SÍLVIO LUÍS DE VASCONCELLOS

DOES CREATIVITY MATTER?
ASSESSING ROLES OF CREATIVITY
ON INTERNATIONAL INVOLVEMENT

São Leopoldo
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Thesis presented as partial prerequisite for
postulating Doctorate Degree in Administration
at Universidade do Vale do Rio dos Sinos –
UNISINOS

CO-ADVISOR: Ronaldo Couto Parente, Dr. – Florida International University
ADVISOR: Ivan Lapuente Garrido, Dr. – PPGA/UNISINOS

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To my love, Claudia, and our children, Marina, and Arthur, who were able to be together when possible, and far when unavoidable; always with unconditional affection, support, smile, and good mood.
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Rather than knowledge, I see creativity – the faculty that enables us to derive useful new forms of knowledge – as the key driver of today’s economy. In my formulation, knowledge and information are merely the tools and the materials of creativity. Innovation, whether in the form of a new technological artifact or a new business model or method, is its product.

Richard Florida (2011)
Abstract

This study investigates the direct role of organizational creativity - as a leading resource - during the international involvement as well as proposes that organizational creativity nurtures both innovative and entrepreneurial capabilities as mediators for the international involvement of the firm. In an objective sense, the innovative capability mediates such relationship once creativity nurtures innovation. In a subjective sense, entrepreneurial capability intermediates this relationship while offering alternatives to solve problems when the firm faces the uncertainty inherent in the international arena. The empirical investigation took place in firms embedded in the Brazilian audiovisual industry, resulting in 78 valid responses. This research is an exploratory-descriptive study built in two main stages: Firstly, an exploratory stage investigated not only the literature but also the environment using interviews with experts to enlarge knowledge about the field. Secondly, a descriptive stage evaluated the field by a quantitative approach based on a survey. The analysis technique applied was regression analysis. Results confirmed the hypotheses designed in this research. We found evidence that there is a direct relationship between organizational creativity with international involvement. Moreover, it was evident that the relationship between organizational creativity with the international involvement intensifies when innovative and entrepreneurial capabilities mediate this relationship. Limitations of this study reflect its singularity. Besides investigating a subjective theme, the research covered just one industry of creative economy in just one country, Brazil. The study has implications in several spheres, such as theoretical, organizational, industrial, and public policies. The originality of this study encompasses not only an explanation of the role of organizational creativity in the international involvement of firms engaged in the creative economy, but also contributes to enlarge and take together theoretical approaches about creativity, innovation, entrepreneurship, and internationalization, at the organizational level of investigation.
Resumo

Este estudo investiga o papel direto da criatividade organizacional - como um recurso de alto nível - durante o envolvimento internacional, bem como propõe que a criatividade organizacional nutre tanto a capacidade inovadora quanto a empreendedora como mediadoras para o envolvimento internacional da firma. Em um sentido objetivo, a capacidade inovadora medeia essa relação, uma vez que criatividade promove a inovação. Em um sentido subjetivo, é a capacidade empreendedora que exerce esse papel, oferecendo alternativas para resolver problemas quando a firma enfrenta a incerteza inerente à arena internacional. A investigação empírica ocorreu em firmas pertencentes à indústria audiovisual brasileira, resultando em 78 respostas válidas. Esta pesquisa é um estudo exploratório-descritivo construído em duas fases principais: em primeiro lugar, uma fase exploratória investigou não só a literatura, mas também o ambiente empírico por meio de entrevistas com especialistas visando ampliar o conhecimento sobre o campo. Em segundo lugar, uma fase descritiva avaliou o ambiente por uma abordagem quantitativa baseada em uma survey. A técnica de análise utilizada foi a análise de regressão. Os resultados confirmaram as hipóteses desenvolvidas nesta pesquisa. Os resultados sugerem que há uma relação direta entre a criatividade organizacional com o envolvimento internacional. Além disso, evidenciou que a relação entre criatividade organizacional com o envolvimento internacional da empresa se intensifica, quando as capacidades inovadora e a empreendedora medeiam essa relação. As limitações deste estudo refletem sua singularidade. Além de investigar um tema subjetivo, a pesquisa abrangeu apenas um setor da economia criativa em apenas um país, o Brasil. Este estudo tem implicações em várias esferas, como organizacionais, industriais e governamentais. A originalidade deste estudo engloba não só uma explanação sobre o papel da criatividade organizacional no envolvimento internacional das empresas que se fazem parte da economia criativa, mas também contribui para ampliar e tomar em conjunto abordagens teóricas sobre criatividade, inovação, empreendedorismo e internacionalização, ao nível organizacional de investigação.
List of Figures

Figure 1: Ekvall’s Model ................................................................. 32
Figure 2: Adaptation of Amabile’s Model ........................................ 33
Figure 3: The direct relationship between organizational creativity with international involvement .................................................. 36
Figure 4: Research basic framework .............................................. 40
Figure 5: The relationship between organizational creativity with innovative capability ......................................................... 50
Figure 6: Comparing causation X effectuation .................................. 55
Figure 7: The relationship between organizational creativity with entrepreneurial capability ...................................................... 55
Figure 8: The research framework .................................................. 71
Figure 9: Research steps .............................................................. 74
Figure 10: Sources of motion picture firm identification .................... 82
Figure 11: Questionnaire summary ............................................... 87
Figure 12: Research hypotheses .................................................... 111
Figure 13: Data dispersion ........................................................... 113
Figure 14: Normality between unstandardized residual measure and frequency ................................................................. 113
Figure 15: Unstandardized residual plot ........................................ 114
Figure 16: Dispersion plot for standardized residual regression .......... 114
List of Tables

Table 1: Cronbach’s Alpha pre-test results ............................................................... 90
Table 2: Composite reliability and extracted variance on pre-test ....................... 91
Table 3: World exports of all creative industry (goods and services) 2002 - 2008 .... 94
Table 4: Reliability of constructs ........................................................................ 105
Table 5: Reliability of constructs on effectuation dimension ................................ 107
Table 6: Discriminant validity of constructs .......................................................... 108
Table 7: Discriminant validity of Entrepreneurial Capability ............................ 109
Table 8: Control Variables Correlation ................................................................. 110
Table 9: Correlation and significance of Variables ............................................. 112
Table 10: Normality of Variables ........................................................................ 112
Table 11: Model summary ................................................................................. 116
# Table of Contents

1 Introduction ....................................................................................................................... 15

2 Theoretical Review and Hypotheses Development .......................................................... 22

2.1 The Organizational Creativity Construct ........................................................................ 23

2.1.1 The evolution of the creativity concept ................................................................. 24

2.1.2 The emergence of creativity ..................................................................................... 25

2.1.3 Dimensions of creativity .......................................................................................... 28

2.1.4 Measuring creativity .................................................................................................. 31

2.1.5 Organizational creativity as a resource ..................................................................... 34

2.1.6 Relating concepts ...................................................................................................... 35

2.2 The Innovative Capability Construct ............................................................................ 41

2.2.1 The evolution of the innovation concept ................................................................. 41

2.2.2 Typologies of innovation .......................................................................................... 43

2.2.3 Innovative capability ............................................................................................... 48

2.3 The Entrepreneurial Capability Construct ..................................................................... 52

2.3.1 Effectuation Theory development ......................................................................... 52

2.3.2 Dimensions of Effectuation Theory ........................................................................ 54

2.3.3 Effectuation Theory in the international business context ...................................... 58

2.4 The International Involvement Construct ................................................................... 59

2.4.1 The behavioral explanation of internationalization ............................................... 60

2.4.2 Internationalization as a relational consequence .................................................. 61

2.4.3 International entrepreneurship ................................................................................. 62

2.4.4 International involvement ....................................................................................... 63

2.5 Theoretical Framework ............................................................................................... 72

3 Method ................................................................................................................................... 74

3.1 Research Conception .................................................................................................... 74

3.1.1 The theme choice ...................................................................................................... 74

3.1.2 Theoretical overview construction ........................................................................... 75

3.1.3 Previous theoretical articles ..................................................................................... 76

3.1.4 The field choice ........................................................................................................ 77

3.1.5 Qualifying .................................................................................................................. 79

3.1.6 The sandwich program ............................................................................................ 79

3.1.7 Research specification ............................................................................................. 80

3.2 Exploratory Stage ......................................................................................................... 80
1 Introduction

This study highlights the role of organizational creativity and its implications for international involvement, mediated by both innovative and entrepreneurial capabilities. The argument bases on Penrose’s assumption about resource accumulation and the experimentation process, in which creativity has central roles (Penrose, 1959) offering a discussion about the relationship between organizational creativity with international involvement.

The understanding of how creativity influences or takes influences when the relations of a firm surpass national frontiers has received limited attention. Discussions about creativity usually are limited to the organizational space with limited attention to creativity roles in the international sphere. In this study, the theoretical gap of research is the roles organizational creativity have during the international involvement of the firm. This research advocates that the more creative the firm be; the more the firm gets involved internationally.

In a systematic cycle, changes in the external environment erode organizational resources and routines that compel firms and entrepreneurs to promote innovative responses (Penrose, 1959) and to build sustainable and competitive advantages (e.g., in Barney, 1991; Grant, 1991, 1996; Wernerfelt, 1984). Despite the importance of these studies, some issues remain in need of further comprehension: In the organizational level, what are the innovation and entrepreneurial behavior antecedents? A possible direction for investigation is creativity, once flows of convergent and divergent thinking support creativity (Lubart, 2007).

Metaphorically, management literature has presented creativity as a role. In this thesis, the term role means an ability of members of an organization not only to take on different actions but also to activate their potential development to the organization (Rivera, 2013). Scholars investigate roles of organizational creativity in several ways. Dul, Ceylan, and Jaspers (2011) examined the role of the physical work environment on the creativity of experienced workers. De Stobbeleir, Ashford, and Buyens (2011) investigated the role of feedback-seeking behavior in creative performance. Im, Montoya, and Workman (2013) searched the mediating role of creativity as a critical link between team dynamics and product competitive advantage.

Searching for which role creativity plays in an organization, two main routes emerge. On one hand, there is an objective role that follows the assumption that creativity
the development of new and useful ideas – is an antecedent of innovation (Amabile, 1996). In this research, the objective role of creativity means creativity emulating innovation, and subsequently representing gains to the firm. On the other hand, there is a subjective role of creativity, as a high-level resource, which nurtures entrepreneurial behavior and influences performance (Kor, Mahoney, & Michael, 2007). In this research, the subjective role of creativity reflects on behavioral aspects that offer better responses to the entrepreneur to solve problems when facing the inherent uncertainty of international environment.

In a historical perspective, the roots of these two roles are close. First, the objective role of creativity is an antecedent of innovation (Amabile, 1996). Innovation is a relevant issue in understanding why and how economic growth happens. Second, the subjective role of creativity feeds the entrepreneurial behavior, which is built on Penrose (1959) to elaborate how entrepreneurs’ observations and personal knowledge outlines a firm’s subjective and rich opportunity set of intangible resources (Kor et al., 2007). Objective and subjective roles of creativity are complementary. Scholars studied the association of innovation and economic growth as a systemic phenomenon (Dosi, 1988; Schumpeter, 1942) that firms capitalize for competing more efficiently (Nelson & Winter, 1982; Nelson, 1991; Penrose, 1959).

This study investigates creativity at the organizational level. Even so, some aspects of creativity at the individual level have to be considered. If the fact of being creative brings the individual a social recognition (Boden, 1994), one would assume that it also could represent a firm distinction. Reasoning in this sense, some reflections are in order: How is the process of transference of individual creativity to the organizational environment? If creativity is a valuable resource, where does it come from? Is there a way to measure creativity in highly competitive environments?

Some scholars have partially answered such questions. Rogers (1954) defined the creative process as the emergence in action of an individual in a relational process, depending on environmental conditions. Given challenging circumstances, it may become organizational creativity. This study follows the definition of organizational creativity as the creation of value that can be useful for developing innovation in products, services, ideas and procedures arising from individuals working together in a complex social context (Woodman, Sawyer, & Griffin, 1993). Such definition takes in account both objective and subjective roles of creativity within the firm. Creativity in the organizational environment is an antecedent of innovation and contains individual factors
and environmental variables that intertwine in a dynamic way. However, how a creative environment emerges still deserves further investigation (Baer, 2012; Moghimi & Subramaniam, 2013).

A sort of paths links creativity and organizational issues. At the confluence between the individual and the environment, creativity plays a role in emulating competitive advantage for the firms. More specifically, in an objective perspective, creativity is a master-spring of innovation (Amabile, 1996), capable of generating competitive opportunities in globalized environments, in which the subjective role takes place. In a subjective perspective, the creation of unlikely alternatives in situations of uncertainty (Boden, 1994) depends on the entrepreneurial behavior.

Both innovation – a creation commercially accepted (Dosi, 1988), and entrepreneurial behavior – a subjective and intangible resource (Kor et al., 2007), influence the internationalization process (Johanson & Vahlne, 2009; Lu, Tsang, & Peng, 2008). Considering that creativity is an antecedent for innovation and entrepreneurial behavior, it is acceptable that the international involvement influences these two central roles of creativity, given that internationalization carries experience, learning and knowledge to firms (Forsgren, 2002), in recursive effects.

There is a sense of conciliation among scholars that the international involvement of the firm establishes a flow of learning from the international environment to the organization. The more the entrepreneur interacts with uncertain situations and diverse institutional environments the faster this cycle becomes. This capability to deal with uncertainty at the organizational level reflects the presence of entrepreneurial capabilities1, nurtured by the entrepreneur’s creative ability to solve problems.

Both entrepreneurial capability and innovation have been influencing internationalization process studies. Scholars investigate internationalization process in a behavioral perspective, interlacing experience (Chetty, Eriksson, & Lindbergh, 2006)

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1 Entrepreneurial capability is a high order capability of arranging resources to achieve competitive advantage. Scholars are still diffuse over this concept. On one hand, entrepreneurial resources may represent a creative skill of managers to solve problems, acting intuitively, and being open to opportunities. Such entrepreneurial resource can be dispersed over the organization and converted in an organizational resource (Mosakowski, 1998). On the other hand, there is the dynamic entrepreneurial capability, as a high-order capability that represents the conversion of a high order resource in a capability that allow firms to develop product innovation and deal with technology change specially in small and medium firms (Lanza & Passarelli, 2014). In this essay, we refer to entrepreneurial capability indistinctly as an entrepreneurial resource and dynamic entrepreneurial capability. In a proposition for a revision of Uppsala Model, Schweizer et al. (2010) considered the entrepreneurial capability as a complementary explanation of the internationalization process.
learning (Johanson & Vahlne, 1977), entrepreneurial behavior (Johanson & Vahlne, 2003; Schweizer, Vahlne, & Johanson, 2010), and relational issues (Johanson & Vahlne, 2009). Meanwhile innovation, as an economic phenomenon that reflects on the firm, nurtures behavioral features of the entrepreneur to convert ideas into a competitive advantage at the managerial level (Grant, 1996). In recent decades, characterized by a process of economic integration, globalization has brought innovation to explain phenomena related to the expansion of international business (Cavusgil & Knight, 2015; Ellis, 2010a; Govindarajan & Ramamurti, 2011; Govindarajan, 2012; Knight & Cavusgil, 2004).

By the end of the twentieth century, another approach enriched the comprehension about internationalization in a particular way: international entrepreneurship (Oviatt & MacDougall, 1994). International entrepreneurship has been considered an original theoretical contribution for understanding internationalization. Nor following rational plans for internationalization (like in Dunning, 1980) or as a gradual and behavioral learning process (e.g., Johanson & Vahlne, 1977), entrepreneurs enter the international arena quickly, usually without any plan (e.g., McDougall & Oviatt, 2000).

Besides the relevance of globalization as a crucial understanding the path of recent internationalization process, there is a consensus that the degree of international involvement affects the decision-making process in the international arena (van Kranenburg, Hagedoorn, & Lorenz-Orlean, 2014). International involvement is beyond internationalization as a process of discovering and exploring new markets (Johanson & Wiedersheim-paul, 1975). In this study, international involvement refers to the necessary capabilities that firms need for growing in international markets, expanding their involvement (Knight & Kim, 2009). International involvement triggers opportunities to establish deep relationships and more inter-partner involvement to mitigate costs and risks of dealing with a foreign company (Cavusgil & Knight, 2015; van Kranenburg et al., 2014). As the firm reduces uncertainty, a favorable environment allows the emergence of learning (Belderbos, van Olffen, & Zou, 2011), knowledge (Liesch, Welch, & Buckley, 2011) and creativity (Butler, Doktor, & Lins, 2010; Zahra & George, 2002).

The enabling environment for creativity mostly depends on management practices. Such management practices create alternatives to cope with uncertain conditions, creating value and sustainable competitive advantage (Sirmon, Hitt, Ireland, & Gilbert, 2011; Sirmon, Hitt, & Ireland, 2007). In this sense, especially when competition on international scenarios becomes increasingly dependent on innovation,
the complexity of business environments provides a discussion of the interaction of two points: international involvement and organizational creativity.

Creativity is intrinsic to all productive activities, but in some firms, it is more evident, as they produce creative artifacts (Gil & Spiller, 2007). When firms explore international markets a complex context takes place, mixing subjective issues, like uncertainty, opportunity discovery, and cognition (Butler et al., 2010). A nurtured field for investigating this theoretical proximity is the creative economy, where creativity plays not just an essential resource but also expected output.

The creative economy is a kind of an oxymoron. On one hand, creative economy reflects one of the most subjective features of a human being – creativity. On the other hand, the economy is a science fundamentally built on statistical models, with almost no room for uncertainty or unreasoned thoughts. Nowadays, the creative economy is a vast field of entrepreneurship somewhat unknown. In 2000, in an article in Business Week, Peter Coy (Coy, 2000) used the term creative economy to address the importance of creativity in a manager’s decision making while the organization becomes a global business in its first years of existence. In 2001, in the first edition of the book The Creative Economy, Howkins (2007) drew attention to the nature of the reconciliation between economics and creativity, generating value to organizations and wealth to the entire society. According to him, people with ideas have become more powerful than people who have machines. In 2013, the United Nations Conference on Trade and Development (UNCTAD) referred to the creative economy as an economic space where creativity nurtures culture while puts the men as a pivot role. The creative economy may develop regions and infuse both innovation and job creation, as well as may contribute to social inclusion, cultural diversity, and environmental sustainability (UNESCO, 2013a).

The creative economy is broad and has limitations in its reviews as an industry. Mostly, the creative economy is associated with the computer and information industry. Data compiled are scarce, mitigating information about it. Like many creative industries, the audiovisual industry — that includes motion picture, television, radio and other forms of broadcasting — has not so precise definitions. The emergence of new information technology and communication tools and the rise of the new media and connectivity, definitions are even more challenging (UNCTAD, 2010). As a mix of cultural and creative content, it is getting hard to define whether a digitized cartoon film, for example, is an audiovisual product or a new media format.
Worldwide, countries are fostering the creative economy. In Brasil, the concern for nurturing creative economy to access foreign markets is visible. Brazilian Agency for Export Promotion and Investment [APEX BRASIL] (APEX BRASIL, 2016) provides programs to support and promote the international integration of Brazilian companies in the world creative economy. A comprehensive program with several projects is ongoing. These programs aim to foster several industries, such as visual arts, music, advertising and publicity films, franchises, television production, motion picture and audiovisual production, editorial content, design and architecture services. This study investigates aspects of the international involvement of Brazilian audiovisual firms considering organizational creativity as a propellant driver.

Due to the limitations related to the diversity of the creative economy, some criteria should be followed to identify peculiarities. First, the field of investigation should have firms in distinct levels of international involvement. Second, creativity should be evident as a leading resource and as an output once creativity is an antecedent of innovation. Third, the field of investigation should reflect organizational creativity influencing the entrepreneurial behavior.

While connecting theoretical and empirical issues, the research question is how does organizational creativity associate with the firm’s international involvement? This issue aims to detect the roles of organizational creativity in the international involvement. Firstly, this study evaluates the direct relationship between organizational creativity with international involvement; Secondly, this study evaluates the mediating role of innovative and entrepreneurial capabilities as mediators of the relationship between organizational creativity with the international involvement of the firm. To achieve this main objective, the path of investigation follows specific ones:

- To search for theoretical literature, looking for the roles of creativity as an organizational resource;
- To identify variables in the relationship of organizational creativity with international involvement;
- To investigate the audiovisual industry looking for vicissitudes in its international involvement;
- To assess the relationship between organizational creativity with international involvement.
Besides the intention of contributing to the theoretical gap, there is an empirical gap to achieve. This study also aims to investigate an industry heavily driven by entrepreneurial behavior where creativity is both a resource and a primary output, as the audiovisual industry (Gil & Spiller, 2007).

Available publications may highlight the relevance of this research. Crossing the terms internationalization or international involvement, and innovation or innovative capabilities in EbscoHost website (EbscoHost, 2016), 714 papers were found. With the inclusion of the term creativity, only 22 articles were published between 1987 and 2015. They referred to 16 different journals from 6 different countries, no one from Brazil.

Crossing the terms internationalization or international involvement, and entrepreneurship or entrepreneurial capabilities or entrepreneurial behavior in EbscoHost website (EbscoHost, 2016), 604 papers have been published. Inserting the term creativity, only two papers from two countries appear, no one from Brazil.

This study delivers results in various perspectives. Besides the theoretical gap to fill, there is a lack of knowledge about the creative economy, which often presents difficulties for comparisons with industries from other ranges of the economy.

This study may offer a comprehensive assessment to evaluate effects of organizational creativity, in industries where innovation and/or entrepreneurial capabilities have influences over international involvement. Besides management contribution, this work may bring additional ways to evaluate how public agents could encourage firms to play in international markets related to the creative economy.

This research has six chapters. After this introduction chapter, Chapter 2 offers an overview of studies on organizational creativity, innovative capability, entrepreneur capability, and international involvement. Chapter 3 presents the method paths, unfolded in research conception, exploratory stage, and descriptive stage. Chapter 4 expands the audiovisual industry as the empirical space for investigation. Chapter 5 presents and analyzes the collected data comparing to the theoretical review. Finally, Chapter 6 concludes this research, commenting results, depicting limitations, and proposing further investigation to prospect.
2 Theoretical Review and Hypotheses Development

This chapter aims to overview theoretical roots that base this study. First, this study introduces creativity as a concept built over the time, influenced by dominant philosophical perspectives. Following Penrose’s (1959) assumption, creativity is a crucial resource that entrepreneurs use to convert ideas into new routines and new products. Resources are the “building blocks” (Javidan, 1998, p.62) of competencies, but hardly turned on it. Resources, grouped by Barney as physical, human and organizational (Barney, 1991) may be tangible or not tangible. How a firm exploits their resources are capabilities (Javidan, 1998). The ability of processing capabilities and resources may generate or not competencies (Javidan, 1998).

Without resigning other roles that creativity plays in organizations, this study first explores two central roles of organizational creativity – an intangible resource – as an antecedent of both innovative and entrepreneurial capabilities. Second, this study overviews innovative capability and entrepreneurial capability, offering concepts, historical evolution, and their explanatory connections. Third, this study proposes international involvement as a concept for exploring internationalization process in firms inserted in the creative economy.

This study follows Schweizer et al. (2010) assumption that Effectuation Theory is relevant to understand internationalization as a context in which entrepreneurs, as decision makers, act in unpredictable environments. Thus, the theoretical background for entrepreneurial behavior is based on the Effectuation Theory (Read & Sarasvathy, 2005; Sarasvathy, 2001, 2003).

Entrepreneurial behavior is intrinsically subjective. According to Kor, Mahoney, and Michael (2007), entrepreneurial capabilities include entrepreneurial attributes such as knowledge, resources, skills, the process of discovery, and creativity. These features are the “heart of entrepreneurship” (Kor et al., 2007, p.1187). This subjective perspective allows the entrepreneur to use creative responses, which may sometimes be contrary to what would be considered the most rational course of action in a given environment (Kor et al., 2007; Penrose, 1959). When entrepreneurs share their problem-solving abilities as well as their capacity to convert ideas into new standards, they are transforming entrepreneurial resources into the entrepreneurial capability of the firm (Mosakowski, 1998), providing room for error tolerance in the solving-problem process (Einhorn & Hogarth, 1987).
This study does not assume that the effectuation process of decision-making is prevalent in international business. However, as entrepreneurs use creative abilities to solve problems in unpredictable environments (Sarasvathy, 2001); in this research, Effectuation Theory may support an approximation of creativity as a subjective antecedent of entrepreneurial capability and, consequently, of the international involvement.

2.1 The Organizational Creativity Construct

This section starts offering an overview of the evolution of the creativity concept development. Over the centuries, creativity received contributions in its understanding that associate itself with the prevailing paradigm. Boden (1994), Lubart (2003) and Pinheiro (2011) observed that creativity was already a challenging topic for Plato. For centuries, creativity was a mystical and divine gift. Gradually this perception extended to most objective judgments. In recent decades, sociological aspects, such as those related to the organizational environment, brought a multi-disciplinary understanding of creativity. Therefore, the conceptual basis of creativity gathered a systems perspective, associating the view of individuals and organizations.

Distinguish knowledge and creativity concepts are crucial for understanding the roles of creativity. Knowledge is a critical factor in the creative process, as creativity empowers individuals to produce novelty (Müller-Wienbergen, Müller, Seidel, & Becker, 2011). Being creative often means putting existing ideas together in new combinations (Amabile, 1988). In this sense, current knowledge drives the potential paths when individuals search for a creative solution to solve a problem (Müller-Wienbergen et al., 2011).

Creativity is a topic that often lies at the boundary between intuition and logic, and for some, like in Popperian perspective, creativity only may likely to be justified, given that creative inspiration is fundamentally irrational (Boden, 1994, citing Popper, 1965). However, in society, creativity has received so much importance that being creative can be a higher degree than being wise (Lubart, 2003).

The following four sub-sections explore the evolution of creativity concept, the emergence of creativity, the dimensions of creativity, and organizational creativity, before proposing the first hypothesis of this research.
2.1.1 The evolution of the creativity concept.

The need for creating is a fundamental human desire (Collier, 1957; 1953). According to Collier (1957), there are three factors responsible for the creative élan: a spirit of freedom, a capacity for detachment, and faith. The vision that combines creative philosophical elements rests on even older foundations. Lubart (2003) mentions a speech from Plato, who considered creativity as a poetic inspiration and a divine gift. The understanding of creativity was a link between the gods and men, stepped in centuries, usually associated with individual geniality. The genius, however, faced discussions about its proximity to talent – superior performance – and the ability to associate ideas in an original way (Duff, 1967, cited by Lubart, 2003). Gradually, the concept of talent began to distance itself from the creative act, or imaginative association, as an exceptional form of genius, challenging the mystical concept that rested for centuries.

During the late 19th and early 20th century, creativity was seen as a phenomenon to be solved objectively by science. Lubart (2003) brings some inferences of the period. In 1879, Galton noted that new ideas rested on mental entities previously stored in memory. In 1900, Ribot held that the act of creative thinking represented intelligence, emotion and unconscious. In 1908, Freud proposed that creativity result from a tension between the conscious and unconscious. In 1926, Wallas considered creativity as a process that involves mental preparation, incubation of the idea, illumination, and verification (Lubart, 2003).

In the second half of the 20th century, the concept of creativity acquired more precise contours, as Guilford (1950) described in the commemorative edition of 50 years of his work in the special edition of Creative Research Journal (Lubart, 2003; Pinheiro, 2011; Runco, 2001). He presented creativity in a comprehensive approach, which considered creativity as an element to solve problems through multiple intellectual abilities and analysis of alternatives, evaluation of possible solutions and synthesis. The association of five intellectual operations supports the intellectual abilities – cognition, memory, convergent thinking, divergent thinking, and evaluation (Runco, 2001, citing Guilford, 1950).

In recent years, creativity has been researched in a sort of perspectives. Sometimes it refers to an ability to create products/services (e.g., Burroughs, Dahl, Moreau, Chattopadhyay, & Gorn, 2011; Le Masson, Hatchuel, & Weil, 2011; Tahseen, 2012).
Other times, creativity refers to how decision-makers made their choices (e.g., George, 2007; Koppl, 2001; Kor et al., 2007).

Some studies include this diversity. Buchanan (2001) studied creativity on several levels. He conjectured on the creative behavior:

There is no consensus, just considerable ambiguity, about what we call creative behavior or what is involved in this behavior. In everyday speech, gifted people who create new ideas, new works of art, new music, and so on, are said to think outside the box, break the rules, revolutionize the field, think intuitively, think different, and change the way we think. (Buchanan, 2001, p.13)

Perceptions of creativity have proximities to both innovation and entrepreneur concepts. Citing Panter et al. (1995), Buchanan (2001) described creativity as the ability to bring something new into existence. Tahseen (2012) proposed creativity as a characteristic of entrepreneurial behavior converted to innovation, what means a kind of competency. He refers to creativity as part of strategic human resource policies of entrepreneurs that offer capacities to compete.

2.1.2 The emergence of creativity.

Although ideas pave the way of creativity, most ideas are bad (Levitt & March 1988). Also, ideas are useless unless applicable (Levitt, 1963). Following these assumptions, this research follows Amabile’s concept to base the objective role of creativity: Creativity is the development of new and useful ideas, acting as an antecedent of innovation (Amabile, 1996).

In the organizational environment, creativity becomes one of the factors that may offer alternatives to changes in the external environment, presenting creativity as an instrument able to provide answers to uncertainty (Knight, 1967). In a broad perspective, creativity is associated with the built-in capabilities of individuals to respond to external changes. The creative ideas thrive when there are those who register and implement them (Csikszentmihalyi, 2000). It results from the interaction between individuals who present ideas in an environment in which there are granted legitimacy and validation as innovative ideas (Amabile, 1996).

Next sub-items explore how mental operations (Runco, 2001, citing Guilford, 1950), cognition, memory, convergent thinking, divergent thinking, and evaluation, promote the ability to offer a broad range of possible responses to problems, from a single
stimulus. Mental operations, especially divergent and convergent thinking, have been providing the crucial role to explain how old knowledge supports the development of new knowledge at the organizational level.

2.1.2.1 Cognition.

Studies about creativity have a central focus not only in the process of generating ideas but also in the momentum. One sense of how ideas arise refers to a psychological trigger (P-creativity); another meaning of creativity connects the historical trigger (H-creativity). A value idea is P-creative if the idea occurs in the mind of someone for the first time. It does not matter if another person has the same idea before. By its turn, a value idea is H-creative when a P-creative idea has ever had to anyone else before (Boden, 1994).

During the stage of cognition, a person senses and structures the problem (Lubart, 2001). When an individual realizes worldly affairs in a different way than in the past, he/she had a different cognition about the subject (Sethy, 2009). Essentially, ideas are found when a close distance between other ideas has been covered to become original to someone. This path is the cognition process (Acar & Runco, 2014).

2.1.2.2 Memory.

As the mind has cognition about the affairs, the brain stocks them for future use in memory (Vandervert, Schimpf, & Liu, 2007). Therefore, memory is a collection of consistently engaged cognitive functions – usually named as thinking – when people interact with the world (Vandervert et al., 2007). Some studies reveal memory to a semantic process of association, considering that the brain organizes conceptual knowledge obeying semantic aspects of the language (Abraham & Bubic, 2015). While an individual faces some episode, old memories are activated to understand what is happening to generate responses that could unfold an own future (Abraham & Bubic, 2015). Without negligence to other aspects of memory concept – for instance, short-term and long-term memory – in this study working memory is a central concept. As individuals face unusual events, memory liaises with additional functions like goal-directed learning to construct and simulate unique responses (Zheng, Luo, & Yu, 2014).
2.1.2.3 Convergent Thinking.

In 1950, Guilford firstly forged the terms convergent and divergent thinking (Cropley, 2006; Müller-Wienbergen et al., 2011; Pinheiro, 2009; Runco, 2001). For a long time, the convergent thinking was even seen as something bad that restrain new ideas; however, it has been recognized as an integrant part of the creative production. Convergent thinking emphasizes velocity, accuracy, logic, recognition of previous knowledge, useful techniques, and accumulating information (Cropley, 2006).

Convergent thinking has been associated with the capacity of solving problems, better than creating something new (Kohn, Paulus, & Korde, 2011). As a paradox, convergent thinking may block the popping up of creativity – like the connection to ideas previously applied – sometimes it is necessary as bridges for new ideas (Cropley & Cropley, 2008). Moreover, convergent thinking and divergent thinking may be transformed into creativity, associated or not, once convergent thinking evokes orthodoxy while divergent thinking provokes variability (Cropley, 2006).

2.1.2.4 Divergent Thinking.

Divergent thinking is the capacity of going beyond the boundaries of established thoughts (Reid, de Brentani, & Kleinschmidt, 2014). An example of nurturing divergent thinking is the brainstorming technique (Kohn et al., 2011; Runco, 2001). Divergent thinking has long been pointed out as an important aspect of creativity. For a long time, the divergent thinking was considered the primary process to achieve creative ideas (Runco, 2001). Although, as the time went by, scientific studies converged to the complementary role of convergent and divergent thinking (Basadur & Hausdorf, 1996; Kohn et al., 2011).

Divergent thinking studies have been associated not only with creativity by itself but also to diverse fields like innovation (Reid et al., 2014) and entrepreneurship (Dayan, Zacca, & Di Benedetto, 2013; Gielnik, Frese, Graf, & Kampschulte, 2012; Müller-Wienbergen et al., 2014). In this study, both divergent and convergent thinking relate to the capacity of prospecting new ideas from international experience to come together to organizational creativity.
2.1.2.5 Evaluation.

Evaluation is the fifth mental operation proposed by Guilford (Runco, 2001). As the last stage, new ideas emerged in the creativity process. At this path, the individual evaluates if the new idea is useful or not. Some scholars approximate this phase to the convergent thinking (Cropley, 2006). In this stage, frequently evaluation is associated with the decision-making process (Kunifuji & Kato, 2007).

The relationship between assessment with motivation is relevant during the process of transforming creative ideas into innovation (Laraway, Snycerski, Olson, Becker, & Poling, 2014; Wood & Hoeffler, 2013). Motivation may be connected to personal aspects, for example when an individual follows particular interests, tending to evaluate constraints that can inhibit creativity to different degrees (Runco, 2004). In this sense, previous experiences may affect the application of creative ideas in subjective ways.

Although creativity is unsurprisingly associated with human being capacities, when people interact in the same environment, creativity may be consistent in different dimensions. Next sub-section goes further in this discussion.

2.1.3 Dimensions of creativity.

Although this work focuses on the organizational dimension of creativity, it is relevant to connect individual and organizational aspects that embed organizations.

2.1.3.1 The creativity from individual.

Creativity has long been considered something inherent in the individual. Through a moment of illumination, an individual produces solutions to problems as mentioned by Kaplan and Simon (1990), citing Duncker (1945). This is the Aha! insight when the decision-maker would solve a problem based on subjective assumptions. Still in a psychological perspective, Boden (1994) associated creativity with the condensation of ancient knowledge in a moment of problem-solving, which is socially accepted.

Amabile (1996), however, noted that the perception of creativity as a phenomenon of individual order is, at the same time, limited and limiting. She believes that the environment, both about frequency and about the creative behavior, influences the
creativity progress. For her, creativity is the production of new and useful ideas in any domain; it is driving innovation and history, which is the successful implementation of creative ideas within an organization. Given the individual, Amabile (1996) proposed creativity as a combination of three factors: individual expertise, creative skills, and motivation for the task.

The individual expertise is the basis of creativity. Expertise is a constructed and structured knowledge erected over time, by technical proficiency and the use of particular talent (Amabile, 1996). Developing creative skills in an environment drives to creativity. The ability to create a collective creative thinking brings individual attributes of creativity to organizations, such as those raised by Lubart (2003), citing Mackinnon (1962), Gough (1961, 1967) and Roe (1952). The motivation for the task is an essential element of creativity, because even though the expertise and creative skills are present, without motivation nothing will happen to the task (Amabile, 1996).

The motivation for the task has different origins and may has an intrinsic or extrinsic order. The inherent order roots in the interests and involvement with the task, the level of curiosity that awakens in the individual, the degree of satisfaction to achieve and the level of challenge that the task can instigate. The extrinsic order may relay to the achievement of a goal and the rewards, and the need to meet deadlines and overcome a possible competition. According to Amabile (1996), studies are indicating that the intrinsic motivations tend to lead to results that are more creative.

### 2.1.3.2 Creativity in organizational environments.

During decades, scholars investigate the way the creativity of the individual changes the organizational environment. Cummings (1965), for example, emphasized creativity and innovation as factors that are inhibited by bureaucracy. He supposed bureaucracy has an aversion to the spread of ideas and that creativity causes conflicts that undermine standards. Moreover, within the organizational environment, creative individuals are more critical, which can lead to the defense hierarchy and expose issues regarded as sensitive by the administration (Florida, 2014). According to Cummings (1965), specialization in tasks is highly bureaucratic; on one hand, in stable environments, managers use to play the role of inhibitors of creativity while maintaining the structures drawn previously. On the other hand, in such environments, managers reduce the ability to solve problems (Cummings, 1965).
In environments where innovation becomes essential, creativity has a diverse role. As a high-level organizational resource, creativity acts as an antecedent of innovation. According to Amabile (1996), creativity is the starting point that may or may not be converted into innovation. While creativity is a necessary condition to emulate innovation, it is not sufficient. It depends on the entrepreneurial character developed in the context in which the interaction between the individual and the organization becomes propelling innovation. In the same vein, Tahseen (2012) believes that creativity is a characteristic of entrepreneurial behavior, which, converted into innovation, can represent an organizational competence. In smaller organizations, Tahseen (2012) refers to creativity as part of the firm's human resources policy to enable the handling strategy to face large corporations.

Assuming that creativity precedes innovation, the issue is how the conversion occurs within the organizational environment. To Amabile (1988), the work environment influences both individual creativity and the team creativity, which affect the firm’s ability to innovate, sometimes offering fewer conditions to improve creativity or even killing it (Amabile, 1998). This environment, however, is not homogeneous and fed by the complementary skills of the individuals combined with features of personality such as introversion and extraversion, balanced atop two extremes - logic and intuition (Pinheiro, 2009, 2011). Creativity flourishes better in stable social environments that allow the continuity of efforts to keep the openness for new ideas (Florida, 2014). To Amabile (1996) and Amabile, Conti, Coon, Lazenby, and Herron (1996), the organizational environment influences individuals and teams and these, in turn, influence innovation within the organization. Three essential elements are necessary for flourishing innovation in the organization - resources, motivation and organizational management practices.

Another dimension of creativity refers to organizational relationships. While putting into action, creativity may establish links between organizations that may be useful in the future (Baer, 2012). According to Baer (2012), the implementation of ideas has a positive relationship with creativity, which means that the more the ideas are implemented, the more creativity is developed. The internal relationships also may affect the organization about creativity.

Before expanding the theoretical overview, the next item explores creativity assessments at the organizational level.
2.1.4 Measuring creativity.

Creativity measurement is a relevant topic in organizational studies, although controversial. “Organizational creativity research has a curious misalignment between construct definitions and measurement model specifications — definitions embrace multiple facets, but empirical measures do not” (Sullivan & Ford, 2010, p.505).

Even though creativity has been investigated in the administration field systematically, most of the studies have been carried out by psychology. Martindale (1994) was concerned about measuring the creativity of an entire society. Martindale’s arguments are based on the premise that creative productions occur in structured social contexts that used to impose rules for regulating ways of doing things. In this effort, the institutional environment restricts collective creativity. Therefore, creativity in the society kind of breaks the rules and usually is associated with artists and scientists.

Measurement of creativity can also refer to a trait. According to Eysenck (1994), studies of creativity involve four components: process, product, person, and situation. Process refers to the production of novel and original content. The product is the result of the creativity trait. A person is who will show something original. Situation refers to a creative momentum when society in a historical period is more likely to produce creative people.

According to Sullivan and Ford (2010), the question is whether it is better to assess creativity with reflective or formative measures. They analyzed 21 articles published in the Academy of Management Journal (AMJ) and the Journal of Applied Psychology (JAP) that propounded to measure organizational creativity and have concluded that there are so many asymmetrical dimensions that it was difficult to compare results.

Moultrie and Young (2009) examined two particular studies about creativity measurement, one associated with creative climate (Ekvall, 1996, cited by Moultrie & Young, 2009) and the other to organizational creativity (Amabile, 1996). The creative climate model proposed by Ekvall shows how an organization’s culture manifests itself in creative abilities (Ekvall, 1996, cited by Moultrie & Young, 2009). Ten factors collectively describe how creative organizational climate is: challenge, freedom, idea support, trust/openness, dynamism/liveliness, playfulness/humor, debates, conflicts, risk taking and idea time from its employees (Ekvall, 1996, cited by Moultrie & Young, 2009), as depicted in Figure 1.
Figure 1: Ekvall’s Model  


On Ekvall’s Model, all factors have a positive impact on the creative climate, but conflicts also exist. Ekvall’s Model tested the effects in quantitative research, supported by a 50-question questionnaire.

By their turn, Amabile et al. (1996) proposed an assessment of the climate for creativity based on Amabile’s Model (Amabile, 1996), grounded on three pillars: organizational motivation, resources, and management practices as depicted in Figure 2.

The Organizational Creativity Model, proposed by Amabile (1996), shows how creativity emerges from a combination of creativity skills and individual motivation. Such combination leverages innovation in a work environment when the connection between organization motivation, resources, and management practices takes place. In a recursive effect, the creative work environment impacts on creativity. Amabile et al. (1996) tested the model in a quantitative research supporting it with a 78-item questionnaire. This study highlights that the organizational level is the focus of the investigation. Thus, the Amabile’s Model is applied partially, assessing organizational motivation, resources, and management practices, combining with references from Moultrie and Young (2009) findings in their exploratory investigation in the British motion picture industry.
Both, Ekvall’s and Amabile’s Model tested the creativity at the organizational level. Moultrie and Young (2009) applied both tests in the creative industry in England to test if results would be the same. Results approved the two tests in a complementary way.

Amabile et al. (1996) offered some variables to assess perceived obstacles and stimulants in an organizational environment. Dimensions of work environments, which could stimulate innovation and creativity, such as organizational motivation to innovate, available resources and management practices, grounded that study. As concluded by Amabile et al. (1996, p. 1178), “creative ideas from individuals and teams within organizations sow the seeds of successful innovation; scholars of innovation must seriously consider characteristics of the organizational context that can impede or support the generation of those ideas.”

Although relevant, Amabile’s Model and Ekvall’s Model are hard to replicate, mostly when there is an association of creativity with other issues, like the internationalization process. As Sullivan and Ford (2010) suggest studies about creativity always must adopt multifaceted measures, preferably composing latent construct models with formative indicators, if comparing organizational creativity relationship with other variables under investigation. As a researcher decision, this study applies Amabile’s
Model, as her research is related to creativity as an antecedent of innovation, converging to the objectives presented in the introductory chapter.

2.1.5 Organizational creativity as a resource.

The importance of creativity in the administration has been renowned throughout the history of organizational studies. Even before Edith Penrose (1959), Randall (1955) referred to the creative thinking. For Randall (1955), creative thinking is an essential element of organizations to be able to adapt to changing conditions. Thus, changes could work in their favor. Randall (1955) supposed that constantly creative thinking must be stimulated, as one of the most valuable and at the same time fuzzy resources of any firm.

Creativity may represent different roles, mainly in social environments (Moran, 2010). For example, the role of creativity as an antecedent of organization performance, mediating the role of corporate entrepreneurship and environment (Bratnicka, 2013). Creativity also plays the role as a critical link between team dynamics and product competitive advantage (Im et al., 2013). Also, creativity can act as an extraordinary ability for solving problems or getting a response to some situations (Amabile, 1996; Csikszentmihalyi, 2000; Cummings, 1965; Runco, 2004).

Organizational creativity embodies a somewhat new and emergent research space within the field of organizational behavior studies (Zhou & Shalley, 2008b). In the context of work, creativity may be revealed in any job or by any person (Zhou & Shalley, 2008a). When a human behavior serves to an organization, there is a conversion in organizational capability (Kor et al., 2007).

Amabile (1988) reasoned that intrinsic motivation quite than extrinsic motivation was crucial for creativity. Motivation acts on the individual level associated with individual expertise and creativity skills (Amabile, 1996) as an input for organizational creativity. By their turn, Woodman, Sawyer and Griffin (1993) stress that it is the interface of an individual’s personality and contextual issues in the work environment that forecasts creative performance. Creative performance in organizations relates to individuals, groups, and organizational characteristics that interrelate in creativity emergence (Woodman et al., 1993).

Scholars support that sustained “product innovation is organizational creativity in action since it both generates creative organizational outcomes and relies on creative organizational processes” (Dougherty & Rutgers, 2008, p.237). Creativity relates to the
construct of innovation, which in turn is settled within the whole construct of change (Woodman, 2008).

Following the structure proposed is this study; next items aim to relate concepts of organizational creativity to international involvement, innovative capability, and entrepreneurial capability.

2.1.6 Relating concepts.

As a high-level resource, organizational creativity is crucial in developing capabilities (Penrose, 1959), that permit firms to nurture innovation (Amabile, 1996) and entrepreneurial behavior (Kor et al., 2007). This item aims to overview such conceptual approximation.

2.1.6.1 Organizational creativity and international involvement.

There is a sense of conciliation that creativity is crucial to negotiate in unpredicted environments due the high uncertainty context. For example, Tierney (2008) claims for attention to organizational reality as the global face of business with an urgent necessity of understanding the outsourcing of essential functional activities related to innovation such as design, and research, and development. Moran (2010) figured out that in an interconnected world people need to understand how imagination works when ideas, object, and strategies become dominant in many places rapidly. Gilson (2008) argues that if companies intend to be global, they need talented people to develop new ideas and novel and useful attitudes to their work.

Despite the reasonable proximity of organizational creativity and internationalization, only nine articles may be identified crossing such terms at Web of Science platform, most of them published since 2013 (Web of Science, 2016). Cavusgil and Knight (2015) proposed that entrepreneurial capability might have a positive relationship between innovation and international involvement of born-global firms. Hee-Yong (2015) published a Korean study about the mediating role of entrepreneurship between organizational creativity and levels of internationalization.

The probable explanation is a difficulty in measuring organizational creativity given da subjective feature of this organization resource. Also, most of the available explanation are in individual level (Zhou & Shalley, 2008b). Approaching organizational
creativity and international business studies at organization level may offer answers to fulfill the knowledge about how the internationalization process evolves. An alternative, for example, is to understand how entrepreneurs pace together the people and ideas from different places to find new ways and conscious decisions to go abroad (Hargadon, 2008). In a broad perspective, the role of creativity in internationalization could be investigated as input, process or output (Zhou & Shalley, 2008a).

As discussed further in this chapter, this study assumes that internationalization, as a conceptual process of entering into new markets is not enough to explain how entrepreneurs design strategies to deal with globalized markets. As a research option, this study assesses international involvement (Knight & Kim, 2009) as an alternative way to find out internationalization as an ongoing process. This study presents its first hypothesis to collaborate to fulfill the gap of investigation:

**H1: There is a direct, positive and significant association between organizational creativity with international involvement.**

This hypothesis aims to assess if there is or not a relationship between organizational creativity with international involvement, as stressed in Figure 3.

![Figure 3: The direct relationship between organizational creativity with international involvement](image)

Source: The author

Even if the direct role or organizational creativity is a plausible link to connect international involvement, the way to understand how such connection takes place depends on other fields, such innovation, and entrepreneurship (Zhou & Shalley, 2008a). Again, this study also investigates an objective and a subjective role of organizational creativity. In an objective sense, creativity can act as an antecedent for innovation (Amabile, 1996; Woodman et al., 1993). In a subjective sense, creativity may serve as an
2.1.6.2 Organizational creativity and innovative capability.

Anticipating customer acceptance is a prerequisite for the entrepreneur to develop or improve any product; however, what stimulates the firm to pursue innovation is its compelling desire to seek uses of resources more efficiently (Penrose, 1959). Innovation is a policy issue to be assumed by an organization, given that its competitor will consistently offer products that will replace theirs. Therefore, developing products becomes a primary objective to reduce costs, improve quality, and search and explore knowledge to accelerate the creation of goods and services. Penrose (1959), anchoring her concepts in Schumpeter (1942), attested that the organization must develop new products and new ways to make them, to deal with the systemic changes arising from the external environment, resulting from technological advancement.

Innovation is an attribute of the organization to cope with the changes resulting from technological advancement (Knight, 1967). More than generating new products, innovation also occurs in the improvement of existing products and processes (Dosi, 1988). It also is a mechanism to promote adaptation to new demands originating in the market, due to new technologies that become dominant (Lawson & Samson, 2001). In addition to bringing greater efficiency and control to the organization, innovation requires flexibility, creativity and a sense of how it might be appropriate to the time to be on the market (Galunic & Eisenhardt, 2001).

Innovation, whether product or process, is among the most important sources of sustainable competitive advantage in the face of accelerated technological change, reducing product life cycles and increasing global competition (Filipescu, Prashantham, Rialp, & Rialp, 2013). For Filipescu et al. (2013), the ability to manage resources to generate innovation, offer new products or change and improve processes (Woodman et al., 1993), represents one of the most important growth factors of competitiveness, both nationally and internationally.

Although some studies indicate that creativity is not relevant in the same proportion for innovation in product and process (Çokpekin & Knudsen, 2012), the perception that innovation can bring sustainable competitive advantages has been consistently reaffirmed. Widening the theme, an approach that has gained space in recent
years is how the ability to compete internationally can bring innovation to the firm (Contractor, 2013; Filipescu et al., 2013; Salomon & Shaver, 2005). In this approach between international integration and innovation, another aspect is observing innovation as a phenomenon arising from the action of learning in more advanced economies, which diffuses into the microenvironment of emerging economies (da Rocha, Kury, & Monteiro, 2009; Govindarajan & Ramamurti, 2011; Govindarajan, 2012). Firms must be able to bring their experience and technological expertise to their country of origin to internationalize faster (Zahra, Ireland, & Hitt, 2000). However, the question that persists in organizational studies is how to enable this flow with greater fluidity, speed and flexibility, allowing it to become a competitive advantage for the organization.

2.1.6.3 Organizational creativity and entrepreneurial capability.

Although creativity is a necessary condition, it is not sufficient for occurring innovation (Amabile, 1996). Creativity is not enough to generate innovation in organizations, but there is no innovation without creativity. Therefore, this study investigates two main characters of creativity as an antecedent of entrepreneurial capability: as an ability for solving problems and as a motivational driver to generate knowledge.

Creativity for solving problems: Managing resources to create competitive advantages for the organization is one of the assumptions of the Resource-Based View (RBV) (Barney, 1991, 1995; Wernerfelt, 1984). The possession of these resources allows the creation of situations in which the firm has an advantage over its competitors. Possessing them, however, does not ensure the firm has such advantage. Solving problems is an indispensable role of an entrepreneur. A broader definition of entrepreneurship is to promote innovative activities in organizations, where the entrepreneur processes subjective roles of discovering, learning and applying his/her creativity (Kor et al., 2007; Penrose, 1959). These processes need to be orchestrated to encompass the competitive advantage for longer (Sirmon et al., 2011), especially in dynamic environments (Sirmon et al., 2007) where to conquer knowledge is crucial (Runco, 2004). Often scholars associate creativity with the ability of the organization to develop a favorable environment for innovation and product development (Barczak, Lassk, & Mulki, 2010; Csikszentmihalyi, 2000; Moghimi & Subramaniam, 2013; Verona, 1999). However, creativity can also act as an ability to make decisions in the opposite direction. At certain
times, the best option may be to abandon any product that is not practicable in the competitive environment (Penrose, 1959). Since creativity involves skills related to decision-making, this study assumes that creativity is related to both innovation antecedent and the ability to make decisions, facing creative destruction, outlined by Schumpeter (1942). Acting in uncertainty is a process; entrepreneurs learn to share knowledge. Various entrepreneurs in an organization collectively may influence organizational learning as new entrepreneurial opportunities for learning occur during interactions in an unpredictable business environment (Kor et al., 2007; Witt, 1998).

*Creativity as a motivational driver:* Grant and Berry (2011, p.73) supposed, “Since ideas are ultimately most useful when they solve problems for other people inside and outside an organization, a focus on usefulness can be engendered by perspective taking.” In this sense, when individuals share views, ideas can be developed easier and generate better solutions for problems that the group is facing. Citing Litwin and Stringer (1968, p. 1), Moghimi and Subramaniam (2013, p.2) referred to organizational climate as “a set of measurable properties of the work environment, perceived directly or indirectly by the people who live and work in this environment and assumed to influence their motivation and behavior”. Environments where there is the enhancement of creativity and innovation are supportive of more creativity and innovation development (Amabile, 1996; Moghimi & Subramaniam, 2013). The motivation for creativity usually does not act alone. While there is a combination of motivation for creativity with organizational learning, a creative climate contributes to the explanation of variances in innovation in several core business organizations (Ismail, 2005). Creativity is more easily spread in a social environment when knowledge is not hidden from each other (Černe, Nerstad, Dysvik, & Škerlavaj, 2014; Perry-Smith, 2006). Once creativity is a social process embedded in a social context, extremely interactive work environments triggers creativity (Amabile, 1996; Perry-smith, 2006). Besides the motivational role, creativity has a coordinating role when entrepreneurs attempt to create new business models connecting a network of entrepreneurial interactions to reach the market (Kor et al., 2007).

Figure 4 represents how innovative capability and entrepreneurial capability mediate the relationship between organizational creativity with international involvement. In its *objective role*, organizational creativity nurtures innovative capability, which mediates the relationship between organizational creativity and the international involvement of the firm. In its *subjective role*, organizational creativity nurtures
entrepreneurial capability; which mediates the relationship between organizational creativity and the international involvement of the firm.

![Research Basic Framework](image)

**Figure 4: Research basic framework**  
*Source: The author*

This research agrees with Zhou and Shalley (2008a) that for expanding investigations about the role of organizational creativity on globalized environments, a multidimensional investigation is necessary. This research proposes that there is a relationship between organizational creativity with international involvement. Together with the direct link between organizational creativity with international involvement, Figure 4 also depicts two antecedent roles of organizational creativity, nurturing both innovative capability and entrepreneurial capability as mediators for international involvement. On one hand, organizational creativity has an objective role in the firm while promoting the development of innovation as an antecedent of innovative capability. On the other hand, organizational creativity has a subjective role in the firm while boosting the development of skills of entrepreneurs to make decisions as an antecedent of entrepreneurial capability. Both, innovative capability and entrepreneurial capabilities may accelerate the path of the international involvement. Further sections describe how this theoretical expansion took place.

Next sections expand both innovative and entrepreneurial capability constructs. Adopting Amabile’s assumption, the next item discusses innovation at the organizational level, assuming the objective role of organizational creativity is an antecedent of innovative capability.
2.2 The Innovative Capability Construct

At the organizational level, innovation studies usually discuss if innovation is an internal or an external issue. Whether exploiting knowledge as a resource or exploring sources outside the organization, firms look for new product development or new ways to process to obtain an advantage over competitors (Cohen & Levinthal, 1990). In this section, this study covers the evolution of innovation as a concept and discusses some understandings about innovation. Finally, this study focuses on the innovative capability, considering that organizational creativity mostly as the ability to innovate than properly into innovation as a result.

2.2.1 The evolution of the innovation concept.

In the economic lens, innovation is a kind of novelty that takes place in an economic system that forces competitors to change to keep competitiveness (Schumpeter, 1942). The perspective of innovation as a crucial element of the growth of the firm (Penrose, 1959). Rosenberg (1976) expressed how innovation overlapped the economic perspective of the organizational environment. According to him, in economics, the innovation concept raised on technological events that provoke changes in the economic environment and, consequently economic growth. By its turn, innovation in social sciences focused in how entrepreneurs handle with the change, as a solving-problem activity.

A set of resources and routines could bring to the organization special and unique advantages to responding to environmental changes, referring to the Schumpeterian concept of creative destruction. During the 1990’s, the uniqueness of resources to cope with environmental changes won a dynamic perspective. Those firms that demonstrate “timely responsiveness and rapid and flexible product innovation, coupled with the management capability to effectively coordinate and redeploy internal and external competencies” (Teece, Pisano, & Shuen, 1997, p. 515) to face the destructive creation that take place in the competitive environment, may achieve better results.

As an organizational issue, innovation focuses on organizational capabilities. Regularly, firms need to create new knowledge to prevent imitation; firms learn new skills by recombining the current capabilities they detain (Kogut & Zander, 1992). Nevertheless, a critical point challenges managers – individuals used to know more than
they could share (Kogut & Zander, 1992). To managers remains the hard task of organizing activities into a pattern that turn experiences into routines (Eisenhardt & Martin, 1999, citing Burns and Stalker, 1966).

The innovation concept evolved, as competition increased. Effective product development and processes involve routines (Penrose, 1959), as well as shared experiences among members, and special skills to solve problems (Eisenhardt & Martin, 1999). Affording the dynamic capability concept (Teece et al., 1997), Zahra and George (2002) distinguished realized capability and potential capability once innovation occurs so fast that capabilities need constant renewal.

Although innovation reflects a contextual evolvement, mixing institutional, industrial, and organizational elements, there are guidelines for measuring how those connections happen. The Oslo Manual: Guidelines for collecting and interpreting innovation data (OECD, 2005) offers an evolutive perspective about how innovation has been measured, comparing the three editions (1992, 1997 and 2005). The 1992 edition focused on the technological innovation of products and processes. The 1997 edition expanded the concept of innovation, including services. The most recent edition incorporate two new types of innovation: marketing and organizational (OECD, 2005), offering a valid explanation about how innovation in products, process, marketing and in organizational levels connect to each other.

Since 2005, however, the innovation concept has frequently been renewed and enlarged. For a long time, innovation turned as the primary driving force of progress and prosperity, associated with technology, knowledge, processes and products. However, results depend heavily on management innovation (Volberda, Van Den Bosch, & Heij, 2013). Volberda et al. (2013, p.1) named management innovation as “changing a firm’s organizational form, practices and processes in a way that is new to the firm and/or industry, and results in leveraging the firm’s technological knowledge base and its performance in terms of innovation, productivity and competitiveness.”

On the Oslo Manual definition, product innovation refers to the new and significant improvement of goods and services that result in significant firm performance improvement (OECD, 2005). Mostly, such definition raises to technological advances. Nevertheless, technological novelties are contextually dependent. Some technologies may represent a novelty for some particular markets and may not on others as the technological product innovation has a different interpretation of the buyer-seller relationship. Due the possible miscomprehension of a technological product innovation,
the Oslo manual “excludes changes in products that may result in mostly subjective customer satisfaction based on personal taste and aesthetic judgment, and/or derived from following fashions, and/or brought about largely by marketing” (OECD, 2005, p.9). According to the Oslo manual, however, once in some industries, changes are crucial, some improvements notably creative may be considered a product innovation.

As the understanding of innovation spread, this study presents typologies of innovation to enhance other interpretations for innovation.

2.2.2 Typologies of innovation.

Although there are several understandings of what innovation is, one logic is prevalent: innovation is an innovative practice commercially approved (Dosi, 1988). Nevertheless, some typologies used to be adopted to refine this concept. Innovation – as a process to do better or as a disruption – can be brought up as incremental or radical; when innovation is a result of work totally developed inside the organization or combined with outside sources, the typology could be referred to as closed or open innovation. Also, innovation may apply to the managerial level or to the industry where the organization is; typology could refer to organizational innovation or systemic innovation.

2.2.2.1 Incremental and radical innovation.

Incremental and radical innovation were first described by Daft and Becker (1978), as cited by Ettlie, Bridges, and O’Keefe (1984). Innovation may refer to some technological advance (Ettlie, 1980) that could result in an incremental innovation. Incremental innovation is related to processes for the success of many highly profitable companies, usually reputed by their creativity, associated with product-line extensions and cost reductions (Gluck, 1985). As a gradualistic innovation, incremental innovation involves a moderate degree of knowledge if compared to radical innovation (Dewar & Dutton, 1986). The necessity of having new versions of electronic products, for example, gave a particular importance to incremental innovation (Starr, 1992; Zahra & Ellor, 1993).

As incremental innovation advanced, connections to current capabilities, learning and knowledge gain relevance. In a circular flow, “goal of innovation development could drive learning and capability building while improved capabilities could help adopt
challenging goals that stimulate a new level of learning” (Forsman, 2009, p. 501). Although current capabilities are usually considered a prerequisite for radical innovation, some scholars are enlightening a mutual relation among capability construction and incremental innovation (e.g., Forsman, 2009; Hoonsopon & Ruenrom, 2012). Incremental innovation recognizes the reinforcement of previous knowledge. Thus, incremental innovation refers to knowledge building to improve current knowledge and to influence an organization’s incremental innovative capability (M. Subramaniam & Youndt, 2005).

There is not a degree to distinguish incremental and radical innovation (Ettlie, 1980). Nevertheless, scholars agree that radical innovation refers to the adoption of some novel technological practice that results in some new product or service (Dewar & Dutton, 1986). Due the magnitude or cost of change required by the organization, it is sufficient to warrant the designation of a rare and radical, as opposed to incremental, innovation (Ettlie et al., 1984).

Even though radical innovation may permit more gains to an organization since radical innovation refers to developing some radical change, most of the radical innovation are not designed inside large companies (Stringer, 2000). Stringer (2000, p. 71) noted that though the radical innovation used to breed in poorly equipped firms “because most large companies are genetically programmed to preserve the status quo.”

Radical innovation generates complex perceptions. The notion that radical innovation is risky strategy comes from observations taken by managers. As radical innovation reshapes the competitive landscape and creates new market opportunities (Zhou & Li, 2012), a firm’s knowledge base represents its unique resource for radical innovation (M. Subramaniam & Youndt, 2005).

Although there is a comprehensive publication distinguishing radical and incremental innovation, this typology got critiques. For instance, Henderson and Clark (1990) understand that the traditional categorization of innovation as incremental or radical is incomplete and potentially mislead innovation research as minimum improvement in products may provoke enormous change in technological products. This perception aligns to the Oslo Manual (OECD, 2005) about the fluid limit among incremental and radical innovations.
2.2.2.2 *Closed and Open Innovation.*

How to generate ideas that can end results to an organization is a central concern of innovation (Chesbrough, 2003). Some organizations invest huge resources in their labs to protect technological secrets. As reported by Chesbrough (2003), at the end of Twentieth Century, some combined factors like the fast rise in the number and mobility of knowledge workers has eroded the foundations of innovation, as a final issue for organizations.

In an objective logic, firms generate, develop, and commercialize their ideas, represented by their products and services. Strategically, the necessity of keeping knowledge and sustained investment became crucial to face rapid changes in products and routines, mainly in high technological industries. On one hand, keeping knowledge was strategic; on the other hand, to develop and produce a complete product became harder.

Outsourcing and the necessity of complementary core competencies challenged organizations to avoid permeability of knowledge in a more porous landscape (Chesbrough, 2003). Thus, open innovation is not an alternative to reduce investment in research, but a leveraging of external research to complement the work on the inside by obtaining it through some other organization’s outplacement of that knowledge (Chesbrough & Crowther, 2006). The initial concept of open innovation bared a choice of an organization, depending on the organization resources available to obtain an advantage over its competitors (Chesbrough & Appleyard, 2007). Recent studies are questioning if open innovation were a choice or an environment contingency, referring to size, location, and industry where the firm is embedded (Xiaobao, Wei, & Yuzhen, 2013).

Considering the international involvement, the firm embedding in a social context reflects the propensity for open innovation, mainly potentializing export intensity (Laursen, Masciarelli, & Prencipe, 2012). Also, inter-firm relationship used to improve innovation capabilities for an organization involved in an international context (Vaccaro, Parente, & Veloso, 2010).

2.2.2.3 *Level of analysis of innovation.*

This work analyzes innovation at an organizational level. Even so, due to interactions that occur between a firm and its environment, it is relevant to clarify some
aspects that distinguish innovation studies. As a multilevel phenomenon, not only attributes of firms but also the context that firms operate matters (Dosi, 1988; Srholec, 2011). Earlier studies about economic growth recognized innovation as a trigger of change, that could exterminate firms and even industries (Schumpeter, 1939). As innovation becomes dominant in a market context, firms need to adapt to offer counterfactual innovation to remain competitive (Nelson & Winter, 1982; Penrose, 1959).

Innovation can be perceived as associated with the institutional environment, industrial, networks, and organizational. When uncertainty is high, organizations tend to interact more to gain access to both the knowledge and the resources (Powell, 1998). In an institutional perspective, innovation is the result of historical and institutional foundations of where it is demanded, crossing influences from different geographical levels and enabling access to unique technological paths (Conceição, 2008), which could impact a firm’s strategic decisions (Srholec, 2011).

Seminal studies have argued that geographical proximity has promoted knowledge spillover referring innovation on the industrial level (Marshall, 1920). Nevertheless, recent studies in industries which radical innovation is a premise for survival has questioned it. In some cases, proximity has turned into a controversial subject. As proximity to industry peers decreases, decreasing knowledge spillovers, inefficient networks can mean a practical issue because they create and sustain diversity internally (Funk, 2014).

At a network level, diffusion of innovation has been related to the social structure in which an organization is immersed (Rogers, 1976). In a network context, innovation implemented by central actors may be identified as leader’s opinion and become established as norms of the group (Brass, Galaskiewicz, Greve, & Tsai, 2004; Brass, 1995).

At the organizational level, innovation studies have an extent amplitude. Some scholars refer to the antecedents of innovation, like ideas to respond to the complexity of environments and to generate innovation (e.g., Blau & McKinley, 1979). Other studies raise to creativity in organizational teams (Amabile, 1996; Im et al., 2013). Other scholars remark innovation as an extraordinary ability for reconfiguring strategies to face rapid changes in the external environment (Cohen & Levinthal, 1990; Damanpour & Aravind, 2012; Teece et al., 1997). Also, innovation is connected to a culture issue related to team trust (Barczak et al., 2010). As the organization level is the focus of this study, the next item brings more hints about innovation at this level of analysis.
Innovation at organizational level.

Innovation refers to the development and enactment of new ideas by people engaged “in transactions with others within an institutional context” (Van de Ven, 1986, p.604). Such definition is mostly pertinent to the wide variety of technical, product, process, and managerial kinds of innovations that managers get engaged. Scholars have argued that innovation as a process related to factors that facilitate or hinder the process of implementing new ideas and practices, promoting a friendly environment for innovation (Souza & Bruno-Faria, 2013). Other scholars consider innovation as a result of interaction with foreign markets, always renewing internal practices (e.g., Filipescu, Prashantham, Rialp, & Rialp, 2013).

Studies present innovation as a result or as a propellant for some results. Innovation could lead to knowledge acquisition to an organization (Grant, 1996). Collaborative and interactive communication improve innovative practices in organizations (Altamimi, 2014). Also, comparisons between investments in Research & Development (R&D) and performance outcomes into unlike innovation outputs (Coe & Helpman, 1995; Huergo & Moreno, 2011; Sougiannis, 2011).

At the organizational level and its connections to the external environment, scholars show how knowledge can be absorbed and transformed into innovation, as an absorptive capacity (Cohen & Levinthal, 1990). The absorptive capacity becomes a topic for organizational studies that can be linked to some relevant concepts in this research, like creativity (Ireland, Hitt, & Sirmon, 2003; Le Masson et al., 2011), resources (Spencer, 2003; Yli-Renko, Autio, & Sapienza, 2001), entrepreneurship (Alvarez & Busenitz, 2001; Ireland et al., 2003), and internationalization (Lyles, 2003; Oviatt & MacDougall, 1994; Zahra et al., 2000).

How firms articulate their resources and capabilities to be ready for changes in the environment also is a relevant topic for innovation. Dynamic capability is a construct sustained in three dimensions: process, position, and paths (Teece et al., 1997). Some works have connected the dynamic capabilities framework to creativity, as creativity may contribute to rapid change (Kyvik, Zhang, & Romero-Martinez, 2012), and considering that lifecycles are getting shorter in dynamic contexts (Helfat & Peteraf, 2003). Recently, Teece (2014) proposed dynamic capabilities as an evolutionary path and that dynamic capabilities aggregates processes and entrepreneurial orchestration of the firm’s activities, named as sensing, seizing, and transforming. Sensing refers to both the identification and
the assessment of opportunities in the domestic or foreign markets; *Seizing* relates to the mobilization of resources to take advantage of opportunities globally, capturing value to the firm; *transforming* is the continued renewal of the firms’ capabilities to face innovation (Teece, 2014).

Dynamic capabilities are the capacity to sustain performance for a long time, due to the ability to change and to adapt to external events and technological advance (Teece et al., 1997). Dynamic capabilities contribute to an evolutionary perspective on organizations, complementing some static assumptions from RBV (Kor et al., 2007). Another connecting point for this research is entrepreneurship (Weerawardena, Mort, Liesch, & Knight, 2007; Zahra, Sapienza, & Davidsson, 2006). Also, the uncertainty that characterizes international business has brought dynamic capabilities framework to international business studies (Knight & Cavusgil, 2004; Sirmon et al., 2011).

Generating innovation to the organization is crucial for achieving sustainable competitive advantage (Zahra & George, 2002). Next item goes further in the perspective of innovative capability as an input for innovation.

### 2.2.3 Innovative capability.

The determinants of innovation in firms have received different approaches (Zawislak, Alves, Tello-Gamarra, Barbieux, & Reichert, 2013). Technology development capability approach proposes that skills, knowledge and experience allow firms to differ from others that are in touch with the existent technology (Bell & Pavitt, 1995); Operations capability refers to the ability to change, develop and use technology (Lall, 1992); Management capability relates to the ability of combining human and physical resources to anticipate shortages (Lazonick, 1992); Transaction capability relates to the ability of reducing transaction costs (Langlois, 2003).

By definition, innovation is the development and implementation of new ideas by people always engaged in transactions with others from an institutional perspective (Van de Ven, 1986). The faculty of absorbing such ideas and transforming into new products, services, and processes is the innovative capability. The innovative capability is an organizational capacity that allows the organization to engage and support new ideas, novelty, experimentation and creative processes that may result in innovations (Lumpkin & Dess, 1996). In this sense, at the organizational level, innovation is an output of innovative capability. Innovative capability represents the development and
implementation of new ideas, products, services and processes to solve problems (Bell, 2005).

As lifecycles have reduced, the increasing competition obliged firms to centralize their efforts in innovative actions. In a broad sense, the innovative capability can lead firms to sales growth due to new products and services taking advantage of the first market entrant, and also leveraging market shares (Kafouros, Buckley, Sharp, & Wang, 2008).

While retaining and elaborating knowledge, a firm captures knowledge to future usage not only for developing incremental innovation but also for creating radical innovation (Subramaniam & Youndt, 2005). The sources of the firm’s capabilities to handle a competitive challenge to innovate may be internal and external (Zahra & George, 2002). These capabilities progress reflects changes in technological paths over time (Dosi, 1988).

Considering sources of capabilities, integration and technology commercialization, Zahra and George (2002) suggested that innovative capability carries different levels of product, process, and organization innovations. Authors associated absorptive capability approach regarding sources of knowledge – exploration and exploitation (Cohen & Levinthal, 1990) – and dynamic capabilities approach referring to how organizations combine such sources to achieve competitiveness (Teece et al., 1997; Teece, 2014).

Following Zahra and George (2002), Jiménez-Jiménez and Sanz-Valle (2011) examined the relation between organizational learning and innovation with organizational performance using a sample of 451 Spanish firms. Results confirm that organizational learning and innovation contribute to the organizational performance and that organizational learning affects innovation. Authors recommended that firms should try to keep inside the firm for forthcoming usage the knowledge they create.

For this research, the innovative capability concept follows Subramaniam and Youndt (2005) definition as a result of intellectual capital accumulate and process knowledge differently orchestrated during the interrelationships of individuals that support both incremental and radical innovations. In sum, this research argues that innovative capability represents the ability an organization develops to face and respond to innovation by a creation of a product, a process or an organizational innovation. In this sense, creativity is a crucial antecedent to develop the innovative capability to create new
products, to create novel ways to produce them, and also discover an alternative to accelerate the process of converting ideas into innovation.

Figure 5 depicts the relation between organizational creativity and innovative capability, considering the contribution from Amabile’s Model (Amabile et al., 1996) and innovative capability assessment applied by Jiménez-Jiménez and Sanz-Valle, (2011) based on Zahra and George (2002).

Figure 5: The relationship between organizational creativity with innovative capability
Source: The author

Figure 5 illustrates the relationship between organizational creativity with innovative capability, considering organizational motivation, resources and management practices as triggers of organizational creativity.

Nevertheless, this relationship between organizational creativity with innovative capability may affect differently product innovation, process innovation, and organizational innovation. First, the innovative capability is associated with strategic decision making; product development creates value for firms within dynamic markets (Eisenhardt & Tabrizi, 1995; Eisenhardt & Martin, 1999). Also, even minimal innovation in products may lead companies to propose dramatic changes in the economic environment (Henderson & Clark, 1990). Not only product innovation promotes competitive advantage but also offer a storage of experience to innovativeness (Leiponen, 2005; Turner, Mitchell, & Bettis, 2013). Second, innovative capability embraces the construction of process innovation. Process innovation involves creating or refining means of production, service or even administrative operations (Khazanchi, Lewis, & Boyer, 2007). Pre-existent knowledge has direct influence not only on process innovation but also on product innovation (Leiponen, 2005; Turner et al., 2013). How firms
reconfigure organizational processes by technological innovations is especially valued in
dynamic environments (Piening & Salge, 2015; Teece et al., 1997; Teece, 2014). While
reflecting antecedents of the innovative capability, process innovation is mainly molded
by the gaining of embodied knowledge, which acts as a crucial instrument for answering
to weak internal capabilities (Hervas-Oliver, Sempere-Ripoll, & Boronat-Moll, 2014).
Third, the innovative capability also refers to shape organizational innovation².
Organizational innovation is novel organizational structures, best practices, new
administrative standards, as well as processes, and procedures that could create value for
the organization to achieve its goals (Birkinshaw, Hamel, & Mol, 2008; Bouquet &
Birkinshaw, 2011; Mol & Birkinshaw, 2014).

Scholars investigated the generation of managerial innovation as a sequential
cycle. First, there is dissatisfaction with the status quo. Second, occurs the inspiration,
usually from external influence. Third, the invention takes place, activated by a blending
of dissatisfaction and inspiration. Fourth, validation happens, from both inside and
outside opinions. Fifth, there is the diffusion to the market (Birkinshaw & Mol, 2006).
Damanpour and Aravind (2012) proposed types of managerial innovation: strategy and
structure innovations; innovation in forms vs. in procedures; information technologies
and administrative dimensions; and innovation radicalness.

From Penrose's seminal studies (Penrose, 1959), innovation and entrepreneurial
behavior are closely related to motives for firms to grow. Innovation links to a response
to systemic change that obliges firms to renew products and processes to keep themselves
competitive. Entrepreneurial behavior is a subjective posture of decision-making to
provoke changes that can offer a better position, better processes and also borrow his/her
history to keep competitive advantages to a firm. Entrepreneurial behavior carries
sustainable competitive advantages in a dynamic perspective (Teece et al., 1997) and
converts an individual skill into an organizational capability (Kor et al., 2007), emulating
innovation. This closer historical relation between innovation and entrepreneurship has a
mutual nature; that is creativity (Penrose, 1959).

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²Organizational innovation has been cited sometimes as a managerial innovation. Organizational innovation
has been referred in economic literature to explain how an organization rebuilding process adopts
technological advances, basing in Schumpeter's fifth innovation type – “new way of organizing”
(Damanpour & Aravind, 2012). Managerial innovations involve alterations in old management processes
and practices that affect the management practice (Hamel, 2006). In this research both management
innovation and organizational innovation are interchanged to explain how organizations innovate in their
practices both to assimilate new technologies and to absorb new management practices to promote
innovative strategies, process development, and new approaches to solve organizational problems.
2.3 The Entrepreneurial Capability Construct

Organizational studies have been investigating the entrepreneurial behavior for a long time. In his prior studies of innovation and economic advance, Schumpeter (1939) considered the entrepreneur as the primary trigger for change. Penrose (1959) endorsed this view. She referred to the entrepreneur as the key for implementing routines and innovation that could bring better position to a firm to face its competitors. Decision-making is a foremost entrepreneurial ability, mainly because it involves aspects that are beyond rational boundaries (Simon, 1957).

Entrepreneurial behavior is intrinsically subjective. It includes features of the entrepreneur such as their knowledge, resources, skills, and the process of discovery and creativity, which constitute the “heart of entrepreneurship” (Kor, Mahoney, & Michael, 2007, p.1187). This subjective viewpoint allows the entrepreneur to use creative responses, which may sometimes be contrary to what would be considered the most rational course of action in a given environment (Kor et al., 2007; Penrose, 1959) or in a certain momentum (Mahoney, 2000). When entrepreneurs share their problem-solving abilities as well as their capacity to convert ideas into new standards, they are translating entrepreneurial resources into the entrepreneurial capability of the firm (Mosakowski, 1998).

Recently, a new approach to entrepreneurship has gained relevance: Effectuation Theory is an alternative way of observing how firms behave, diversifying the prevalent economic theoretical approaches about entrepreneurship (Sarasvathy, 2001). The next sub-section provides aspects of the theoretical construction of the Effectuation Theory. After, there is an overview of dimensions of the Effectuation Theory. Afterward, a discussion promotes proximity of the Effectuation Theory and international business studies.

2.3.1 Effectuation Theory development.

Influenced by Herbert Simon, the Effectuation Theory is an emergent conceptual framework. The Effectuation Theory is based on Simon’s concept of bounded rationality (Simon, 1957, 1981), Levitt and March’s studies about learning (Levitt & March, 1988), Mintzberg’s concept about patterns of strategy formation (or not) (Mintzberg, 1978), and
Weick’s theory of enactment-retention-selection in decision-making into organizations (Weick, 1999).

Although the Effectuation Theory occurred in Sarasvathy, Simon, and Lave (1998), and focused on Sarasvathy (2001), it was in Sarasvathy (2004) the presentation of Effectuation as a singular perspective that intends to understand why entrepreneurship should deserve a particular way of investigation. She appointed three reasons: a.) there is a tendency to misunderstand the firm and the entrepreneur; b.) entrepreneurs are usually considered homogeneous, and c.) researchers tend to “rest on assumptions of opportunism both at the individual and firm levels of analysis” (Sarasvathy, 2004, p.520).

Although entrepreneurship is constant in the Effectuation Theory evolution, Sarasvathy and Dew (2008, p.732) expand horizons of the effectuation approach. To them “effectuation is not a theory about entrepreneurs per se; it is a theory of entrepreneurial expertise.” Effectuation is about how experienced entrepreneurs build new ventures and/or new markets. It is an approach to examine the way entrepreneurs think, act, make decisions and solve problems (Sarasvathy & Dew, 2008). Nonetheless, effectuation is not just a characteristic. It is also an ability that needs to be developed to deal with uncertainty (Perry, Chandler, & Markova, 2012; Sarasvathy & Dew, 2008) as well as to cultivate, strengthen and maintain healthy relationships (Chandler, DeTienne, McKelvie, & Mumford, 2011). Hence, instead of opportunism, creative altruism is applied. Effectuation behavior enables the conversion of problems into opportunities to reach new markets (Sarasvathy, 2004, citing Simon, 1981).

Relationships under the effectuation perspective are collaborative. This premise is evolutionary, according to Sarasvathy and Dew (2008). Citing Thompson (1998), Sarasvathy and Dew (2008) considered that natural selection sometimes had favored selfish behavior and other times collective behavior during humanity’s evolution. As a human being, he/she is managing situations among other entrepreneurs, involving behavioral variations, like heterogeneity (people are different from one other, and so their behavior is); lability (people change constantly, and so preferences, cultures, and institutions do), and contextually (people play roles depending where and when they are, i.e., sometimes take risks under hard situations and other times are afraid of simpler circumstances) (Sarasvathy & Dew, 2008).

For the entrepreneur the intuition is relevant. According to Sarasvathy (2003), intuition for entrepreneurs is not a naïve situation apart from experience; it is related to the language they use, the stories they tell, the way they handle problems. These
characteristics are associated with informal institutional behavior in that they accept each other. This relationship permits patterns of behavior that oppose what MBA courses explain, which usually teach entrepreneurship as a business plan recipe (Sarasvathy, 2003). Effectuators follow intuition better than rational plans when uncertainty happens (Sarasvathy, Kumar, York, & Bhagavatula, 2014; Sarasvathy, 2003, 2004).

Entrepreneurs borrow their experience, knowledge, and creativity to their firms (Mosakowski, 1998). It influences their decisions, as in choosing between more aggressive or defensive tactics (Wales, Parida, & Patel, 2013), deciding between innovating or adapting (Lassen & Nielsen, 2009), or opting in taking risks levels (Brockhaus, 1980; Grichnik, 2008). The multiple combinations of these features may offer “a large number of possibilities for entrepreneurial choices and activities, which in turn produces different firm-level economic performance outcomes” (Kor et al., 2007, p.1192).

### 2.3.2 Dimensions of Effectuation Theory.

Sarasvathy (2001) defined two primary processes in entrepreneurial behavior – causation and effectuation. For Perry et al. (2012), causation and effectuation processes are concepts on opposite sides of a line, as a continuum. Entrepreneurs move over this line regularly, making decisions, choosing alternatives, sometimes more systematic (causation), other times under intuition and without a predictive path (effectuation). In sum, Figure 6 depicts those characteristics.

<table>
<thead>
<tr>
<th>Causation Process</th>
<th>Effectuation Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a given goal to achieve (usually well-structured and specific)</td>
<td>There is a given set of means</td>
</tr>
<tr>
<td>There is a set of alternative means or causes (usually originated by a decision-making process)</td>
<td>Some effects or possible operationalization of generalized aspirations arise during the decision process</td>
</tr>
<tr>
<td>There are constraints on possible means (usually originated in the environment)</td>
<td>Constraints are taken as opportunities or as effect from those</td>
</tr>
<tr>
<td>There is an expectation of gains; that impose criteria for selecting means</td>
<td>Effects are chosen, either it may be affordable loss or acceptable risk, given the means available</td>
</tr>
<tr>
<td>Usually exploits preexistent knowledge</td>
<td>Often exploits contingencies</td>
</tr>
<tr>
<td>Try to predict the future, and consequently, to control it</td>
<td>If the future cannot be controlled, it is a waste of time to predict it. The effectuator also wants to influence and shape the future, but he/she does not follow trends (Saras D. Sarasvathy &amp; Dew, 2008)</td>
</tr>
<tr>
<td>Reach for market share in existing markets, through competitive advantages</td>
<td>New markets are created by alliances and other cooperative strategies</td>
</tr>
</tbody>
</table>
As the market is this, I can segment it, target it and reach the customer.

Given who I am, what I know, whom I know, I make partnerships; I can define/create one of the several possible markets (Sarasvathy, 2003).

Problems are like a puzzle that I know the picture to be assembled.

Problems are like patchwork, which I assemble according to the pieces I have, and the result may be something different, depending on the imagination (Sarasvathy, 2003).

Figure 6: Comparing causation X effectuation
Adapted from Sarasvathy and Dew (2008); Sarasvathy (2001, 2003)

Figure 7 depicts the relationship between organizational creativity with entrepreneurial capability. The triggers of organizational creativity, i.e., organizational motivation, resources, and management practices (Amabile, 1996), connects to the Effectuation Theory assumptions. This proposition predicts that there is an association between organizational creativity with entrepreneurial capability in two diverse dimensions, causation and effectuation processes (Read & Sarasvathy, 2005; Sarasvathy, 2001, 2004).

![Figure 7](image)

Figure 7: The relationship between organizational creativity with entrepreneurial capability
Source: The author

In short, opposing to the causation process, the effectuation process is based on four principles (Sarasvathy, 2001): a.) affordable loss is more observed than expected returns; b.) strategic alliances are more relevant than competitive analyses; c.) exploitation of contingencies is more effective than preexisting knowledge, and d.) if there is no control over the future; it is not necessary to predict it.
2.3.2.1 Causation dimension of Entrepreneurial capability.

Considering that the entrepreneurial capability is the entrepreneurial behavior converted to an organizational resource to handle and solve problems, organizational creativity influences entrepreneurial capability in two primary dimensions. Firstly, when organizational creativity affects the causation process of decision-making, organizational creativity is consistent with planning. The causation dimension includes activities as creative opportunity recognition and also the business plan development (Chandler et al., 2011; Sarasvathy & Dew, 2008). This research considers that not only the causation dimension of entrepreneurial capability has implications on organizational creativity, but the effectuation dimension also does. When organizational creativity influences the effectuation process of decision-making, organizational creativity is consistent with emergent strategies (Mintzberg, 1987). The selection of alternatives to handle with uncertainty bases on experimentation, loss affordability, flexibility, and pre-commitments (Chandler et al., 2011; Sarasvathy, 2001), as sub-dimensions of the effectuation process of decision-making.

2.3.2.2 Effectuation dimension of entrepreneurial capability.

The effectuation logic of entrepreneurial behavior has been researched in comparison to causation dimension (Chandler et al., 2011; Faia, Rosa, & Machado, 2014). Nevertheless, as a reflective construct, effectuation presents some singularity that deserves further investigation (Arend, Sarooghi, & Burkemper, 2015; Galkina & Chetty, 2015; Perry et al., 2012). Studies concluded that the measurement of effectuation construct should be under second order. Assessments that consider the four sub-dimensions (experimentation, loss affordability, flexibility, and pre-commitments) away from each other may respond better (Chandler et al., 2011; Faia et al., 2014).

Experimentation: Openness to new ideas is a feature of creative people, once such individuals consider multiple possibilities and experimentation to develop skills of persuasion and encourage positive responses to new ideas on the organizational level (Matthews, 2010). More creative firms have something different during change and stability as they need to fly off, in several directions to become more creative and innovative (Mintzberg, 1987). As an example, experimentation is a driver for taking-risk behavior when artists act as entrepreneurs, once through
experimentation, they blur the boundaries between conventional disciplines (Poorsoltan, 2012). As a construct, experimentation is the process of discovering and developing dynamic capabilities, leading to the point of experience that represents trial-and-error efforts fueled by some tensions that exist in the organizational environment (Turcan & Juho, 2014). The conversion of ideas in alternatives to solve problems is a feature of the organizational creativity applied as an entrepreneurial capability (Sarasvathy, 2001).

**Affordable loss:** The Effectuator looks for creative alternatives to establish prior commitments, avoid investing in projects that would not have the best-expected excellent return (Sitoh, Pan, & Yu, 2014). In this sense, organizational creativity may influence the process of discovering such alternatives, given the loss affordability. The entrepreneur’s affordability of loss in the effectuation logic is in the opposite sense of the causation logic of expecting returns. The effectuator’s sense is to create prospective options in the present rather than maximize returns as an expectation for the future (Sarasvathy, 2001; Svensrud & Asvoll, 2012).

**Flexibility:** Entrepreneurs use effectuation logic for searching opportunities. They start with generalized aspirations applying the resources they have available (Perry et al., 2012). As the objective is not clear, flexibility is necessary to scan opportunities to employ their experience, their knowledge, and their network to take advantage of environmental contingencies (Sarasvathy, 2001). As the future is something to be build, rigid plans are useless (Read & Sarasvathy, 2005).

Although recent studies confirmed that goal orientation avoids applying organizational creativity in situations of high uncertainty (Blauth, Mauer, & Brettel, 2014), other studies confirmed that flexibility also is a feature of creative individuals. Such individuals absorb information and are more open to new experiences (de Stobbeleir et al., 2011).

**Pre-commitments:** Pre-commitments are important to effectuators to minimize risks (Read, Song, & Smit, 2009). There is a share of interests between the firm and the stakeholders to prospect opportunities. Scholars have been skeptic about pre-commitments as an effectuation logic sub-dimension; once previous agreements also have causation features (Chandler et al., 2011; Faia et al., 2014). Otherwise, pre-commitments may represent levels of formalization that can allow the emergence of bureaucratic behavior. On the one hand, as bureaucracy inhibits creativity (Cummings, 1965), creative individuals avoid the formalization of pre-
commitments, mitigating entrepreneurial capability. On the other hand, entrepreneurs state precommitments among a previous network (Galkina & Chetty, 2015).

2.3.3 Effectuation Theory in the international business context.

Several international business scholars have looked at how innovation and organizational capabilities relate to international business (for instance, Cavusgil & Knight, 2015; Golovko & Valentini, 2011; Knight & Cavusgil, 2004). In parallel, as an entrepreneurial process (Schweizer et al., 2010), internationalization has been present as a complementary perspective to the explanatory model of the internationalization process developed by Johanson and Vahlne (1977), which became known as the Uppsala model. As portrayed in Schweizer et al., (2010, p.365), this amplified approach “incorporates entrepreneurial capabilities as a stable variable, and exploiting contingencies as a change variable.”

However, a crucial premise of the Effectuation Theory is that entrepreneurs used to plan less than organizational study predicts. The entrepreneurial decision-making process is related to how much entrepreneurs can afford (instead of expected returns), whom they can connect to as a partner, which contingencies may exploit, and a non-controllable future (as it may be constructed) (Sarasvathy, 2001). Entrepreneurs learn by doing, as noticed by Zahra et al. (2006, p.14): “They [entrepreneurs] will rarely have the luxury of planning ahead how they might convert substantive capabilities over time, much less the luxury of waiting for or comparing the results of multiple experiments.”

Sarasvathy, Kumar, York, and Bhagavatula (2014) proposed some extension of internationalization research under effectuation approach, to help to resolve some inconsistency in international business studies, as a complement of Uppsala’s Model. Citing Jones, Coviello and Tang’s (2011, p.648) research over 323 relevant journals Sarasvathy et al. (2014, p.72) stated that given the “multi-disciplinary and multi-theoretical nature of IE [International Business]” need for “iterative process of debate, discussion as well as testing”, wherein the logic of effectuation is suggested.

Next section explores not only the objective role of organizational creativity – innovative capability – but also the subjective role of organizational creativity – entrepreneurial capability as mediators of international involvement.
2.4 The International Involvement Construct

Following Penrose’s (1959) assumptions, this research proposes that organizational creativity is a crucial and intangible resource to build up capabilities (Javidan, 1998). This section explores not only an objective role of organizational creativity – as an antecedent of innovative capability – but also a subjective role of organizational creativity – as an antecedent of entrepreneurial capability as mediators of international involvement.

International business studies usually follow two main trends, one with rational-economic bias (as in Cantwell, Dunning, & Lundan, 2010; Dunning, 1980, 1988) and other behavioral. As the research focus is the organizational environment, aspects related to the manager’s behavior delimits this study, mainly concerning about how such behavior reflects creative ability, as an entrepreneurial feature.

Johanson and Wiedersheim-Paul (1975) observed that the steps of internationalization of firms depend on the development of knowledge, activity and organizational structure, suggesting therefore that knowledge for internationalization is dependent on the experience of the decision makers. Schweizer, Vahlne, and Johanson (2010) found that decision-making in international business has characteristics of entrepreneurship. Entrepreneurial ability is an antecedent condition of the exploitation of contingencies in international environments.

Given the technological advances and accelerated the momentum of internationalization, it has become difficult to keep on explaining internationalization through the entry modes perspective (Johanson & Vahlne, 2009; Schweizer et al., 2010). However, as a starting point to explain how this research adopted international involvement as a measure of the internationalization process, this section presents an evolutionary path of theory in International Business field, focusing on behavioral approaches.

According to Schweizer et al. (2010), the Effectuation Theory is imperative to the understanding of internationalization as a context in which entrepreneurs, as decision makers, act in unpredictable environments. This research does not presume that the effectuation process of decision-making is prevalent in international business. However, since entrepreneurs use creative abilities to solve problems in unpredictable environments (Sarasvathy, 2001), this research proposes that the Effectuation Theory may support
organizational creativity as an antecedent of entrepreneurial capability influenced by the international involvement.

2.4.1 The behavioral explanation of internationalization.

The behavioral approach to international business evolved from two sources - the perspective of resources (Penrose, 1959) and technological advances as a promoter of innovation (Schumpeter, 1942) while technological advancement allows the most advantageous entry into new markets. In this approach, the seminal studies of Johanson and Vahlne (1977), Johanson and Wiedersheim-Paul (1975) and Johanson and Vahlne (1990) stand out because they understand internationalization as a gradual process that takes place through the acquired knowledge and physical distance from the target market that constrains it. Other perspectives were added later, such as the experience (Chetty, Eriksson, & Lindbergh, 2006; Eriksson et al. 1997), learning (Forsgren, 2002), relationships (Johanson & Vahlne, 2003, 2009) and entrepreneurial behavior (Schweizer, Vahlne, & Johanson, 2010).

This research does not intend to evaluate entrepreneurship based on how old firms were when they started operating in an international market. This perspective is in the same direction of the Schweizer et al. (2010) conceptual proposal for internationalization as an entrepreneurial process. Also, this research also is aligned to Knight and Cavusgil (2004), that consider innovation, knowledge and capabilities as critical issues for the internationalization process of entrepreneurial firms.

On the topic of experience and its relationships to the gradual advance in international business, Eriksson et al. (1997) addressed the lack of experience as inhibiting the advancement in business with the outside. Chang and Chiang (2008) observed that the international experience of designers has expanded its creative capacity. Previously, Luo and Peng (1999) approximated experience and absorptive capacity topics. They proposed that learning different ways of doing things also promotes innovation and consequently improves the performance, from the diversity of such experiences.
2.4.2 **Internationalization as a relational consequence.**

About relationships, both among individuals and among organizations, the topic has been gaining relevance since Johanson and Vahlne (2003). Authors observed the evolution of a case in the pharmaceutical industry, which has networks among individuals before foundation, and accelerated the internationalization process. Johanson and Vahlne (2009) revisited their seminal article (Johanson & Vahlne, 1977), adding the issue of easing communication to the previous model. For the authors, the business environment is a net of relationships, differentiating the neoclassical model via agents acting separately. Thus, relationships promote the building bonds of trust and knowledge creation within a relational network.

The prospect of networked relationships in international business (for example, Johanson & Vahlne, 2009) favors recognition of opportunities during business, rather than a plan to seek specific opportunities. Therefore, the previously existing relationships facilitate taking advantage of prior knowledge to discover opportunities. Consequently, the relational environment enables the entrepreneur to find an alternative business model based more on established knowledge in their relationships than following recommendations from others (Johanson & Vahlne, 2009).

Besides the high flow of possibilities for improving a sort of resources in a firm that connects the international environment (Coviello, 2006), international networks established during the international experience reflects a knowledge flow. In an amplified sense, knowledge diversity brings benefits that safeguards institutions and networks where the firm plays, avoiding to become locked into old technologies (Kotabe, Dunlap-Hinkler, Parente, & Mishra, 2007).

During the network construction, the creative process takes place (Baer, 2012). The search for associations based on knowledge generated from personal experience starts with the combination of experiences among the parties in a creative manner (Harms & Schiele, 2012). While acting and working together, entrepreneurs may be more willing to adopt creative responses in the face of adversities that may arise, to turn contingencies into opportunities.

In international business, a network may refer to individuals or an organization (Eberhard & Craig, 2013). Such connections may occur even in virtual spaces (Sigfusson & Chetty, 2013). In a foreign environment, where the risk perception used to be higher,
entrepreneurs looking for connections on other networks in foreign countries to gain trust (Smith & Ryan, 2012).

2.4.3 International entrepreneurship.

For decades, the topic of entrepreneurship has been recurring in organizational studies. In recent years, however, the aggressive spirit of International New Ventures (INV) has received attention from researchers in organizational research (for example, McDougall, 1989; Oviatt & McDougall, 1994; 2005; McDougall & Oviatt, 2000), giving rise to a branch of specific research.

The early years of an organization are crucial to its survival. Besides surviving, some entrepreneurs rehearse their first steps in the foreign market in their first years of existence. Confronting theories of the international business based on gradualism that involves learning and commitment, these entrepreneurs start playing into international markets, often distant both geographically and physically (Oviatt & McDougall, 1994).

According to Yamakawa, Peng, and Deeds (2008), some aspects must be observed to understand the entry of such ventures in developed and emerging economies; among them, the resources and capabilities that lead to venture abroad in adverse institutional environments.

Andersson (2011) investigated how the INV could enter in many markets in a short period of time, through cooperation with local networks. He found that the knowledge and networks previously established by the founders were essential in the fast international expansion. The effectuation approach explains the ability of entrepreneurs to create opportunities, along with their network partners, to act as a tool of international insertion (Andersson, 2011).

In longitudinal and qualitative research over new ventures firms, Gabrielsson, and Gabrielsson (2013, p.1372) evaluated if decision-making patterns change in international business to business new ventures, based on assumptions of the Effectuation Theory. They interpreted their results considering that the “effectuation-based decision-making increased the role of opportunity creation as a necessary antecedent for growth and the importance of explorative learning for long-term survival as well.” As individuals take experience abroad, they connect to different institutional environments that allow better responses (Delios, 2011). According to Delios (2011), the experience can be a valued
asset to the organization, as it allows to generate knowledge and capabilities that may be useful in different institutional contexts.

The creative process takes place during the network development. The search for associations based on knowledge generated from a personal experience occurs through a combination of experiences between the parties in a creative manner (Harms & Schiele, 2012). Personal experience may result in learning through experience, which can generate innovation at its origin (da Rocha et al., 2009). When entrepreneurs act and work together, entrepreneurs may be more willing to adopt creative responses in the face of contingencies that may arise, turn them into opportunities to get more involvement in international markets.

2.4.4 International involvement.

Usually, a firm uses internal and external sources of capabilities to compete (Zahra & Nielsen, 2002). Nevertheless, the way how entrepreneurs manage such capabilities is crucial to turn them efficient (Barney, 1999). Since the focus of this research is the organizational environment, attention must be turned to aspects related to the manager’s behavior, especially about how organizational creativity – a high-level resource – affects the international involvement of the firm, mediated by both innovative and entrepreneurial capabilities.

The steps of the firm’s international involvement depend on the development of knowledge, activity, and organizational structure, suggesting, therefore, that knowledge about a firm’s international involvement is dependent upon the current experience of its decision makers (Johanson & Wiedersheim-paul, 1975; Schweizer et al., 2010).

2.4.3.1 The mediating role of innovative capability between organizational creativity and international involvement.

Knight and Kim (2009) proposed that a collection of intangible resources and capabilities be especially outstanding to small and medium firms to improve their international involvement. Scholars suggest that international orientation, international innovativeness, and international market orientation are all significant dimensions of international business competence (Knight & Kim, 2009).
International orientation is an intangible and scarce resource that contributes to bringing competitive advantage to a firm. When the entrepreneurs detain knowledge or this expertise in embedded within the firm, the unique potential knowledge is available, depending on actions to correctly interpret and convert into an advantage (Mahoney, 1995). Firms internationally oriented tend to achieve better outcomes in international markets (Oviatt & MacDougall, 1994). Such firms have a proactive organizational culture that helps to develop resources for achieving better results in international markets (Knight & Cavusgil, 2004).

International innovativeness is the capacity to create products or processes, or even new ideas to international markets (Damanpour & Aravind, 2012; Knight & Kim, 2009). A first obstacle to implementing a new concept sometimes is internal, once organizations develop barriers that must be overlapped to get recognition about the need for new ideas (De Ven, 1986). International innovativeness combines to international orientation capability. As a firm go global, the learning gained abroad interchanges with local sources of information, and facilitates the introduction of innovation into international markets (Autio et al., 2000).

International market orientation takes place when the organization and customers interact to develop market intelligence about customer needs and, afterward disseminate such intelligence throughout the firm, expanding the responsiveness to it (Kohli & Jaworski, 1990). International market orientation is a critical subject because there is a confrontation of ideas inside the firm. The market orientation of domestic markets tends to fragilize ideas mainly when the performance is well, and international markets have too many variables to control (Cadogan, Diamantopoulos, & Siguaw, 2002; Garrido, Larentis, & Rossi, 2006). Despite such barriers, firms with international market orientation get better performance (Cadogan, Souchon, & Procter, 2008) and expand their network (Ellis, 2010b).

To offer a discussion about the mediating role of innovative capability between organizational creativity and international involvement is necessary to recover some aspects of organizational creativity as an antecedent of innovation. Scholars have shown that creativity and innovation have a reciprocal relationship. Im et al. (2013) evaluated antecedents and consequences of creativity in product innovation teams. Barczak et al. (2010) researched antecedents of team creativity considering team emotional intelligence, trust and collaborative culture. Isaksen and Ekvall (2010) investigated the tension between debate and conflict in creative climates. Çokpekin and Knudsen (2012)
investigated whether environment led to product and process innovation in small and medium-sized firms and concluded that environment does not yield the same results for product and process innovation.

The assumption that there is a direct relationship between innovative capability with international involvement anchors on earlier studies that partially investigated this field. Hoonsopon and Ruenrom (2012) evaluated the impact of organizational capabilities on the development of radical and incremental product innovation and concluded that new products of firms, which offer new and superior benefits to clients, increase the market and financial performance of firms. Analyzing 15 years of Spanish manufacturing firms Huergo and Moreno (2011) checked if participation in technological activities, R&D intensity, the generation of innovations have implications over outputs on total factor productivity growth. Results confirmed their proposal. Baer (2012) verified the individuals' motivation to put their ideas into practice mediates creativity and implements relationships. Results attested that individuals overlapped difficulties as they see their ideas implemented. The assumption that there is a direct link between innovative capability with international involvement is partially based on a validated instrument proposed by Jiménez-Jiménez and Sanz-Valle (2011) based on Zahra and George (2002).

Innovative capability acts as an antecedent of the international involvement, reinforcing international orientation, international innovativeness, and international market orientation development. The innovative capability construct proposed in this research encompasses three aspects of innovation: product innovation, process innovation, and organization innovation. International Business literature has been investigating such connections, sometimes in an integrative perspective, other times taken separately.

As previously presented, the construct of Innovative Capability includes three different aspects, product innovation, process innovation and organizational innovation (Zahra & George, 2002), this research explores such aspects alternately to understand how international involvement intensifies.

There is some controversy about the correlation between innovation and the path of internationalization – firms that internationalize are more innovative, or they become more innovative due to internationalization (e.g., Chiva, Ghauri, & Alegre, 2014). Literature has a sense of conciliation that in local or global markets firms launch new products due the fear of obsolescence (Autio et al., 2000; Patel, Fernhaber, McDougall-Covin, & Have, 2014). Despite such controversy, the relation between product
innovation, process innovation, and organizational innovation has been investigated in international business.

**Product innovation:** Some scholars concluded that rapid international growth is clearly outlined to a strong commitment to product innovation (e.g., Bell, Crick, & Young, 2004). How firms behave, as they get involved in international markets, has been investigated under the lens of effectuation. For example, Berends, Jelinek, Reymen, and Stultiëns (2014) examining product innovation paths in five small firms across 352 total events observed that there is an early effectuation logic, which progressively turned toward causation logic over time.

**Process innovation:** Although product innovation may speed up the international involvement, it takes time to get, assimilate, and use external knowledge. Usually, this path depends on small changes in products to absorb new technologies as a process innovation (Zahra & George, 2002). In dynamic environments, the reconfiguration of processes by technological innovations is especially prized (Piening & Salge, 2015). Process innovations led to a more efficient production and reduce a firm’s unit costs (Rammer & Schmiele, 2008) by a learning process of technological assimilation (Pla-Barber & Alegre, 2014). When involved in international markets, the firm not only improves competitiveness at home but also get additional opportunities present in international markets (Cadogan et al., 2008), given the improvement of processes characterized by the inter-relationship of companies involved abroad (Ellis, 2010b; Yu & Si, 2012).

**Organizational innovation:** Some studies refer to organizational innovation as the best fusion between creativity and innovation (e.g., de Sousa, Pellissier, & Monteiro, 2012). The sense of organizational innovation as a discovery process of new ways to do thing better refers to an organizational learning (Wang, Hermens, Huang, & Chelliah, 2015). Organizational learning is a process of development of “new way of seeing things or understanding them within organizations, which implies new organizational knowledge” (Chiva et al., 2014, p.689). The Oslo Manual refers to organizational innovation as the starter of significantly changed organizational structures allied with the application of unconventional management techniques and the employment of new or substantially improved strategic orientations (OECD, 2005). Organizational innovation is related to operational autonomy. In international business, the higher operational autonomy is, the more the subsidiary should be able to absorb from outside sources and improve its resource base (Keupp, Palmié, & Gassmann, 2011).
Taking into account previous studies that approximate not only organizational creativity and innovative capability but also innovative capability and international involvement, this study proposes that innovative capability mediates the relationship between organizational creativity and international involvement, in an objective sense. Organizational creativity acts as the resource that nurtures innovative capability, as Hypothesis 2:

\[ H2: \text{The innovative capability mediates the relationship between organizational creativity with international involvement.} \]

The next item explores the subjective role of entrepreneurial capability as a mediator between organizational creativity and international involvement.

### 2.4.3.2 The mediating role of entrepreneurial capability between organizational creativity and the international involvement.

In international markets, a firm that trusts on emergent goals tends to remain flexible concerning their strategic objectives. On the other hand, firms relying on defined targets would have fixed plans about the selection of markets, entry modes, and specific strategies (Harms & Schiele, 2012). Effectuators usually are more flexible to handle with external environment changes, new means at disposal, and even eventual unexpected stakeholders demand (Kalinic, Sarasvathy, & Forza, 2014).

Uncertainty, for the economic mainstream, is associated with market imperfection, given that a perfect competition does not match with it. On the other hand, uncertainty would be a lack of equilibrium status when no evolution could take place. Under Nelson (1982) perspective, economics is evolutionary and dynamic. Thus, the constant storm of creative destruction that occurs in the economic system envisaged by Schumpeter (1942) unleashes the creative process for dealing with uncertainty in organizations to allow innovation to happen.

As a human being, the entrepreneur manages situations among other entrepreneurs, which involve heterogeneity, lability, and contextual issues. Hence, intuition becomes a very relevant factor. According to Sarasvathy (2003), entrepreneurial intuition does not arise from thin air and isolated from experience. On the contrary, it is related to the language they use, the stories they tell, and the way they handle problems.
These characteristics are associated with informal institutional behavior and mutual acceptance in the social context. For Sarasvathy (2003), effectuators follow intuition better than rational plans in the presence of uncertainty.

Scarce but recent empirical studies have evaluated the relationship between organizational creativity with entrepreneurial behavior in the international context. Based on the Effectuation Theory, Sitoh, Pan, and Yu (2014) conducted a case study of a console game creation project to understand the decision-making process and how it influences subsequent tactics during the new product creation process. Dayan, Zacca, and Di Benedetto (2013) developed an exploratory study to understand the role of entrepreneurial creativity in the context of firms in the United Arab Emirates and found that expertise and creative self-efficacy are significantly related to entrepreneurial creativity. Considering that creativity is a prerequisite for entrepreneurial behavior, entrepreneurs borrow this behavior to the organization as an entrepreneurial capability (Mosakowski, 1998).

Under the effectuation approach, internationalization has been investigated as a moderator variable between the entrepreneur capability and the international involvement. Frishammar and Andersson (2008) compared 188 small Swedish firms that adopted market orientation strategies and entrepreneurial orientation approaches. They concluded that firms that adopted a more entrepreneurial orientation had more success than others did. In longitudinal and qualitative research over new venture firms, Gabrielsson, and Gabrielsson (2013, p.1372) evaluate if decision-making patterns change in international business to business new ventures, based on assumptions of the Effectuation Theory. They interpret their results considering that the effectuation-based decision-making increased “the role of opportunity creation as an important antecedent for growth as well as the importance of explorative learning for long-term survival.”

Even sparsely, International Business literature has been investigating such connections. Referring to learning to arise from the internationalization process, Forsgren (2002) believes that access to a network of business relationships creates the opportunity to learn from other organizations. Similarly, Sarasvathy (2001) emphasized that relationships facilitate the decision-making process of effectuation. Recently, Gong, Kim, and Lee (2013) developed a study to understand how goal orientation is related to individual and organizational creativity. Dew and Hearn (2009) examined how creativity can enhance learning in groups with the restriction of access to resources.

Recent empirical studies got dubious results over the effectuation logic. Scholars tried to test effectuation as a first order construct but concluded that effectuation
dimension is a multifaceted feature of entrepreneurial capability (Chandler et al., 2011; Faia et al., 2014) composed by four secondary sub-dimensions: experimentation, affordable loss, flexibility, and pre-commitments.

The causation logic of entrepreneurial capability observes the entrepreneurial making decisions according to a predicted plan. On the contrary, the effectuation logic resigns plans to build a future from contingencies (Sarasvathy, Simon, & Lave, 1998; Sarasvathy, 2004). In international environments, uncertainty is a primary barrier to inhibit the internationalization process (Knight & Cavusgil, 2004; Knight & Kim, 2009). As a process, after starting by a chance or an opportunity discovery process (Mainela & Puhakka, 2008), entrepreneurs begin to adopt causation behavior as the knowledge grows (Hollanders & Soete, 2010; Yao, Yang, Fisher, Ma, & Fang, 2013).

Effectuation logic has different effects on international involvement, considering effectuation dimension of entrepreneurial capability as a second-order construct, composed of experimentation, affordable loss, flexibility, and pre-commitments sub-dimensions. When opportunities arise from international markets, the entrepreneurial capability moves on the continuum of effectuation (Perry et al., 2012), depending on how they realize uncertainty. This study also explores the four sub-dimensions of effectuation logic in the four sub-dimensions, experimentation, affordable loss, flexibility, and pre-commitments.

As the effectuation logic offers alternatives to handling uncertainty, such as scanning opportunities in less familiar environments is more prevalent in new firms (Evers & O’Gorman, 2011). Not only the entrepreneur experience but also the internationalization experience reduce risk aversion to international markets (Harms & Schiele, 2012). As individuals take experience abroad, they connect to different institutional environments that allow better responses (Delios, 2011). More experienced firms associate the effectuation logic to mitigate risk aversion with causation logic to design plans starting from their own experience (Harms & Schiele, 2012). As firms get more knowledge, learning and more network connections, they can develop possible scenarios.

According to Delios (2011), the experience can be a valued asset to the organization, as it allows generating knowledge and capabilities that may be useful in different institutional contexts. Mainly, learning must be shared in the organization as a resource to face adversities in various markets.
Effectuation theorists propose that entrepreneurs do not draw scenarios; entrepreneurs evaluate opportunity facing contingencies; doing that they first build a future and not a goal (Read & Sarasvathy, 2005; Sarasvathy, 2004). Entrepreneurs create opportunities by grounding decisions on the affordable loss principle rather than on the enlargement of expected returns (Kalinic et al., 2014). Depending on the level of uncertainty, entrepreneurs sometimes act following the causation logic and other times the effectuation logic. Following their ability to solve problems as they happen, they may change the chosen direction quickly (Gabrielsson & Gabrielsson, 2013). Some scholars argue that effectuation logic can manage crises more effectively (Read & Sarasvathy, 2005). In international markets, entrepreneurs use network relationship to share risk-taken managers with partners to raise their means and share affordable loss (Galkina & Chetty, 2015).

A critical issue for firms that get involved in international markets is flexibility. Flexibility is the ability to adjust to substantial and unpredictable changes in the environment (Aaker & Mascarenhas, 1984). To the extent firms get more involved internationally, the firms tend to follow clients’ goals (Eriksson, Johanson, Majkgard, & Sharma, 2000; Erramilli & Rao, 1993). Such behavior illustrates how the entrepreneur reacts to customer demands, offering flexibility during international involvement (Harms & Schiele, 2012) acting as the environment changes (Kalinic et al., 2014). As small firms recognize opportunities in international business, flexibility helps to achieve results quickly (Zhang, Ma, Wang, & Wang, 2014).

Usually, uncertainty is a limitation for firms to spread internationally (Johanson & Vahlne, 1977). When entrepreneurs perceive opportunities as a high level of uncertainty, they try to negotiate pre-commitments from participants – clients, suppliers – even in an informal way, such pre-commitments run as contracts guaranteeing stable future, to have more control over unpredictable future (Chandler et al., 2011; Harms & Schiele, 2012). Nevertheless, researchers have not accomplished quite well this pre-dimension of effectuation behavior (Chandler et al., 2011; Faia et al., 2014; Galkina & Chetty, 2015). The studies offered dubious results, offering space to discuss the basis of pre-commitment understanding. In this research pre-commitment sub-dimensions were enlarged looking for a network approach, similar to Galkina and Chetty (2015) recommendation to consider more as a network than a tacit contract approach.

Despite a rising claim about the theoretical intersection of the Effectuation Theory and International Business (Coviello, 2006; Schweizer et al., 2010; Zhou & Shalley,
there are scarce studies that approximate them. Following such avenues of investigation, this study proposed that entrepreneurial capability mediates the relationship between organizational creativity with international involvement, in a subjective sense. Organizational creativity acts as high-level resource (Kor et al., 2007) that fosters entrepreneurial capability to trigger international involvement, Hypothesis 3 proposes:

**H3: The entrepreneurial capability mediates the relationship between organizational creativity with international involvement.**

Figure 8 synthesizes the framework construction, including two more variables, in which the objective role of innovative capability appears as a mediator between organizational creativity (H2) and international involvement, as well as the subjective role of entrepreneurial capability in the same relationship (H3).

![Figure 8: The research framework](Source: The author)

The next section summarizes the hypotheses construction before introducing the method of investigation.
2.5 Theoretical Framework

This section summarizes the research framework. Organizational creativity has a direct relationship with the international involvement of the firm. Two Capabilities act as mediate variables, innovative and entrepreneurial capability. The innovative capability is an objective role of organizational creativity, once innovative capability has creativity assuming a tangible result, reflecting on the generation of innovation. In this sense, organizational creativity may affect product innovation, process innovation, organizational innovation. The entrepreneurial capability is a subjective role of organizational creativity, once entrepreneurial capability has creativity assuming an intangible role, sometimes reflected in a causal behavior of the entrepreneur, other times indicated as an effectual behavior of the entrepreneur. In this sense, organizational creativity offers better alternatives to solve problems and generate alternatives when the entrepreneur faces uncertainty.

The framework consists of 3 hypotheses. Hypothesis H1 predicts a direct, significant, and positive relationship between organizational creativity and international involvement. Hypothesis H2 supposes that organizational creativity has an indirect, significant and positive relationship with international involvement mediated by the innovative capability. Hypothesis H3 assumes that organizational creativity has an indirect, significant and positive relationship with international involvement mediated by entrepreneurial capability. In sum, the hypotheses are:

- There is a direct relationship between organizational creativity and international involvement:
  - H1 tests the relationship between organizational creativity (Independent Variable – IV) with international involvement (Dependent Variable – DV):
    
    \[ H1: \text{There is a direct, positive and significant association between organizational creativity with international involvement.} \]

- Considering the objective role of creativity as an antecedent of innovative capability and consequently of international involvement:
  - H2 tests the relationship between organizational creativity (Independent Variable – IV) with international involvement (Dependent Variable – DV), mediated by innovative capability (Mediating Variable - MV):
    
    \[ H2: \text{The innovative capability mediates the relationship between organizational creativity with international involvement.} \]
• The subjective role of creativity as an antecedent of innovative capability and consequently of international involvement:
  
  o H3 tests the relationship between organizational creativity (IV) with international involvement (DV), mediated by the entrepreneurial capability (MV):
  
  ▪ **H3:** The entrepreneurial capability mediates the relationship between organizational creativity with international involvement.

  The next chapter presents the method of investigation applied in this research.
3 Method

This chapter presents the research method. The chapter unfolds in three parts: research conception, exploratory stage and finally the descriptive stage of research, as depicted in Figure 9.

Figure 9: Research steps
Source: The author

3.1 Research Conception

The research conception is a detailed procedure the researcher followed during the process of obtaining information to solve a research problem (Malhotra, 2004). This item presents some antecedents of the exploratory stage and the descriptive stage of this research.

3.1.1 The theme choice.

As usual, during the first year of the doctoral program, the central issue was what to research. It should be something relevant to both theoretical and applied field. Research does not start on a specific date. Research is a construction the involves knowledge structures – individual or collective – and information processed from the environment that co-signs or not the dualist idea of what the researcher has in mind and what he or she finds in the world (Nicolini, 1999).
Individual knowledge structure of the research had a historical path in recognizing the internationalization process of the firms, combining executive life and academic experience. Collective knowledge structure of the study group signalized that recent advances, both technological and sociological had changed the environment, moving the academic interest from mature industries to high-knowledge industries. A challenge was how creative firms internationalize. From this inquietude, the first article emerged, titled as \textit{Searching evidence about what leads organizations from creative economy to act globally} (Vasconcellos, Garrido, Calixto, & Monticelli, 2013), presented at the Iberoamerican Academy Conference, São Paulo, 2013. The article was an exploratory study, conducted by a technical strategy of the focus group as a way to investigate the case of a computer graphics company transitioning from the production of electronic models to produce 3D movies. The paper noticed that studies with both positivist and interpretive approaches could contribute in different ways in the evolution of this research, with emphasis on organizational behavior. After some improvements, the article was submitted to the EnAnpad Conference, Belo Horizonte, 2015, titled \textit{Prospecting approaches to understanding internationalization in creative economy firms} (Vasconcellos, Monticelli, Garrido, & Calixto, 2015).

The option of a previous qualitative approach follows a prescription from Eisenhardt (1989, p.548) that “ [...] a strong theory-building study yields good theory, which emerges at the end, not at the beginning, of the study.” Thus, the previous qualitative approach followed three major investigation aims a.) Amplify theoretical connections between the main themes: creativity, innovation, and entrepreneurial behavior internationalization; b.) Identify relevant variables to enrich creativity investigation, considering possible links between creativity and the internationalization process; and c.) Look for relevant metrics for innovation and entrepreneurial assessments, which could enlarge creativity connection to the internationalization process.

3.1.2 Theoretical overview construction.

The necessity for understanding creativity as a phenomenon led this study to the field of psychology, based mainly in Boden (1994), Lubart (2010), Pinheiro (2009) and Runco and Chand (1995). As the first article developed (Vasconcellos et al., 2013), the primary variable emerged from executives: motivation is an input or an output of creativity? This question came out as a further process of investigation, aiming to
understand the roles of creativity in organizations. Two main roles emerged, as an antecedent of innovation and as an antecedent of entrepreneurial behavior. The theoretical overview expanded to the understanding of the relationship between organization creativity with international involvement, mediated by both capabilities, innovative and entrepreneurial proposing a connecting to international business studies. This construction resulted in four articles presented in four conferences.

3.1.3 Previous theoretical articles.

Four articles were developed during the theoretical construction of this research:

- **Does creativity matter? Discussing two roles of creativity in international insertion under effectuation theory** (Vasconcellos, Garrido, & Monticelli, 2014). This theoretical article was a synthesis from the theoretical essay presented in December 2013, as a required work to postulate for the Ph.D. in Administration title, required by UNISINOS. The paper presentation was at EnAnpad, in 2014.

- **Before innovation: the mutual relation between creativity and internationalization** (Vasconcellos, Garrido, Parente, & Monticelli, 2014). This theoretical paper proposed a relationship between internationalization with creativity, mediated by innovation, covering a slice of this research. The paper presentation was at AIB-SE, Miami, in 2014.

- **Crafting entrepreneurial capability: a recursive effect on creativity and internationalization** (Vasconcellos, Garrido, Parente, & Monticelli, 2014a). This theoretical article proposed a relationship between internationalization with creativity, mediated by entrepreneurial capability. The paper presentation was at EIBA, Uppsala, Sweden, in 2014.

- **The creativity flow: The recursive effect between international involvement and organizational creativity** (Vasconcellos, Garrido, & Parente, 2015). As an evolution of theoretical investigation, this paper integrated the mediator role of innovative and entrepreneurial capability between organizational creativity and international involvement, propounding some assumptions to explore in the thesis. The paper presentation was at EIBA, Rio de Janeiro, in 2015.
3.1.4 The field choice.

As the Creative Economy is vast and has different industries inserted in the same category (UNESCO, 2013a), as a research choice this study investigated the audiovisual industry in Brazil. As mentioned in the introductory chapter, the field choice followed three criteria. First, the field should have firms in distinct levels of international involvement. Second, creativity should be evident as a high-level resource and as an output, as creativity is taken as an antecedent of innovation. Third, the field should reflect organizational creativity as an influence on entrepreneurial behavior.

Struggling the first criterion, this research evaluates if firms were acting internationally. The audiovisual industry is still in a branched structure, with entrepreneurs having a limited understanding of the advantages of internationalization. An example of the public effort to internationalize the motion picture production industry is the project Brazilian TV Producers [BTVP] (BTVP, 2016), created in 2004 and supported by APEX BRASIL. This nonprofit program aims to promote opportunities for co-production as well as to develop international partnerships. Also, the program seeks to stimulate the Brazilian motion picture production industry both in national and international markets (BTVP, 2016). In the catalog published by BTVP, there are 131 listed companies with potential or actual actions of internationalization, distributed in 10 Brazilian states. Existing since 1999, the Brazilian Independent Producers of Television [ABPITV] (ABPITV, 2016) congregates 636 producers from 17 Brazilian states. ABPITV promotes production, disseminates information, and supports international involvement for their partners. These companies have achieved international recognition as producers of images and videos (ANCINE, 2016).

As a creative economy industry, audiovisual-industry firms have received particular attention from the government (ANCINE, 2016) not only for fostering production but also promoting a wider space within the programming of television channels, both broadcast and pay TV (Law 12485/11, 2011). According to the Brazilian Observatory of Cinema and Audiovisual (ANCINE, 2015), the audiovisual industry represents about 3% of Brazil’s Gross Domestic Product (GDP). Audiovisual industry embraces the film and video phonographic industries, represented by the agents of production, distribution, and exhibition of film segments (theaters), pay TV (mass electronic communication by subscription), the broadcast television (sound broadcasting and images), home video, video on demand, video on stream and mobile media.
For the international insertion, the Brazilian National Cinema Agency [ANCINE] (ANCINE, 2016) has three programs for supporting exports: Cinema do Brasil (Cinema do Brasil, 2016), Brazilian TV Producers (BTVP, 2016) and Film Brazil (Film Brazil, 2016), with coordination of APEX BRASIL. According to the Cinema do Brasil website (Cinema do Brasil, 2016), this project aims to broaden the participation of Brazil in the international motion picture market. Cinema do Brasil offers logistical and strategic support to approximately 140 members. The objective is to enable them to carry out co-productions and open markets for the distribution of its products, thus enhancing the industry's image abroad.

The second criterion intends to check if creativity is evident in its objective role, as an antecedent of innovation. Creativity has been investigated in motion picture production firms. This industry has the distinctive feature of having creativity as a resource and as an output (Gil & Spiller, 2007). Anecdotally, in recent years, while there is more mobile equipment sold than there are children born daily (Baker, 2014), dramatic changes are occurring in communications, reflecting overall society. In a paradox, the more technology is spread over society; the more channels are needed to reach people. Also, people access contents in many ways (McNeal, 2013). Moreover, the motion picture is a short life-cycle product (Eliashberg, Elberse, & Leenders, 2006), compelling entrepreneurs to innovate. In recent years, there are more people connected, more channels available, and multiple access means. Consequently, more content has to be produced, indicating substantial opportunities, even for internationalization in an industry which creativity is continually present as input, managing/production, and output.

The third criterion intends to investigate the subjective role of creativity, as an antecedent of entrepreneurial capability. Although appearing to be an industry with a few actors, given the adherence to governmental programs, the comparison between the number of companies affected by the programs and the universe of entrepreneurs in this industry is conflicting. The discrepancy between the number of businesses assisted and total entrepreneurial, organizational and individual identified by the Federation of Industries of the State of Rio de Janeiro [FIRJAN] (FIRJAN, 2013) is an indicative of the difficulty to access public actions. Data collected nationally by FIRJAN (2013) exposed that the audiovisual industry has more companies than employees. That research detected 81,000 firms and 30,000 employees. This discrepancy, according to FIRJAN, is due to the practice of professionals to work on their projects without employment contracts.
3.1.5 Qualifying.

The thesis qualification happened in June 2014. This study added some contributions suggested by revisers.

- Expansion of theoretical innovation review;
- Expansion of the empirical field in a chapter apart;
- Review of quantitative studies about the Effectuation Theory;
- Reorganization of hypotheses; and
- Review of the theoretical framework.

After the qualifying, as a result of doctoral consortiums, conferences, and the sandwich program, the research received some improvements, besides the contribution at qualifying examination:

- Reinforced that organizational level encompasses this research, specifying that organizational creativity is antecedent of two central organizational capabilities, such as innovative and entrepreneurial;
- Instead of assessing effects on international performance, international involvement served as the dependent variable (Knight & Kim, 2009). Thus, internationalization is no longer a moderator variable. This decision aligns to the perception that firms from the creative economy internationalize in a peculiar way, as they understand business as global all the time (Moultrie & Young, 2009; Vasconcellos et al., 2013).

3.1.6 The sandwich program.

From October 15, 2014, until April 15, 2015, the author developed studies at Florida International University (FIU), as a sandwich program. The advisor at FIU was Professor Dr. Ronaldo Couto Parente, responsible for an extensive publication in strategy and innovation as determinants of internationalization. During this six-month term program, the author improved some skills that helped in the research development:

- Development of scientific articles connecting his research to the research developed at FIU regarding innovation and internationalization;
- Refining scales for measuring innovation;
• Participation in two international conferences – AIB-SE/2014 in Miami, and EIBA 2014 in Uppsala, Sweden;
• Participation in the doctoral consortium at AIB-SE/2014 Conference; and
• Involvement in a workshop about quantitative methods of investigation, lectured by Professor Joe F. Hair, Jr, at the AIB-SE/2014 conference.

3.1.7 Research specification.

In a wide perspective, this is an exploratory-descriptive study built in two main stages. Firstly, an exploratory stage explored not only the literature but also the environment. On this stage, interviews with experts enlarged the knowledge acquired during the literature review. During this stage, two relevant aspects emerged, motivation in a creative environment, and how internationalization takes place. Interviewees referred to internationalization as an anachronism in the audiovisual industry, once they feel the firm as a global player. According to them, in these firms, ideas, structure, and knowledge are available worldwide, and they always consider such factors. Secondly, a descriptive stage evaluated the field by a quantitative approach based on a survey. This construction assumes that the social world exists externally to man, and should be measured using objective methods to standardize data to allow the development of summaries, comparisons, and generalizations, based on statistics tools (Dancey & Reidy, 2006).

The collection technique adopted was a survey. The survey is a set of questions built to measure the intensity of opinions and attitudes objectively. They come in different ways but consist of asking respondents the best match for their perception of a researched fact, using a scale (Gil, 1999).

The method of developing this research was based on Malhotra (2004), who proposed two main typologies: exploratory or conclusive. An exploratory study helps to amplify the comprehension of given phenomenon, offering some criteria about such resolution. A convincing study aims to categorize or look for cause and effect relationship between constructs previously validated (Malhotra, 2004).

3.2 Exploratory Stage

In the exploratory stage, two main possibilities should be examined: to propose variables to measure the constructs or adopt validated scales. This phase of the research
sought to understand the theoretical relationships between organizational creativity, innovative capability, entrepreneurial capability and international involvement. Once completed, this step achieved the following results:

- After the construction of the theoretical framework, to define a conceptual model linking organizational creativity, innovative capability, entrepreneurial capability, and international involvement;
- The validation of the adequacy of the scales previously adopted for measuring such relationship, approved both in the academia and in the business field;
- Pre-testing the scales in Brazilian audiovisual firms; and
- Applying the integrated scales in the audiovisual firms, in Brazil.

3.2.1 Field recognition.

The field recognition occurred in four phases. First, during the construction of the exploratory study that resulted in two articles mentioned in the research conception item. Second, examining secondary sources like UNCTAD (UNCTAD, 2010; UNESCO, 2013a), World Trade Organization [WTO] (WTO, 2015), FIRJAN (FIRJAN, 2012, 2013, 2014), ANCINE (ANCINE, 2015), APEX BRASIL (APEX BRASIL, 2016), ABPITV (ABPITV, 2016), and specific industry associations in several Brazilian states (see Figure 10 below). Third, interviews during the biggest Brazilian exhibition focused on motion picture production. In 2014, the research author visited the RioContentMarket exhibition and informally interviewed three entrepreneurs from the motion picture industry. RioContentMarket takes place in Rio de Janeiro, annually. This exhibition is an international event of production of audiovisual content, open to both television and digital media industries. During the five editions, 14,000 visitors were there, among executives, producers and audiovisual professionals from 38 countries (RioContentMarket, 2016). Fourth, during the sandwich program, the research author interviewed the representative of the Motion Picture Association of America (MPAA, 2016) in Brazil to understand why the world biggest motion picture association has an official branch in Brazil.

Even FIRJAN (FIRJAN, 2013) stated that the motion picture production industry has a greater number of companies than employees – that catalog mentioned 81,000 firms and 30,000 employees – most of the motion picture producers do not engage in official
or industry programs for stimulating internationalization. Figure 10 partially summarizes the field wideness.

<table>
<thead>
<tr>
<th>Source</th>
<th>Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANCINE (ANCINE, 2015)</td>
<td>1,174 motion picture studios</td>
</tr>
<tr>
<td></td>
<td>3,634 producers for advertising</td>
</tr>
<tr>
<td></td>
<td>7,982 motion picture production activities, videos,</td>
</tr>
<tr>
<td></td>
<td>and television programs not otherwise specified</td>
</tr>
<tr>
<td>ABPITV (ABPITV, 2016)</td>
<td>536 associated firms</td>
</tr>
<tr>
<td>BTVP (BTVP, 2016)</td>
<td>107 associated firms</td>
</tr>
<tr>
<td>Sindicato da Indústria Audiovisual do Rio de Janeiro (SICAV-RJ, 2015)</td>
<td>73 affiliated firms</td>
</tr>
<tr>
<td>Sindicato da Indústria Audiovisual do Paraná (SIAPAR, 2015)</td>
<td>22 affiliated firms</td>
</tr>
<tr>
<td>Sindicato da Indústria Audiovisual do Rio Grande do Sul (SIAV-RS, 2015)</td>
<td>58 affiliated firms</td>
</tr>
<tr>
<td>Sindicato da Indústria Audiovisual do Estado de São Paulo (SIAESP, 2015)</td>
<td>40 affiliated firms</td>
</tr>
</tbody>
</table>

Figure 10: Sources of motion picture firm identification
Source: as above

Figure 10 lists 13,626 possibilities of contact obtained on websites. Nevertheless, ANCINE catalog mentions just names and tax codes (Cadastro Nacional de Pessoas Jurídicas – CNPJ). Thus, only 856 firms remained for investigation. After checking double citations, the study concluded that some companies were in more than one list. In the end, just 740 firms remained to be contacted. Further details are available in Chapter 4.

3.2.2 Search for variables.

The search for variables to measure the relationships between organizational creativity, innovative capability, entrepreneurial capability and international involvement occurred both during the theoretical construction and during field recognition. The aim was to understand linking elements of such topics to validated in the empirical field. Previously, motivation, entrepreneurship, and global orientation emerged still as a naïve perception. As the theoretical construction advanced, some scales already validated emerged for testing.
Organizational creativity: An exemplary study came up from crossing motivation and organizational creativity, *Motivating Creativity in Organizations: on doing what you love and loving what you do* (Amabile, 1997). This paper paved the path for understanding the role of motivation in the organizational creativity and a direction to other publications of Teresa Amabile. As a consequence, the objective role of organizational creativity, as an antecedent of innovation appeared, with scales already validated (Amabile et al., 1996). Complementing, a study in motion picture industry in the UK applied a creativity measuring comparing Amabile’s model and Ekvall’s model (Moultrie & Young, 2009). Thus, in this research, an extract from Amabile’s Model mentioned by Moultrie and Young (2009) referring to creativity at the organizational level was adopted.

Innovative Capability: This research opted research innovation not as a result but as a capability to innovate, assuming that absorptive capability and dynamic capabilities concepts could furnish elements to investigate. Even the Oslo Manual (OECD, 2005) suggested investigations in four levels, product innovation, process innovation, organizational innovation, and marketing innovation, and this research adopted the scale built from Zahra and George (2002) applied by Jiménez-Jiménez and Sanz-Valle (2011).

Entrepreneurial capability: Crossing entrepreneurship and organizational creativity the paper *Resources, Capabilities and Entrepreneurial Perceptions* (Kor et al., 2007) revealed connections between organizational creativity and entrepreneurial behavior. The article emphasizes the subjective role of creativity in the transfer of entrepreneurial behavior to the firm as an entrepreneurial capability, mainly in small and medium enterprises (SME), but without an assessment proposal. Entrepreneurial behavior is a topic of the Effectuation Theory under investigation in quantitative research since 2011 (e.g., Chandler et al., 2011; Faia et al., 2014; Galkina & Chetty, 2015).

International involvement: Global orientation came up as a topic of investigation during the first paper of this research, built in the qualitative study, during a focus group interview (Vasconcellos, Monticelli, Calixto, & Garrido, 2013). When questioned about the process of internationalization, interviewees considered a nonsense question because they are internationalized all the time, selling abroad or not due the connections they have. Recent literature on internationalization in services, high-technology, and creative economy discussed internationalization as an idiosyncratic concept in such fields (Cavusgil & Knight, 2015; Coviello, 2006; Johanson & Vahlne, 2009a; Schweizer et al., 2010). The question was not how the internationalization process starts but how the international involvement affects the firm (Knight & Kim, 2009).
The set of variables that finally integrated this research originated from four scales detailed in the next sub-item.

3.2.3 Search for scales.

This research has four constructs connected, organizational creativity, innovative capability, entrepreneurial capability, and international involvement.

3.2.3.1 Organizational creativity scale.

Some scholars questioned outputs of creativity at the organizational level. For instance, Sullivan and Ford (2010) considered that many varied ways have been adopted to assess creativity. They proposed to examine potential measurement model misspecification in organizational creativity research.

Nevertheless, two studies have been leading research on an organizational level, Ekvall’s Model (cited in Moultrie & Young, 2009) and Amabile’s Model (Amabile et al., 1996). As mentioned in the theoretical overview chapter, Moultrie and Young (2009) compared the two models in the motion picture industry in the United Kingdom, and concluded they are complementary.

Nevertheless, during the process of searching scales, this study found that Amabile’s Model could contribute in a better way as Amabile Model analyzed creativity as an antecedent of innovation, fitting to these research objectives. Even so, Amabile’s Model instrument has 84 questions which could be unfeasible once it should integrate a larger research. Thus, only questions related to an organizational level were kept, totaling 16 questions also used by Moultrie and Young (2009). At the organizational level, Amabile’s Model (Amabile et al., 1996) contributed to this research with three variables: Organizational motivation (6 questions); Resources (5 questions); and Management practices (5 questions). As organizational creativity is measuring a whole construct as an antecedent of innovative capability and entrepreneurial capability, the three variable originates a single measurement.
3.2.3.2 **Innovative capability scale.**

This research intends to measure the capacity a firm has to convert organizational creativity into innovation. Thus, the aim is not to measure innovation per se, but the innovative capability. This direction aligns two relevant topics of theoretical explanation about the process of how a firm generates innovation, dynamic capabilities and absorptive capabilities. Zahra and George (2002) investigated how absorptive capability influences the process of creating innovation at the organizational level, considering three variables, product innovation, process innovation and organizational innovation, partially aligned to the Oslo Manual (OECD, 2005) that also includes marketing innovation.

Jiménez-Jiménez and Sanz-Valle (2011) instrument built from Zahra and George (2002) essay contributed to this research with 13 questions, distributed on three variables: Product Innovation (6 questions); Process Innovation (6 questions); and Organizational Innovation (3 questions).

3.2.3.3 **Entrepreneurial Capability scale.**

This research intends to measure the capacity a firm has to convert organizational creativity into entrepreneurial capability. Entrepreneurial capability, mainly in SME’s is a result of entrepreneurial behavior captured by the firm as a capability (Kor et al., 2007). Recent studies revealed that the entrepreneurial behavior has distinct features, depending on the environment, information level, learning, connections to the entrepreneur, risk-taken orientation, and resources (Sarasvathy, 2001). As illustrated in the theoretical overview, two major dimensions orient the entrepreneurial behavior during the decision-making process, causation and effectuation logic. Even with some limitations, scholars have tried to measure the entrepreneurial behavior under the Effectuation Theory assumptions. Chandler et al. (2011) proposed that the causation process as a primary construct while the effectuation process is more complex. The effectuation process has four sub-dimensions: experimentation, affordable loss, flexibility, and pre-commitments. To this research, Chandler et al. (2011) instrument contributed to establish five variables of entrepreneurial capability: Causation (7 questions); Experimentation (4 questions); Affordable loss (3 questions); Flexibility (4 questions); Pre-commitments (2 questions).

Not only Chandler et al. (2011), but also Faia et al. (2014) and Galkina and Chetty (2015) observed a limitation in the pre-commitment variable. Thus, this research expands the
conception from pro-commitments to networks, as explained in Chapter 2, including three more questions to the pre-commitment variable, at the end the pre-commitment variable had five questions.

3.2.3.4 *International involvement scale.*

The international involvement construct is the independent variable in this research. Considering that firms from the creative economy use to always consider themselves internationally involved, this research overpassed the internationalization process concept, as literature has been promoting it (Cavusgil & Knight, 2015; Coviello, 2006; Schweizer et al., 2010). In this research, it is not the process of internationalization that would respond as a result of organizational creativity, mediated by innovative capability and entrepreneurial capability. For the interest of this research, how intense is this involvement is the primary interest of measuring.

The international involvement refers to how a firm get involved in international markets and how it feedbacks the competencies of the firm (Knight & Kim, 2009). It is a marketing concept borrowed in this research composed by four distinguished variables: international orientation, international marketing skills, international innovativeness, and international market orientation (Knight & Kim, 2009). As a research decision, international marketing skills were not considered in the results because they were not related to the objectives of this study. Thus, the instrument of this research received contributions from the following variables: International orientation (4 questions); International innovativeness (5 questions); and International market orientation (5 questions).

Figure 11 summarizes the questionnaire:

<table>
<thead>
<tr>
<th>Section</th>
<th>Objectives</th>
<th>Quantity of questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>identification</td>
<td>describing the sample</td>
<td>10</td>
</tr>
<tr>
<td>organizational creativity</td>
<td>assessing organizational creativity based on Amabile et al. (1996) and Moultrie and Young (2009)</td>
<td>16</td>
</tr>
<tr>
<td>innovative capability</td>
<td>assessing innovative capability based on Jiménez-Jiménez and Sanz-Valle (2011) and Zahra and George (2002)</td>
<td>15</td>
</tr>
</tbody>
</table>
entrepreneurial capability assessing entrepreneurial capability based on Chandler et al. (2011) 23

international involvement assessing international involvement based on Knight and Kim (2009) 18

Control providing control variables and avoiding the halo effect 8

Total of questions 90

Figure 11: Questionnaire summary
Source: The author

The entire questionnaire applied is available as Appendix A. The instrument also bears the factorial loads of each indicator.

3.2.4 Conceptual framework.

The conceptual model of the relationship between the subjects of the research follows the theoretical framework presented in Chapter 2. In the literature review, the research sought to deepen in topics related to organizational creativity, innovative capability, entrepreneurial capability, and international involvement.

3.2.5 Validation of constructs.

Four academic members and three executives from the audiovisual industry validated the variables and hypotheses. As the set of variables is a result of four different studies, the researcher concerned about four points: First, translating to the Portuguese language without losing intrinsic meanings that could affect the results. Four academic members were fluent in English and Portuguese. Even so, the reverse translation was performed. Second, the standardization of questions and scales should offer a sense of integration among the respondents. For example, terms like the organization replaced by the term the firm; competidores and concorrentes in Portuguese replaced by competitors (concorrentes, in Portuguese). Third, the language used should be clearly understandable to respondents, mostly because there was information that most of the firms have technically oriented managers, and administrative terms could provoke misunderstandings. Fourth, a Likert scale from 1 to 5 – from totally disagree to agree totally – standardized all scaled answers to facilitate the respondent understanding and to make the data collection easier both to perform and to analyze.
3.2.6 Data collection.

At the beginning of October, the author and the advisor oriented a group of nine people about the industry features; also, all 90 questions received a careful explanation to avoid missing data. After pre-testing approval, data collection started immediately. A nine people professional team performed phone calls to 636 potential respondents. Simultaneously, the team sent the emails with a link for answering.

As the return rate was little during the first week, other lists were immediately incorporated to reach a better response index. The team and the author searched the internet for other telephone numbers and emails based on not only the lists available but also adding firms from the ANCINE list (which did not mention phone and e-mails). Initially, the team and the author reached 856 potential respondents. After filtering double citations (some firms were in audiovisual alliance industry lists and also in APEX-Brasil programs lists), 740 potential respondents remained.

Again, a meeting with the team leaders, the author and the advisor took place to increase the return index. The author proposed that the team should reinforce an offer of the feedback to the respondents as there was no possibility of reducing the questionnaire.

Finally, on December 7th, there was a list of 81 answered questionnaires. Thus, the return index achieved 11% of the potential responses, supplanting the goal of ten percent and enough for applying the method of analysis planned before.

3.3 Descriptive Stage

This section presents the exploratory research stage. Specifically, this section presents the data treatment, statistical analysis, tests of the internal reliability of the scales, hypotheses validation, and description of results.

3.3.1 Data treatment.

Before applying any data analysis technique, researchers should evaluate the fit of the sample data with statistical assumptions of the technique to be adopted. Careful analysis of the data leads to better forecasting and more accurate assessment of dimensionality (Hair Jr., Anderson, Tatham, & Black, 2009). Before being analyzed, the data passed through the following treatments:
• **Missing values**: The researcher must observe whether the missing values can affect the generality of the results. In this sense, the researcher should analyze the reasons for the existence of missing values (Hair Jr. et al., 2009). Kline (1998) pointed out that the missing values must not exceed a range of 5% to 10% of the responses to a variable and that this omission is random.

• **Outliers**: Verification of the existence of respondents who show patterns of very contradictory answers of others (Kline, 1998) exceeding more than two standard deviations from the mean (Maroco, 2010). This verification applied a multivariate evaluation. Hair Jr. et al. (2005) suggested a significance level of 0.001 as a basis for determining an unusual observation.

• **Normality**: Skewness and kurtosis values assess normality (Hair Jr. et al., 2009). Variables with absolute asymmetry index values over $|3|$ can be very asymmetrical and with kurtosis, values over $|10|$ can be problematic for data normality.

• **Homoscedasticity**: homoscedasticity refers to the assumption that dependent variables exhibit equal variance levels over the domain of predictive variables. Scatter plots are useful for verifying homoscedasticity.

• **Linearity**: The most common mode of linearity verification is by examining variables scattergram (Hair Jr. et al., 2009). Scatter plots are useful for measuring the linearity of variables.

• **Multicollinearity**: The approximate linear relationship among independent variables is called multicollinearity. There is multicollinearity when correlations between predictors are high (Cortina, 1993). If multicollinearity is high, substantial loss of power may occur due to error association (Ganzach,
1998). Relationships among variable over $|0.85|$ indicates that there is a possible multicollinearity (Hair Jr. et al., 2009).

### 3.3.2 Statistical analysis.

This research adopted the SPSS (Statistical Package for Social Sciences) software, version 21, and AMOS (Analysis of Moment Structures) software version 16 for statistic tests. The tests of the observable variables were made using linear regression analysis. Conceptually, linear regression defines an extensive set of statistical techniques used for modeling relationships between variables and estimate a dependent variable (response) value from a set of dependent variables (predictors) (Maroco, 2010).

### 3.3.3 Pre-test description.

The pre-testing occurred in the first week of October 2015 by phone. Thirty firms from the main list responded to the 90-question questionnaire. During data collection, some questions had to be reformulated as respondents asked back in some items, like in the flexibility sub-dimension of effectuation process – an integrative section of entrepreneurial capability section. Control questions had to be reformulated to insert the period to which they referred.

The collecting team referred to two groups of general problems during the collection: the questionnaire was too long and firms indicated that there are too many academic researches without feedback.

For purposes of testing whether the sample is statistically valid, a one-dimensionality factor test was applied. Cronbach's alpha was estimated for the constructs analyzed. Table 1 describes the results:

<table>
<thead>
<tr>
<th>Construct Dimension</th>
<th>Cronbach's Alpha</th>
<th>Reliable variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Creativity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>organizational motivation</td>
<td>0.664</td>
<td>11, 12, 15, 16</td>
</tr>
<tr>
<td>Resources</td>
<td>0.633</td>
<td>17, 18, 21</td>
</tr>
<tr>
<td>managerial practices</td>
<td>0.580</td>
<td>22, 23, 25</td>
</tr>
<tr>
<td>product innovation</td>
<td>0.881</td>
<td>27 to 32</td>
</tr>
</tbody>
</table>

Table 1: Cronbach’s Alpha pre-test results
As a reliability measure, an acceptable value for Cronbach’s alpha is at least 0.6 (Hair Jr. et al., 2009). Nevertheless, the use of Cronbach’s alpha does not guarantee the one-dimensionality by itself but assumes that it exists (Hair Jr. et al., 2009). Two additional tests were carried out on data collected in the pre-test: reliability of the constructs and extracted variance. Composite reliability is a measure of internal consistency of indicators. A commonly accepted reference value is 0.7, although values below it are acceptable for exploratory research (Hair Jr. et al., 2009).

The extracted variance is also a reliable indicator, which indicates the overall amount of variance explained by the latent construct and also for each dimension. Hair Jr. et al. (2009) suggested values greater than 0.5 for each construct. Table 2 summarizes the pre-test results.

### Table 2: Composite reliability and extracted variance on pre-test

<table>
<thead>
<tr>
<th>Construct</th>
<th>Dimension</th>
<th>Composite reliability</th>
<th>Extracted Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Creativity</td>
<td>organizational motivation (ORGMOT)</td>
<td>0.7126</td>
<td>0.3854</td>
</tr>
<tr>
<td></td>
<td>resources (RESOUR)</td>
<td>0.8079</td>
<td>0.5895</td>
</tr>
<tr>
<td></td>
<td>managerial practices (MANPRT)</td>
<td>0.7857</td>
<td>0.5510</td>
</tr>
<tr>
<td>Innovative Capability</td>
<td>product innovation (PRDINN)</td>
<td>0.9125</td>
<td>0.4998</td>
</tr>
<tr>
<td></td>
<td>process innovation (PRCINN)</td>
<td>0.8217</td>
<td>0.4461</td>
</tr>
<tr>
<td></td>
<td>organizational innovation (ORGINN)</td>
<td>0.7857</td>
<td>0.5551</td>
</tr>
<tr>
<td>Entrepreneurial Capability</td>
<td>causation (CAUSAT)</td>
<td>0.8351</td>
<td>0.4460</td>
</tr>
<tr>
<td></td>
<td>effectuation (EFFECT)</td>
<td>0.8735</td>
<td>0.3756</td>
</tr>
<tr>
<td>International Involvement</td>
<td>international orientation (INTORT)</td>
<td>0.8915</td>
<td>0.6741</td>
</tr>
<tr>
<td></td>
<td>international innovativeness (INTINN)</td>
<td>0.8012</td>
<td>0.4697</td>
</tr>
<tr>
<td></td>
<td>international markets orientation (INMKOR)</td>
<td>0.8770</td>
<td>0.5912</td>
</tr>
</tbody>
</table>

Source: The author based on 30-respondent results

Although some results denote some warning on extracted variance (the effectuation dimension, for instance), the pre-test was considered satisfactory. The
effectuation dimension has presented some fuzzing results in another research (e.g., Chandler et al., 2011). This result suggests that the effectuation dimension needs analysis at sub-dimension levels on final results.

3.3.4 **Internal reliability of scales.**

The internal reliability of scales was performed by Cronbach’s alpha, composite reliability and extracted variance of constructs. The use of reliability measures such as Cronbach's alpha do not ensure one-dimensionality but assumes that it exists (Hair Jr. et al., 2009). The reliability of each construct had separated calculations. An acceptable reference value is 0.7 while values below that are acceptable for exploratory research (Hair Jr. et al., 2009). The extracted variance indicates the overall amount of variance in the indicators explained by the latent construct. This research used extracted variance to calculate each of the constructs separately. Hair Jr. et al. (2009) suggest values greater than 0.5 for a construct.

The assessment of discriminant variance among constructs followed Fornell and Larcker (1981) recommendations. The extracted variance of each construct must be greater than the variance among constructs (squared correlation). Finally, this research checked the general adjustment for organizational creativity, innovative capability, entrepreneurial capability, and international involvement.

3.3.5 **Hypotheses validation.**

In the descriptive stage, this research sought confirmation of the hypotheses of the conceptual model using multivariate regression analysis to assess the relationship between dependent with independent variables (Hair Jr. et al., 2009). Indicators were converted into latent variables by means. Latent variables were also converted into observable variables by means. The Sobel test assessed mediating variables.

Next chapter aims to offer an overview of the environment where this research occurred, considering the world creative economy, the Brazilian audiovisual context and a summarized overview of the institutional and innovation context for the audiovisual production in Brazil.
4 The Empirical Context

This chapter aims to offer an overview of the environment where this research occurred. Firstly, this study brings a broad view of the creative economy based on data from UNCTAD and UNESCO (Hollanders & Soete, 2010; UNCTAD, 2010; UNESCO, 2013a, 2013b) and then focuses on the world audiovisual production. Secondly, presents information about the Brazilian audiovisual context as well as recent institutional changes that impacted not only in the Brazilian market but also in its enhancement of international production, mostly based on ANCINE an FIRJAN reports (ANCINE, 2015, 2016; FIRJAN, 2012, 2013). Thirdly, there is an investigation into the institutional and innovation context for the audiovisual production in Brazil.

4.1 The Global Creative Economy

More than generating innovation or entrepreneurial capabilities, creativity generates economic growth (Florida, 2014). Creative Economy is one of the fastest growing industry in the global economy, not just regarding revenue generation but also for job creation and export amounts (UNESCO, 2013a). The term *creative economy* was firstly used in 2001 by the British writer John Howkins, who applied it to 15 creative industries spreading from the arts to science and technology (Howkins, 2001).

The global creative economy is vast and multifaceted. It differs from other industries due to its peculiar “organizational forms and the market risk associated with new products” (UNESCO, 2013, p.25). Usually, small companies are more numerous in this industry than in others, mainly in developing countries, but it is possible to identify not only small independent producers but also outsourcing to larger firms and even large companies in an industry like motion picture and publishing (UNESCO, 2013a).

A significant milestone in embracing the concept of “creative industries” was the UNCTAD XI Ministerial Conference in 2004. This conference presented the topic of *creative industries* to the international economic and development agenda propounding a high-level panel about this theme (UNCTAD, 2010). UNCTAD refers as creativity activities those with the artistic component to any economic activity that produces symbolic products with substantial support from intellectual property feasible for market purposes (UNCTAD, 2010). UNCTAD considers the creative economy an interplay of many industries that range from activities “rooted in traditional knowledge and cultural
heritage such as art crafts, and cultural festivities, to more technology and services-oriented subgroups such as audiovisuals and the new media” (UNCTAD, 2010, p.7).

UNCTAD classifies creative industries into four broad groups: heritage, arts, media and functional creations. The heritage group has cultural aspects from the historical, anthropological, ethnic, aesthetic and social perspectives, like art crafts, festivals, celebrations, archeological sites, museums, libraries, and exhibitions. The arts group bases on art and culture, including artwork, is inspired by heritage, identity values, and symbolic meaning, like painting, sculpture, photography, antiques, live music, theater, dance, opera, and circus, for example. The media group produces creative content to communicate with large audiences, like books, press, film, television, radio and other broadcasting. The functional creations group provides more demand-driven and services-oriented industries furnishing creative goods and services for functional purposes, like interior design, graphic, fashion, jewelry, toys, architectural, advertising, cultural and recreational, creative research and development, digital and other related creative services (UNCTAD, 2010). Despite the diversity, all these industries have a broader definition of the creative economy (UNCTAD, 2010). Table 3 presents a summary of the creative economy, comparing years 2002 and 2008.

Table 3: World exports of all creative industry (goods and services) 2002 - 2008

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2008</th>
<th>growth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>value (in millions of US$)</td>
<td>growth</td>
<td></td>
</tr>
<tr>
<td>All creative industries</td>
<td>267,175</td>
<td>592,079</td>
<td>14.4%</td>
</tr>
<tr>
<td>All creative goods</td>
<td>204,948</td>
<td>406,992</td>
<td>11.5%</td>
</tr>
<tr>
<td>All creative services</td>
<td>62,227</td>
<td>185,087</td>
<td>17.1%</td>
</tr>
<tr>
<td>Subgroups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heritage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art crafts goods</td>
<td>17,503</td>
<td>32,323</td>
<td>8.7%</td>
</tr>
<tr>
<td>Others</td>
<td>7,504</td>
<td>11,306</td>
<td>7.3%</td>
</tr>
<tr>
<td>Arts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual arts goods</td>
<td>15,421</td>
<td>29,730</td>
<td>12.8%</td>
</tr>
<tr>
<td>Performing arts goods</td>
<td>9,689</td>
<td>26,136</td>
<td>17.8%</td>
</tr>
<tr>
<td>Media</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publishing goods</td>
<td>29,817</td>
<td>48,266</td>
<td>7.3%</td>
</tr>
<tr>
<td>Audiovisual goods</td>
<td>462,000</td>
<td>811,000</td>
<td>7.2%</td>
</tr>
<tr>
<td>Audiovisual and related services</td>
<td>13,681</td>
<td>26,426</td>
<td>11%</td>
</tr>
<tr>
<td>Functional creations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design goods</td>
<td>114,692</td>
<td>241,972</td>
<td>12.5%</td>
</tr>
</tbody>
</table>
A relevant note is that in 2008 occurred a global economic crisis that affected the creative economy less than other industries. The world economic recession weakened opportunities in many countries for jobs, growth, and social well-being. With the deteriorating worldwide import demand, world trade dropped by 12 per cent (UNCTAD, 2010). In contrast, international trade in the creative economy was sustained despite the long economic crisis.

In 2008, all creative goods represented 2.73% of total world goods exports, while all creative services represented 4.8% of total global services exports. The motion picture production is inserted in the media subgroup listed as audiovisual. The audiovisual production includes films, videos, radio, and television. The goods are the films and videos per se; Services are production services, distribution services, post-production services, and other related services. It also includes radio and television broadcasting services, audio post-production services, radio program production services, and audiovisual production support services (UNCTAD, 2010).

From an economic perspective, the UNCTAD Report estimates that the creative economy has been growing faster than the rest of the economy in several countries, although the contribution of the creative economy to the global economy was hard to evaluate in 2010 (UNCTAD, 2010). The lack of standardization for assessing creativity inhibits an accurate figure. Usually, the industry’s contribution to the national economy is evaluated by its value added, including its share of labor and capital. However, the value added by individual creative industries is not available from official sources (UNCTAD, 2010; UNESCO, 2013a).

SMEs make up, predominantly, several stages of the supply chains of creative products in many countries, both in developed and developing economies (UNCTAD, 2010), mainly at creation level. Nevertheless, in some countries, creative SMEs exist alongside and competing against a few large vertically integrated firms results in asymmetric competition. In the United Kingdom, for instance, not just in software and
computer games industries but also in advertising and film, small firms compete against expressively bigger international firms (UNCTAD, 2010).

In the creative economy, interconnecting and flexible networks of production and service systems covering the entire supply chain characterize firms. Thus, despite the not proportional competition between small and larger creative firms, there is evidence that smaller creative firms have an advantage from the presence of larger firms in the industry, as these larger firms and corporations are a primary source of commissions and capital by outsourcing arrangements or joint ventures (UNCTAD, 2010).

4.2 Global Audiovisual Production

The motion picture production is an integrative industry of creative economy, inserted as an audiovisual industry. According to Caves (2000), there are some commercial practices and business models particular to the audiovisual and music industries:

- The **window** distribution system enables subsequent releases of films, videos and television programs in a staged process (windows). The product can be resold to several markets over time at a slight additional cost. It eases price formulation and the exploitation of secondary markets;

- **Price discrimination** allows competition in secondary markets for audiovisual services. Sometimes, dumping is the same practice; that occurs because the initial costs of production were recovered in the home market;

- **Minimum exhibition period** requests by distributors. They ask for minimum exhibition episodes for films, forcing smaller exhibitors to decline some titles and thereby diminish their profit-making;

- **Blind bidding**, when a distributor calls for an operator to order a movie without prior watching;

- **No share** periods, compulsory by major distributors to prevent showing different titles at different times of the day/week that are predominantly onerous for small independent exhibitors;

- **Vertical integration** of distributors into the exhibition, pay-per-view services and broadcasting.
The audiovisual industry has public policy implications. Mostly in developing countries, governments involve not only fostering but also enacting a legislative structure to support local motion picture production due limited supply capacity of audiovisuals and the struggle of accessing global distribution channels (UNCTAD, 2010).

The making, distribution, and exhibition of films remain controlled by a small number of vertically integrated groups. About 80 percent of all films exhibited worldwide are Hollywood productions (UNCTAD, 2010), mostly produced by the big-six: Disney; Sony Pictures; Warner; Paramount; 20th Century Fox; and Universal (MPAA, 2016). An example is the list of top 25 audience films in Europe in 2010 season. American producers, alone or co-producing with Europeans producers, dominated the market, usually aimed at child-youth audiences, also evidencing the growth of 3D films, reinforcing the dominance of high-technological movies (UNESCO, 2013b). Among these 25 movies, just two were not produced or co-produced by American studios: an Indian film (My name is Khan) and a Brazilian (Elite Squad: The Enemy Within) (UNESCO, 2013b).

This supremacy constrains the development of motion picture industries in developing countries and restricts their participation in the global market. Some countries try to build legislation and set incentives to encourage national production. In parallel, recent years brought challenges and opportunities due to technological advances that allow for economies of scale by making motion picture production easier to distribute at a global level without physical copies and streaming (UNCTAD, 2010). At the same time, particularly in developing countries, the lack of exhibition rooms with more sophisticated technologies, exhibition got more expensive, restricting to a massive audience (UNESCO, 2013a).

Despite the absolute predominance of American production, some countries shown increase in production between 2005 and 2011. Examples are China (260 to 584 films, increase of 124.6%), the United Kingdom (106 to 299 films, increase of 182.1%) and the Republic of Korea (87 to 206 films, increase of 148.3%). Outside the Top 10, some countries showed increases in the level of production. Such countries are, for example, Brazil (42 to 100 films, increase of 136%), Iran (26 to 76 films, increase of 192%), Turkey (28 to 70 films, increase of 150%), Viet Nam (12 to 75 films, increase of 525%), and Mexico (71 to 111 films, increase of 56.3%).

The domination of big distributors worldwide is a challenge for the motion picture production, not only in developing countries but also in developed countries (Flew &
Cunningham, 2010). On one hand, the creativity process occurs in SME firms, but there is a dependence on more structured and commerce-oriented distributors (UNESCO, 2013a). On the other hand, technological advances, as promoting cheaper and high-quality production that can be accessed in many kinds of screens, any place, and to anyone. On the next item, the focus is the Brazilian scenario for the audiovisual production.

4.3 The Brazilian Scenario

The motion picture production is a pioneer audiovisual activity in innovation and symbols generation. Worldwide organized around a distribution system based on action and activity of the major US studios, the motion picture production in almost all countries demands protection, support and state funding to stay in the market and grow (ANCINE, 2013).

Production activities and distribution of audiovisual content experienced the spread of creation techniques and the emergence of new market segments. The audiovisual industry was upstretched to the center of world economic dynamics. New opportunities emerged alongside the digital convergence (ANCINE, 2013).

After the decrease in the early 1990s, recovery and funding of production were the most visible problems to foster initiatives of governments and industry players. Recently, the scenario has changed. Until 2003, about 25 films were released annually. Between 2006 and 2010, the Brazilian motion picture production reached 70 to 80 films a year. In 2011, the 99 films launched represented an unthinkable result ten years before (ANCINE, 2013).

In 2013, 251,000 companies integrated the Brazilian creative economy. Last decade, there was an increase of 69.1%, when they were 148,000 firms. On the labor wages aspect, the Brazilian creative economy produced US$ 40 billion in 2013 or 2.6% of total production in Brazil. During the last ten years, the GDP of the creative economy increased 69.8%, while the total GDP increased 36.4% (FIRJAN, 2014).

The motion picture industry distinguishes itself by having more businesses than employees: there are 81,000 companies in the supply chain and 30,000 employees. Likewise, this fact stems from the widespread practice of work of industry professionals in firms themselves without employment contracts. An example is the photographers; the
main activity of the core Film & Video in some companies - 6,268 of the 22,629 establishments are the creative core (FIRJAN, 2012).

In Brazil, the production of independent content for motion picture has a kind of integration with the advertising production (ANCINE, 2013). In some cases, the endowment of audiovisual production services for advertising – with more regular and structured demand – supports firms to operate in other market segments like film projects and TV series production (Vasconcellos et al., 2015). This interaction allows the advertisement to be seen by many professionals as a gateway not only for entrance in motion picture production but also to qualify techniques for the entire industry (ANCINE, 2013).

Excluding the internet, mobile media, video on demand and ancillary activities, the Brazilian audiovisual market revenue was about US$ 9 billion in 2011. In relative terms, these values exceeded the growth of Brazilian GDP. Incomes are concentrated especially on broadcast television and cable, the most profitable market segments. Cable TV achieved the highest growth rate among the segments listed. The primary source of return is advertising. In 2011, about 63% of the investments in the advertising market were allotted to broadcast television (ANCINE, 2013).

The Brazilian television business model presents historical barriers to independent production. The entry of new economic agents and digital convergence allows changing expectations of this situation, with a greater flow of works and increasing ease of consumer access to a variety of media services through various networks and platforms available. In this convergence scenario, audiovisual media services have higher added value (ANCINE, 2013).

As noted by UNESCO (2013b), institutional changes and innovation influenced not only the Brazilian scenario of audiovisual production but also brought space for international involvement expansion.

### 4.3.1 Institutional changes.

The audiovisual industry has had substantial growth in recent years in Brazil. On the one hand, the rise and spread of new technologies multiplied the content distribution platforms as a result of increased demand for video on demand and streaming. On the other hand, the creation of the audiovisual industry fund and the enactment of Law 12,485
in 2011 consolidated strategic public policies for the industry's development (FIRJAN, 2014).

To sustain this growth, the public financing policy has diversified itself. Some financial instruments represents this change: the Audiovisual Industry Fund, the Additional Income Award (Prêmio Adicional de Renda – PAR), the ANCINE for Quality Incentive Award (Prêmio ANCINE de Incentivo à Qualidade – PAQ), the Foment Special Programs (Programas Especiais de Fomento – PEF), and new incentives and support mechanisms for international co-productions. The volume of funds also increased. In US dollars, the amount financed by the federal government in 2010 was five times the available in 2002 (ANCINE, 2013).

The Law Nº12.485 enacted on September 12, 2011, which lays new rules on pay TV, has been crucial to define the directions in the film production in Brazil. The operation of the provisions of Law implies an exponential increase in the number of independent works displayed on different channels, as well as indicating the growth of pay TV in the country (Law 12485/11, 2011). To finance the production, the Law brought new revenues to the Industry Fund. The relative integration of audiovisual chains suggests that, therefore, any activity tends to get dynamism and development (ANCINE, 2013).

Law 12485/11 aims to create demand for national productions. The law introduced a minimum quota for domestic content, established as 3 hours and 30 minutes of prime time national content per week for all channels classified as adequate space, and independent Brazilian production companies must produce half of this quota. Also, Law 12485/11 determined that for all packages offered to consumers by pay TV service providers, one out of three proper space channels must be an adequate space channel from a Brazilian schedule programmer (Guedes Filho et al., 2014).

Law 12485/11 has been an attraction factor to international motion picture industry to establish subsidiaries in Brazil, like de MPAA. The MPAA website published the Brazilian Law resume as an opportunity to set partnerships among their associated studios and Brazilian producers (MPAA, 2016).

Not only the pay TV and broadcast TV have been a target for Brazilian public agents, but also, exhibition rooms received institutional attention. Recently, Brazilian government enacted Bill Nº 8386/14 (2014) reserving percentages of the exhibition for Brazilian films, transferring responsibility to ANCINE to enact other orientation.
4.3.2 Innovation environment.

Innovation reflects over the Brazilian scenario of audiovisual production. On one hand, innovation in producing content brought opportunities not only to increment quality but also to reduce costs globally (UNCTAD, 2010). On the other hand, to the same extent that new technologies spread by different segments of the population, new windows to achieve consumers arise.

In the early twentieth century, audiovisual emerged as a collective entertainment, with an outstanding presence on city streets. Later, with television and home video, audiovisual got space in homes and the attention of the families. Since late 20th century, communication technologies, the organization of services and the needs of people made the audiovisual also an individualized phenomenon. Today, the means of all these consumption levels are increasingly interconnected and ubiquitous. The Internet and mobile media have become the environment where audiovisual most expands in formats and distribution models in which rules are very flexible (ANCINE, 2013).

Since 2011, the video on demand offer has grown rapidly in Brazil. Many economic agents organize services in different communication platforms. Pay TV packers, industry software companies, electronics retailers with operations on the internet and in the home video market, and electronics manufacturers compete for the delivery of audiovisual content to consumers. The contents are also enjoyed in different ways besides using different equipment, from traditional computers and TVs to smartphones, tablets and smart TVs (ANCINE, 2013). Also, content distribution by the Internet has spread in other channels to achieve consumers, like on demand and on stream programmers as Netflix and iTunes (Guedes Filho et al., 2014).

Brazilian government supports research and innovation in the audiovisual industry by the Audiovisual Industry Fund (Fundo Setorial do Audiovisual – FSA). FSA is a particular category of programming of the National Culture Fund (Fundo Nacional de Cultura –  FNC) (FINEP, 2016). The FSC fund is under the responsibility of Financing of Studies and Projects (Financiadora de Estudos e Projetos – FINEP). FINEP is a public company linked to the Ministry of Science, Technology and Innovation, founded in 1997. FINEP aims to support studies, projects, and programs relevant to the economic, social, scientific and technological development of Brazil, bearing in mind goals and industrial priorities established in the plans of the Federal Government (FINEP, 1996).
FSA's resources promote programs and projects for the development of cinematographic and audiovisual activities in line with the programs of the Federal Government. FSA aims to increase the participation of Brazilian audiovisual products in domestic and international markets, and ultimately, translate into economic value and social development efforts of Brazilian society to get inserted in the global scenario of cinema and audiovisual (FINEP, 2016).

4.3.3 International involvement expansion.

As an emerging market, Brazil stimulates audiovisual production to face the international arena in better conditions to compete (UNESCO, 2013b). Guided mainly by formal institutional agents (e.g., ANCINE, 2016; Apex Brasil, 2016), Brazilian audiovisual production has been experimenting new opportunities to go abroad. Three programs lead the promotion of Brazilian content in international markets:

- **Cinema do Brasil:** It is an export program run by the Audiovisual Alliance Industry for São Paulo State (SIAESP) in APEX-BRASIL and Ministry of Foreign Affairs. Such initiative uses the institutional support of the Brazilian National Film Agency (ANCINE) (Cinema do Brasil, 2016). This program seeks to favor the advance of film productions in Brazil, reaching Brazilian films in international markets. The site offers bilingual content (Portuguese and English). Cinema do Brasil Program fosters two main activities. First, providing support for the distribution of Brazilian films produced by its member companies, to be screened in international cinemas. Second, helping sales agents that have Brazilian films produced by firms associated with the Program during the Festivals of Cannes, Berlin, Locarno, Venice and San Sebastián (Cinema do Brasil, 2016). The website lists ninety Brazilian motion picture producers as potential exporters, nine distributors, and details of 229 Brazilian movies, produced since 1997 until 2015 (Cinema do Brasil, 2016).

- **Brazilian TV Producers (BTVP):** It is an audiovisual content export program created by the Brazilian Independent TV Producers Association in partnership with Apex-Brasil and Ministry of Culture. The program aims to promote the independent audiovisual production in foreign countries, enabling partnerships between Brazilian and foreign companies. The program also supports new co-production opportunities and develops international
partnerships for TV and new media producers. The program also sponsors the RioContentMarket, an international event on multiplatform content production open to the audiovisual and digital media industry (BTVP, 2016). RioContentMarket takes place annually in Rio de Janeiro, presenting keynotes, panels, pitching sessions, and business rounds, approximating Brazilian producers to the international market. RioContentMarket offers to producers from any part of the world the opportunity to expand their projects with experts and to introduce them to Brazilian and international customers (RioContentMarket, 2016). The website lists 131 Brazilian motion picture producers.

- FilmBrazil: It is a project that acts in two ways: first, promoting Brazilian talent and producers and, in doing so, adding a valuable tool to the industry while strengthening Brazilian position as a global advertising production hub (Film Brazil, 2016). FilmBrazil is a subsidiary of the Brazilian Association of Audiovisual Production – APRO in partnership with APEX-Brasil (Film Brazil, 2016). Both organizations, APRO and APEX-Brasil assist 50 firms in music, production, direction, post-production, animation and infrastructure industries, putting them in direct contact with partners to drive and facilitate new business (Film Brazil, 2016). Such 50 firms altogether produce over 80% of commercial ads in Brazil. According to FilmBrazil (2016), Brazil represents the largest advertising network in Latin America. Firms registered at ANCINE produced over 46,000 commercials in 2014 and generated a US$1.169 billion turnover. The United States has been the largest client, representing 40% of the total global volume, followed by England (28%), Japan, France, and Germany. Rio de Janeiro has been the primary destination of interest (68%), followed by São Paulo (26%) (Film Brazil, 2016). FilmBrazil keeps a close relationship with organizations, such as the Advertising Production Association (APA-USA), Association of Independent Commercial Producers (AICP-UK) and Commercial Film Producers of Europe (CFP).

The next chapter presents the results as well as discusses the theoretical implications of this study.
5 Data Analysis

This chapter presents the results and analyses of this research, divided into sections. The first section presents the data treatment applied. The second describes the reliability of constructs. The third brings the descriptive analysis of collected data. Finally, the fourth section shows the results.

5.1 Data Treatment

The descriptive phase of research first details the data collection and then applies them to the proposed framework. In this research, the framework searches for relationships between organizational creativity with the international involvement of firms engaged in the Brazilian audiovisual industry. As described in the previous section, 81 Brazilian audiovisual firms responded the survey.

Following the standards set out in the research method description, the data were prepared and checked. The researcher accomplished missing data analysis, outlier verification, tests of all multicollinearity, normality, linearity, and homoscedasticity. Then, the researcher scanned the database to identify typing errors or anomalies among the answers.

As the questionnaire had 90 questions a range of 5 to 10% missing values could represent up to 9 items, according to the literature (Kline, 1998). Three respondents were excluded, remaining 78 valid responses.

By graphic analysis, the researcher looked for outliers. Three respondents bear as outliers, repetitively (respondents X, Y, and Z). As recommended by Hair et al. (2009), the behavior of each respondent was evaluated to understand if there was an outlier generalized behavior or they represented some specificity in some answers only. Respondent X exemplifies a small firm, with five employees, established in 1995, with experience in international markets since 1998, but without sales to international markets nowadays. There were no anomalies among the answers. The firm represents usual features of the audiovisual industry, such as size and rapid international experience. Respondent Y accounts for a medium-size firm according to the revenue but a small firm according to the employee criterion. The foundation of the firm was in 1988 and started selling abroad in 1993. Sales to international markets represent twenty percent of the revenue. The firm has co-production with foreign companies, denoting interesting
information to the research. Respondent Z has only two employees and has no sales to foreign markets. Even so, its answers were plausible to the features of the firm. After checking if the results could have an influence on the reliability of construct, the researcher observed that there were not significant changes. Thus, as a research decision, these three responses were kept in the research.

Appendix B shows the test of normality. Latent variables from 11 to 82 presented normality, with absolute asymmetry index values below $|3|$ and with kurtosis values below $|10|$, in the range proposed by Hair Jr. et al. (2009). The visual analysis confirmed linearity between dependent and independent variables. The test of multicollinearity was performed by bivariate correlation. Variables present correlation below 0.85, as recommended by Hair Jr. et al. (2009) as illustrated in Appendix A.

### 5.2 Reliability of Constructs

As previously described, all constructs had dimensions assessed by observable variables. Together with Cronbach’s alpha test, testing the composite reliability of the constructs and extracted variance verified the reliability of constructs, as depicted in Table 4.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Dimension</th>
<th>Previous variables</th>
<th>Used variables</th>
<th>Cronbach’s alpha</th>
<th>Composite reliability</th>
<th>Extracted Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Creativity</td>
<td>ORGMOT</td>
<td>11 to 16</td>
<td>13,14,15</td>
<td>0.530</td>
<td>0.704</td>
<td>0.476</td>
</tr>
<tr>
<td></td>
<td>RESOUR</td>
<td>17 to 21</td>
<td>17,18,21</td>
<td>0.593</td>
<td>0.622</td>
<td>0.361</td>
</tr>
<tr>
<td></td>
<td>MANPRT</td>
<td>22 to 26</td>
<td>22,23,25</td>
<td>0.461</td>
<td>0.483</td>
<td>0.254</td>
</tr>
<tr>
<td>Innovative Capability</td>
<td>PRDINN</td>
<td>27 to 32</td>
<td>27 to 32</td>
<td>0.889</td>
<td>0.902</td>
<td>0.611</td>
</tr>
<tr>
<td></td>
<td>PRCINN</td>
<td>33 to 38</td>
<td>33,34,35,38</td>
<td>0.771</td>
<td>0.771</td>
<td>0.476</td>
</tr>
<tr>
<td></td>
<td>ORGINN</td>
<td>39 to 41</td>
<td>39 to 41</td>
<td>0.727</td>
<td>0.847</td>
<td>0.650</td>
</tr>
<tr>
<td>Entrepreneurial Capability</td>
<td>CAUSAT</td>
<td>42 to 48</td>
<td>42 to 45</td>
<td>0.793</td>
<td>0.810</td>
<td>0.521</td>
</tr>
<tr>
<td></td>
<td>EFFECT</td>
<td>*</td>
<td>*</td>
<td>0.757</td>
<td>0.644</td>
<td>0.404</td>
</tr>
<tr>
<td>International Involvement</td>
<td>INTORT</td>
<td>65 to 68</td>
<td>65 to 68</td>
<td>0.892</td>
<td>0.894</td>
<td>0.681</td>
</tr>
<tr>
<td></td>
<td>INTINN</td>
<td>73 to 77</td>
<td>73 to 77</td>
<td>0.848</td>
<td>0.855</td>
<td>0.544</td>
</tr>
<tr>
<td></td>
<td>INMKOR</td>
<td>78 to 82</td>
<td>78 to 82</td>
<td>0.886</td>
<td>0.889</td>
<td>0.618</td>
</tr>
</tbody>
</table>

Source: The author based on 78-respondent results

(*) Variables of the effectuation dimension results from subdimensions analysis.

As shown in Table 4, this research does not consider some indicators in the final assessment as follows:
• Organizational motivation (ORG MOT): no extracted variance factors presented high factorial loads. It happened because there is a high level of error associated. Also, V13 presented low factorial load \(^3\) (0.322), but discriminant analysis revealed that there is a contribution to ORGMOT to take into account. Indicators V11, V12, and V16 were cut because they had low correlation with the other observable variables and showed low factorial load (less than 0.500) in the confirmatory factorial analysis. The possible explanation appears while reading the questionnaire. Indicator V11 intended to evaluate how internal publications may motivate individuals. Descriptive analysis of the sample shown that some firms are too small, a dominant feature in the audiovisual industry. Maybe the questions make no sense to the respondents. The same have to be considered to indicators V12 (risk-taken motivation) and V16 (flexibility of managing systems).

• Resources (RESOUR): The indicators V19 and V20 were cut because they did not present any correlation with the other variables and even between them. Moreover, they had low factorial load factor in the confirmatory factor analysis. Some possible explanations arise while reading the questions, also considering the features of the samples. Indicator V19 asked about open access do financial resources to develop projects. Indicator V20 questioned about free access to internal information. Both issues probably make no sense to respondents.

• Management practices (MANPRT): Generally, results of management practice dimensions were disappointing. The best statistic results were without indicators V24 and V26. Taken separately, Cronbach’s alpha 0.461 is unacceptable (below 0.6 according to Hair Jr. et al., 2009). Also, both composite reliability and extracted variance are low. Nevertheless, considering that MANPRT together with ORGMOT are statically significant and presented discriminant validity, MANPRT dimension is an integrative element of the construct. Excluded indicators V24 (questioned whether project goals are clearly defined at the beginning of the work assignment) and V26 (the question was if work groups are formed according to complementary

\(^3\) Appendix A shows factorial loads of each indicator.
personalities), mostly have no sense for some micro and small firms, a dominant feature of the sample.

- **Process Innovation (PRCINN):** Indicators V36 and V37 were cut because they had low correlation with other observable variables as well as their low factorial loads (less than 0.500) in the confirmatory factorial analysis. Indicator V36 referred to how strong is the firm in improving the production process. A possibility is that this question generated doubts to respondents, once improvement of a process could represent some fuzzy lexical mean in the empirical environment. Indicator V37 questioned if the firm develops new processes more frequently than our competitors do. In qualitative observations, common sense is that they do not have a comprehensive vision for the entire industry (FIRJAN, 2014). Thus, probably they could not compare their firms to others.

- **Effectuation (EFFECT):** Four sub-dimensions compose the effectuation dimension: experimentation (EXPRMT), affordable loss (AFFLSS), flexibility (FLEXIB), and pre-commitments (PCOMMT). This research checked Cronbach’s alpha, composite reliability and extracted variance of all of them, as expressed in Table 5.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Sub-dimension</th>
<th>Previous variables</th>
<th>Used variables</th>
<th>Cronbach’s alpha</th>
<th>Composite reliability</th>
<th>Extracted Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFFECT</td>
<td>EXPRMT</td>
<td>49 to 52</td>
<td>49 to 52</td>
<td>0.592</td>
<td>0.766</td>
<td>0.454</td>
</tr>
<tr>
<td></td>
<td>AFFLSS</td>
<td>53 to 55</td>
<td>53 to 55</td>
<td>0.932</td>
<td>0.934</td>
<td>0.825</td>
</tr>
<tr>
<td></td>
<td>FLEXIB</td>
<td>56 to 59</td>
<td>56 to 58</td>
<td>0.746</td>
<td>0.753</td>
<td>0.508</td>
</tr>
<tr>
<td></td>
<td>PCOMMT</td>
<td>60 to 64</td>
<td>60, 61, 63</td>
<td>0.739</td>
<td>0.753</td>
<td>0.511</td>
</tr>
</tbody>
</table>

Source: The author based on 78-respondent results

- **Flexibility (FLEXIB):** FLEXIB did not consider indicator V59 because it had low correlation with the other observable variables and showed low factorial load (less than 0.500). Indicator V59 asked respondents if they avoided courses of action that restricted their flexibility and adaptability. A possibility is that there was a misunderstanding about the question, once indicator V58 (questioned if they were flexible and took advantage of opportunities as they arose) had some correspondence to the meaning, without statistic problems.
• **Pre-commitments (PCOMMT):** This sub-dimension of effectuation dimension of entrepreneurial capability has been presenting statistic problems in many studies (e.g., Chandler et al., 2011; Faia, Rosa, & Machado, 2014; Galkina & Chetty, 2015). This research added two extra observable variables to the scale aiming to expand pre-commitment sense to the original theoretical meaning (“Whom I know” – Sarasvathy, 2001, p.253; Tasic & Andreassi, 2008, p.14) expanding the relationship sense into this sub-dimension. Indicator V63 confirmed that the pre-commitments sub-dimension needed a complementary understanding. Indicator V62 (the contacts and the relationships we had before establishing our company have served to reduce uncertainty) did not contribute to the results; so it was taken out.

This research checked the discriminant validity of the constructs. Results confirmed that each construct was measuring different dimensions, as detailed in Table 6.

### Table 6: Discriminant validity of constructs

<table>
<thead>
<tr>
<th></th>
<th>Organizational Creativity</th>
<th>Innovative Capability</th>
<th>Entrepreneurial Capability</th>
<th>International Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. ORGMOT</td>
<td>0.476</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. RESOUR</td>
<td>0.108</td>
<td>0.361</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. MANPRT</td>
<td>0.069</td>
<td>0.153</td>
<td>0.254</td>
<td></td>
</tr>
<tr>
<td>D. PRDINN</td>
<td></td>
<td></td>
<td></td>
<td>0.611</td>
</tr>
<tr>
<td>E. PRCINN</td>
<td></td>
<td></td>
<td></td>
<td>0.476</td>
</tr>
<tr>
<td>F. ORGINN</td>
<td></td>
<td></td>
<td></td>
<td>0.204</td>
</tr>
<tr>
<td>G. CAUSAT</td>
<td></td>
<td></td>
<td></td>
<td>0.277</td>
</tr>
<tr>
<td>H. EFFECT</td>
<td></td>
<td></td>
<td></td>
<td>0.360</td>
</tr>
<tr>
<td>I. INTORT</td>
<td></td>
<td></td>
<td></td>
<td>0.650</td>
</tr>
<tr>
<td>J. INTINN</td>
<td></td>
<td></td>
<td></td>
<td>0.521</td>
</tr>
<tr>
<td>K. INMKOR</td>
<td></td>
<td></td>
<td></td>
<td>0.404</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.681</td>
</tr>
</tbody>
</table>

Source: The author based on 78 respondent results

Considering that the extracted variance of all constructs is greater than the correlation of the square, as recommended by Fornell and Larcker (1981), the constructs have discriminant validity.

However, the entrepreneurial capability has four sub-dimensions. Once the Effectuation Theory is a theory under construction on international business perspective (Kalinic et al., 2014; Sarasvathy et al., 2014), this research also checked the
entrepreneurial capability discriminant validity considering their four sub-dimensions, as per Table 7.

Table 7: Discriminant validity of entrepreneurial capability

<table>
<thead>
<tr>
<th></th>
<th>CAUSAT</th>
<th>EXPRMT</th>
<th>AFFLSS</th>
<th>FLEXIB</th>
<th>PCOMMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAUSAT</td>
<td>0.521</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXPRMT</td>
<td>0.228</td>
<td>0.454</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AFFLSS</td>
<td>0.001</td>
<td>0.002</td>
<td>0.825</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLEXIB</td>
<td>0.097</td>
<td>0.205</td>
<td>0.007</td>
<td>0.508</td>
<td></td>
</tr>
<tr>
<td>PCOMMT</td>
<td>0.132</td>
<td>0.041</td>
<td>0.044</td>
<td>0.126</td>
<td>0.511</td>
</tr>
</tbody>
</table>

Source: The author based on 78-respondent results

As occurred with the discriminant validity of constructs, the extracted variance of entrepreneurial capability is greater than the correlation of the square, as endorsed by Fornell and Larcker (1981). Hence, the entrepreneurial capability has discriminant validity.

Before presenting the hypothesis validation, next section presents a descriptive analysis of the sample.

5.3 Descriptive Analysis

The sample has 78 responses of firms inserted in the Brazilian audiovisual industry. These firms are in a range of 2 to 29 years of activity. The mean for years of activity is 11.4 years. Forty-three firms experienced sales in international markets. Among them, the average experience is 6.8 years. The international involvement intensified over the last five years (29 firms). Among the firms with international experience, the average of starting international involvement was 6.7 years.

According to the Brazilian Supporting Service to Micro and Small Firms (Serviço Brasileiro de Apoio às Micro e Pequenas Empresas - SEBRAE, 2014), in the service field, firms may be classified considering how many employees work in the firm, as follows:

- **Micro**: up to nine employees
- **Small**: from 10 to 49 employees
- **Medium**: from 50 to 99 employees
- **Large**: more than 100 employees
An alternative sizing parameter is revenue. According to the Brazilian Geography and Statistics Institute (Instituto Brasileiro de Geografia e Estatística - IBGE, 2016), considering the annual gross operational revenue criterion, Brazilian firms may be classified as:

- **Micro**: less or equal to R$ 2.4 million
- **Small**: over than R$ 2.4 million but less or equal to R$ 16 million
- **Medium**: over than R$ 16 million but less or equal to R$ 90 million
- **Medium-Large**: over than R$ 90 million but less or equal to R$ 300 million
- **Large**: over than R$ 300 million

According to the results, the sample is mainly composed of micro and small firms (95% considering employees criterion and 92% considering revenue criterion). Although percentages are similar, a correlation test shows that the relation is not statistically significant. This response confirms qualitative observation (FIRJAN, 2013) that the quantity of employees does not necessarily mean more sales in the creative economy. Results show how heterogenic the audiovisual firms in Brazil are. Also, results demonstrate that there is a statistically significant correlation between two variables, revenue, and years of activity (Sig. (2-tailed) value is 0.001). Table 8 expresses such results.

### Table 8: Control Variables Correlation

<table>
<thead>
<tr>
<th></th>
<th>Revenue</th>
<th>Employees</th>
<th>Years of activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>1</td>
<td>.138</td>
<td>.381**</td>
</tr>
<tr>
<td>Employees</td>
<td>.138</td>
<td>1</td>
<td>.002</td>
</tr>
<tr>
<td>Years of activity</td>
<td>.381**</td>
<td>.002</td>
<td>1</td>
</tr>
</tbody>
</table>

(*** statistically significant)

**Source**: The author based on 78-respondent results

### 5.4 Test of Hypotheses

After checking normality, linearity, multicollinearity as the discriminant validity, composite reliability, and extracted variance of the constructs, this research generates four observable variables (Organizational Creativity – ORGCREAT, Innovative Capability – INNCAPAB, Entrepreneurial Capability – ENTCAPAB, and International Involvement

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4 In January 2016, Real Brazilian currency (R$) was equivalent to ¼ US Dollars.
First, means of indicators were transformed into latent variables, following the scales adopted for this study. Second, means of latent variables were transformed into observable variables of each construct. The relationship between ORGCREAT (independent variable – IV) and INTINVOL (dependent variable – DV) was tested directly and through the mediation of two variables, INNCAPAB (mediating variable – MV) and ENTCAPAB (MV) using linear regression. Finally, a Sobel test evaluated the mediation effect. Figure 12 recovers the hypotheses:

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Description</th>
<th>Constructs</th>
<th>Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>There is a direct, positive and significant association between organizational creativity with international involvement.</td>
<td>Organizational Creativity (IV)</td>
<td>(Amabile et al., 1996; Moultrie &amp; Young, 2009)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International Involvement (DV)</td>
<td>(Knight &amp; Kim, 2009)</td>
</tr>
<tr>
<td>H2</td>
<td>The innovative capability mediates the relationship between organizational creativity with international involvement.</td>
<td>Organizational Creativity (IV)</td>
<td>(Amabile et al., 1996; Moultrie &amp; Young, 2009)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International Involvement (DV)</td>
<td>(Knight &amp; Kim, 2009)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Innovative Capability (MV1)</td>
<td>(Jiménez-Jiménez &amp; Sanz-Valle, 2011; Zahra &amp; George, 2002)</td>
</tr>
<tr>
<td>H3</td>
<td>The entrepreneurial capability mediates the relationship between organizational creativity with international involvement.</td>
<td>Organizational Creativity (IV)</td>
<td>(Amabile et al., 1996; Moultrie &amp; Young, 2009)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International Involvement (DV)</td>
<td>(G. Knight &amp; Kim, 2009)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Entrepreneurial Capability (MV2)</td>
<td>(Chandler et al., 2011)</td>
</tr>
</tbody>
</table>

**Figure 12: Research hypotheses**  
*Source: the author*

Table 9 illustrates the correlations and significance among variables. There is a correlation between each variable, in different intensities. The significance rate between ORGCREAT and INTINVOL is at the limit of acceptance, considering significant on level 0.05.
Table 9: Correlation and significance of variables

<table>
<thead>
<tr>
<th></th>
<th>INTINVOL</th>
<th>ORGCREAT</th>
<th>INNCAPAB</th>
<th>ENTCAPAB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson correlation</td>
<td>1</td>
<td>.217</td>
<td>.393**</td>
<td>.395**</td>
</tr>
<tr>
<td>Sig. (2 tailed)</td>
<td>.057</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>78</td>
<td>78</td>
<td>78</td>
<td>78</td>
</tr>
</tbody>
</table>

This research performed a test of normality of the four variables, as illustrated in Table 10. Skewness is below |3| and Kurtosis is below |10|, confirming the variables are normal, according to Hair Jr. et al. (2009).

Table 10: Normality of variables

<table>
<thead>
<tr>
<th></th>
<th>ORGCREAT</th>
<th>INTINVOL</th>
<th>INNCAPAB</th>
<th>ENTCAPAB</th>
</tr>
</thead>
<tbody>
<tr>
<td>N valid (of list)</td>
<td>78</td>
<td>78</td>
<td>78</td>
<td>78</td>
</tr>
</tbody>
</table>

** Correlation is significant on level 0.01 (2-tailed).

Source: The author based on 78-respondent results

A visual interpretation of data also confirms its normality (Figure 13) configuring a positive correlation.
Figure 13: Data dispersion
Source: The author based on 78-respondent results

The histogram (Figure 14) and unstandardized residual plot confirm normality (Figure 15).

Figure 14: Normality between unstandardized residual measure and frequency
Source: The author based on 78-respondent results
The homoscedasticity tested the extent that residual present homogeneous variance, crossing residues (ZRESID) versus estimated values of dependent variable (ZPRED), as depicted in Figure 16. The results showed no relationship between the predicted values and standardized residues.

After checked preliminary assumptions, this research presents the models that summarize the research.
5.5 Research Models

Five models synthesize this research:

- Model I tested the direct relationship between variables ORGCREAT (IV) with INTINVOL (DV) aiming to validate Hypothesis H1;
- Model II assessed such relationship including variable INNCAPAB (MV) to evaluate the mediating effect of this variable on the relationship of ORGCREAT (IV) with INTINVOL (DV) to validate Hypothesis H2;
- Model III substituted INNCAPAB by ENTCAPAB (MV) to evaluate the mediating effect of ENTCAPAB in the relationship between ORGCREAT (IV) with INTINVOL (DV) to validate Hypothesis H3;
- Model IV joined both INNCAPAB and ENTCAPAB as mediating variables in the relationship between ORGCREAT (IV) with INTINVOL (DV) simultaneously to expand results of this research.
- Model V included control variables, such as time of existence of the firm, size according to the revenue, and size according to the number of employees.

Table 11 resumes the results of the tested models.
Table 11: Model Summary

<table>
<thead>
<tr>
<th></th>
<th>Model I</th>
<th>Model II</th>
<th>Model III</th>
<th>Model IV</th>
<th>Model V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent variable (IV)</td>
<td>ORGCREAT</td>
<td>ORGCREAT</td>
<td>ORGCREAT</td>
<td>ORGCREAT</td>
<td>ORGCREAT</td>
</tr>
<tr>
<td>Mediating variables (MV)</td>
<td>INNCAPAB</td>
<td>ENTCAPAB</td>
<td>INNCAPAB</td>
<td>ENTCAPAB</td>
<td>INNCAPAB</td>
</tr>
<tr>
<td>Dependent variable (DV)</td>
<td>INTINVOL</td>
<td>INTINVOL</td>
<td>INTINVOL</td>
<td>INTINVOL</td>
<td>INTINVOL</td>
</tr>
<tr>
<td>Control variables (CV)</td>
<td>Existence, revenue, employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R² adjusted</td>
<td>0,034*</td>
<td>0,134*</td>
<td>0,157*</td>
<td>0,185*</td>
<td>0,165</td>
</tr>
<tr>
<td>F</td>
<td>3,747</td>
<td>6,940</td>
<td>6,990</td>
<td>6,833</td>
<td>3,527</td>
</tr>
<tr>
<td>R² change</td>
<td>0,109*</td>
<td>0,110*</td>
<td>0,170*</td>
<td>0,013</td>
<td></td>
</tr>
<tr>
<td>F change</td>
<td>9,705</td>
<td>9,798</td>
<td>8,030</td>
<td>0,390</td>
<td></td>
</tr>
<tr>
<td>β ORGCREAT</td>
<td>0,217*</td>
<td>0,049</td>
<td>0,037</td>
<td>-0,053</td>
<td>-0,048</td>
</tr>
<tr>
<td>β INNCAPAB</td>
<td></td>
<td></td>
<td></td>
<td>0,287*</td>
<td>0,294*</td>
</tr>
<tr>
<td>β ENTCAPAB</td>
<td>0,377*</td>
<td></td>
<td>0,293*</td>
<td></td>
<td>0,292*</td>
</tr>
<tr>
<td>β existence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0,050</td>
</tr>
<tr>
<td>β revenue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0,071</td>
</tr>
<tr>
<td>β employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0,062</td>
</tr>
<tr>
<td>VIF INNCAPAB</td>
<td>0,794*</td>
<td></td>
<td>0,794*</td>
<td></td>
<td>0,794*</td>
</tr>
<tr>
<td>VIF ENTCAPAB</td>
<td></td>
<td>0,773*</td>
<td></td>
<td>0,773*</td>
<td>0,773*</td>
</tr>
<tr>
<td>VIF existence</td>
<td></td>
<td></td>
<td></td>
<td>0,992</td>
<td></td>
</tr>
<tr>
<td>VIF revenue</td>
<td></td>
<td></td>
<td></td>
<td>0,994</td>
<td></td>
</tr>
<tr>
<td>VIF employees</td>
<td></td>
<td></td>
<td></td>
<td>0,924</td>
<td></td>
</tr>
</tbody>
</table>

(*) significant at 0.05

Source: The author based on 78-respondent results

Discussion of models and outcomes presented in Table 11 are in the following items.

5.5.1 Model I.

Model I tests Hypothesis H1. Hypothesis H1 predicts that there is a positive, direct and significant association between organizational creativity (ORGCREAT) with international involvement (INTINVOL). Results confirm that the dependent variable (INTINVOL) has a direct relationship with the independent variable (ORGCREAT), as Pearson Correlation demonstrates a moderate and positive correlation of 0.217, significant at p=0.057.
According to the model, in Brazilian audiovisual firms, a modification of 100% in the organizational creativity resource generates a change of 3.4% in their international involvement. The results are consistent with the expectations, supporting H1.

Scarce but relevant studies have been investigating the connection between organizational creativity and international involvement in a similar direction. Delios (2011) investigated on an individual level the role of experience as a valued asset to the organization to generate knowledge and capabilities that may be useful in different institutional contexts. In a similar perspective, Harms and Schiele (2012) examined the creative manner how personal and group experience match to generate knowledge. In this research, creativity is recognized as a crucial and intangible resource of the firm, offering an organizational level assessment.

This study assumes that there is an association between organizational creativity and internationalization, nurtured by divergent and convergent thinking (Cropley, 2006; Runco, 2001) when the firm experiences international environments. This perception aligns to the investigation on individual and group level of analysis. Moran (2010) understands that in an interconnected world people try to understand how imagination runs when ideas and strategies prevail in many places. In the same sense, Gilson (2008) talent individuals develop new ideas, and so new and useful attitudes are necessary to make a global firm. Considering that the sample available refers to a particular industry of an emerging market, some obstacles exist to implement concepts learned abroad, once organizations build up barriers that must be overlapped recognize the need for new ideas (De Ven, 1986). In global markets, a firm has to develop the capacity of creating products or processes, or even new ideas to conquer space in a competitive scenario (Damanpour & Aravind, 2012; Knight & Kim, 2009).

In this research, it was proposed that there are two main roles for organizational creativity in international involvement. First, an objective role, organizational creativity acts as an antecedent of innovative capability. Second, a subjective role, organizational creativity acts as an antecedent of entrepreneurial capability. Such capabilities mediate the relationship between organizational creativity – a crucial an intangible resource (Penrose, 1959) – with international involvement. As proposed by Javidan (1998), firms build their competencies supported by resources that offer conditions to build capabilities. In practice, a firm applies internal and external sources of capabilities to compete (Zahra & Nielsen, 2002). The way how entrepreneurs manage such capabilities is critical to get efficiency (Barney, 1999). The next item presents the objective role of organizational
creativity mediating international involvement as an antecedent of innovative capability. Model 2 assesses the indirect relationship of ORGCREAT and INTINVOL mediated by INNCAPAB.

5.5.2 Model II.

Hypothesis H2 predicts that there is a mediation of innovative capability between organizational creativity and international involvement. Model II tests this hypothesis including the variable INNCAPAB. Such relationship refers to the objective role of organizational creativity in the international involvement.

Results demonstrate that the dependent variable (INTINVOL) has an indirect relationship with the independent variable (ORGCREAT), mediated by variable innovative capability (INNCAPAB), significant at p=0.003. Nevertheless, when INNCAPAB mediates the relationship of ORGCREAT with INTINVOL, there is no more significance between ORGCREAT with INTINVOL. It means that the role of innovative capability mediates entirely such relationship.

According to Model II, in Brazilian audiovisual firms, a modification of 100% in the organizational creativity resource generates a change of 13.4% in their international involvement, if mediated by innovative capability. The results are suitable with the expectations, supporting H2.

The results agree with previous studies. For example, Filipescu et al. (2013) observed that the capacity to manage resources to innovate, as well as to offer new products or improvements in processes represents one of the most relevant growth factors of competitiveness, both nationally and internationally. Autio et al. (2000) emphasized that as a firm go global the learning increased overseas interrelates with local sources of information, enabling the firm to introduce innovation into international markets.

Although the result confirms the expectations, there is a further implication of Model II to explore, mainly if taking into account the finding of Çokpekin and Knudsen (2012). Those authors noticed that product innovation and process innovation might reflect in different proportion in the firm. In this research, Model II did not confirm which role has organizational creativity over different dimensions of innovative capability, i.e., product innovation, process innovation or organizational innovation.

Additionally, this research tested the relationship between latent variables of INNCAPAB; it means, product innovation (PRDINN), process innovation (PRCINN),
and organizational innovation (ORGINN). Surprisingly, results demonstrate that the dependent variable (INTINVOL) has an indirect relationship with the independent variable (ORGCREAT), mediated exclusively by organizational innovation (ORGINN), significant at p=0.001. In this additional test, neither ORGCREAT directly nor two dimensions of innovative capability (PRDINN and PRCINN) collaborate in mediating the relationship between ORGCREAT with INTINVOL, once there was no significance anymore. It means that the role of organizational innovation mediates entirely such relationship.

Amplifying this discussion, in Brazilian audiovisual firms, a modification of 100% in the resource organizational creativity generates a change of 18.2% in their international involvement if mediated by innovative capability, considering all three its dimensions separately. A possible explanation for this improvement is the association of estimated error between dimensions. This complementary test confirmed that the effect of organizational creativity in international involvement happens more intensively by the mediation of organizational innovation than product or process innovation.

This result also has theoretical implications when compared to similar studies that do not consider organizational innovation. For instance, Hoonsopon and Ruenrom (2012) assessed the impact of organizational capabilities on the build of radical and incremental product innovation. They concluded that when such products offer new and superior benefits to clients, there are a better market and financial performance of firms. Bell, Crick, and Young (2004) observed that fast international growth correlates to a strong commitment to product innovation. Also, scholars relate effects of process innovation in the internationalization process. For example, Ellis (2010) and Yu and Si (2012) verified that the inter-relationship of firms involved abroad improves their processes.

Considering the mediating effect of organizational innovation, in Brazilian audiovisual firms, a modification of 100% in the resource organizational creativity generates a change of 20.3% in their international involvement.

This result is coherent to de Sousa, Pellissier, and Monteiro (2012) that consider organizational innovation as the best fusion between creativity and innovation, once organizational innovation refers to a discovery process of new ways to do thing better (Wang et al., 2015). In the same sense, Chiva, Ghauri, and Alegre (2014), organizational learning leads to organizational innovation as a process of development of new ways of realizing or understanding things within organizations provoking new organizational knowledge.
5.5.3 Model III.

Hypothesis H3 predicts that there is a mediation of entrepreneurial capability between organizational creativity and international involvement. Such relationship refers to the subjective role of organizational creativity in the international involvement.

Results demonstrate that the independent variable (ORGCREAT) has an indirect relationship with the dependent variable (INTINVOL), mediated by variable entrepreneurial capability (ENTCAPAB), significant at p=0.002. Nevertheless, when ENTCAPAB mediates the relationship of ORGCREAT with INTINVOL, there is no more significance between ORGCREAT with INTINVOL. It means that the role of entrepreneurial capability entirely mediates such connection in this model.

According to Model III, in Brazilian audiovisual firms, a modification of 100% in the resource organizational creativity generates a change of 15.7% in their international involvement, if mediated by entrepreneurial capability. The results are consistent with the expectations, permitting to support H3.

Other studies similarly denote this mediating effect. Hee-Yong (2015) published a study about the mediating role of entrepreneurship between organizational creativity and levels of internationalization in Korea. Similarly, Hargadon (2008) investigated how creativity works to understand how entrepreneurs pace people and ideas from different places together to find new alternatives and conscious decisions to go to international markets. Gabrielsson and Gabrielsson (2013) evaluated the decision-making patterns in the international environment. These findings are consonant to Sarasvathy (2001) who considers that entrepreneurs use creative abilities to solve problems in unpredictable environments and also to van Kranenburg, Hagedoorn, and Lorenz-Orlean (2014) implications of international involvement in the decision-making process in the international arena. Those empirical studies attested Schweizer et al., (2010) proposition that incorporating entrepreneurial capabilities as a stable variable in international business studies would be reasonable to exploit contingencies as a change variable.

Even that result confirms the expectations; there is a further implication in Model III to investigate. Results did not confirm which role has organizational creativity over different dimensions of entrepreneurial capability, i.e., causation or effectuation dimensions.
Unexpectedly, results demonstrate that only the dependent variable (INTINVOL) has an indirect relationship with the independent variable (ORGCREAT) when mediated exclusively by causation (CAUSAT), significant at p=0.000. Neither ORGCREAT directly nor EFFECT (as a dimension of entrepreneurial capability) cooperates in mediating the relationship between ORGCREAT with INTINVOL; once there was no significance anymore. It means that the role of causation as a dimension of entrepreneurial capability mediates entirely such relationship.

In this proposition, in Brazilian audiovisual firms, a modification of 100% in the resource organizational creativity generates a change of 18.2% in their international involvement, if mediated by entrepreneurial capability, considering its dimensions separately. A possible explanation for this improvement is the association of estimated error between dimensions. Additionally, results confirmed that the association of organizational creativity in international involvement happens mainly due to the mediation of the causation dimension. This evidence invites for a further investigation, considering only the causation dimension of entrepreneurial capability.

The effect of CAUSAT as a mediating variable between ORGCREAT and INTINVOL has explanations in previous studies. The causation logic has implications for learning and knowledge acquisition to develop scenarios and to achieve goals (Read & Sarasvathy, 2005; Sarasvathy, 2001). Thus, when entrepreneurs scan opportunities in international markets, the entrepreneurial capability moves on the continuum of effectuation (Perry et al., 2012), depending on how they realize uncertainty. In this sense, the more a firm gets involved in international markets; the more its behavior becomes predominantly causation. This behavior has empirical evidence, like in Berends, Jelinek, Reymen, and Stultiens (2014). Authors researched product innovation paths in five small firms across 352 events and noted that there was an early effectuation logic, which progressively turned toward causation logic over time. This finding is consonant to other scholars that observed that entrepreneurs begin to adopt causation behavior as knowledge grows (Hollanders & Soete, 2010; Yao et al., 2013).

Nevertheless, this finding diverges from other studies. For example, Andersson (2011) investigated how new ventures could access many markets in a short time cooperating with local networks. According to his results, knowledge and early networks of founders were critical in the fast international expansion, considering that the effectuation approach could explain the ability of entrepreneurs to create opportunities, along with their partners, as a tool of international insertion (Andersson, 2011).
As findings conflict with some theoretical connections established on theoretical review, this research extends the investigation taking into account the multifaceted feature of effectuation dimension. Theoretically, the effectuation dimension has associations to intuitive aspects of the decision-maker that could approximate such constructs. Effectuators experiment alternatives, evaluate available resources, use flexibility and take into account their relationships to create pre-commitments (Sarasvathy, 2001). This research unfolds the four sub-dimensions of effectuation trying to evaluate whether the effectuation logic considers organizational creativity to establish international involvement. Another test including the CAUSAT variable and the sub-dimensions of EFFECT as mediators, i.e., EXPRMT, AFFLSS, FLEXIB, and PCOMMT separately aimed to analyze this finding deeper.

Results demonstrate that the dependent variable (INTINVOL) has an indirect relationship with the independent variable (ORGCREAT), mediated by two sub-dimensions of EFFECT, it means, EXPRMT (sig. at p=0.003) and FLEXIB (p=0.025). Neither ORGCREAT directly nor AFFLSS and PCOMMT (as sub-dimensions of EFFECT) liaises in mediating the relationship between ORGCREAT and INTINVOL; once there was no statistical significance.

Results disclose that in Brazilian audiovisual firms a modification of 100% in the resource organizational creativity generates a change of 22.8% in their international involvement if mediated by entrepreneurial capability, taking into account the causation dimension and sub-dimensions of effectuation dimension. This test confirms the expectations about the influence of organizational creativity on international involvement mediated by entrepreneurial capability.

Such findings offer many considerations. First, confirm earlier studies that despite effectuation being a construct of entrepreneurial capability, when considered separately, the explanation improves (as in Chandler et al., 2011; Faia et al., 2014; Galkina & Chetty, 2015). Second, two sub-dimensions of effectuation dimension on entrepreneurial capability do mediate the relationship between organizational creativity and international involvement, i.e., experimentation and flexibility. Third, two sub-dimensions of effectuation dimensions of entrepreneurial capability do not mediate such relationship, i.e. affordable loss, and pre-commitments.

Although this research did not find previous bibliographic references about the mediating role of experimentation and flexibility between the relationship of organization creativity with international involvement, some clues may offer explanations.
Experimentation, a process of discovering and developing dynamic capabilities (Turcan & Juho, 2014), provides room for applying some principals of creativity like tolerance to error as a problem-solving process. Flexibility is necessary to detect opportunities to employ their experience, knowledge, and network to take advantage of environmental contingencies (Sarasvathy, 2001) in which creativity may contribute to divergent and convergent thinking processes. Scholars offer some explanations about flexibility influence on effectuation logic in international environments. Kalinic et al. (2014), for example, observed that effectuators are usually more flexible to handle with external environment changes. Zhang, Ma, Wang, and Wang (2014) found that flexibility helps small firms to recognize opportunities in international business promoting the achievement of quick results.

On the other hand, two sub-dimensions of effectuation dimension on entrepreneurial capability, affordable loss and pre-commitments did not mediate the relationship between organizational creativity with international involvement. Affordable loss, as a sub-dimension of effectuation dimensions of entrepreneurial capability, is a central concept of the Effectuation Theory that provides explanations of the entrepreneurial behavior when there is not a scenario to achieve but a future under construction, limited by available resources (Sarasvathy, 2001). For Amabile (1998), availability of funding does not matter to the creative process, as creative people try to be more creative even to overlap financial limitations. Also pre-commitments, as a sub-dimension of effectuation dimension on entrepreneurial capability did not mediate the relationship between organizational creativity and international involvement. Eriksson, Johanson, Majkgard, and Sharma (2000) emphasized that the more firms get involved internationally; the more they tend to follow the goals of the clients. In this study, the sample tested is restricted to an industry that intensified its connections to international markets in recent years, stimulated by public initiatives (APEX BRASIL, 2016; Law 12485/11, 2011). Although depending on further investigation, a possible explanation is that international markets connections are recent and dependent on public actions, without establishing an own network, an essential condition to develop strong bonds (Galkina & Chetty, 2015).

Therefore, this research does not refuse the role of the effectuation dimension at all. This result contributes to understand the continuum feature proposed in the Effectuation Theory, as there is not a predominant kind of behavior. Entrepreneurs move into a continuum line, sometimes making decisions in causation logic and other times in
effectuation logic, as proposed by Perry et al. (2012). This complementary test permits to infer that aspect effectuation dimension carries on organizational creativity when firms get involved in international markets.

The next Model expands the comprehension about the mediating effects of both innovative capability and entrepreneurial capability, connecting both the objective and the subjective roles of the organizational creativity on the international involvement process.

5.5.4 Model IV.

This study evaluated the whole framework, considering the fourth possibility. Reviewing, Model I tested a direct relationship between ORGCREAT with INTINVOL; Models II tested the relationship between ORGCREAT with INTINVOL considering the mediator role of INNCAPAB; Model III tested the relationship between ORGCREAT with INTINVOL considering the role of ENTCAPAB as mediator. Therefore, Model IV evaluates both INNCAPAB and ENTCAPAB as mediating variables in the relationship between ORGCREAT with INTINVOL.

Model IV illustrates that the dependent variable (INTINVOL) has an indirect relationship with the independent variable (ORGCREAT), mediated by two variables INNCAPAB and ENTCAPAB. INNCAPAB (sig. at p=0.020) and ENTCAPAB (p=0.019) satisfy the assumption of normality. Also in Model IV, the relationship of ORGCREAT with INTINVOL has no statistical significance. Results attest that, although a direct relationship between ORGCREAT with INTINVOL has been significant (Model 1), when put side by side with INNCAPAB and ENTCAPAB, all association between ORGCREAT with INTINVOL is totally transferred to the mediating variables in similar proportion.

This mediation was attested by Sobel test (Preacher & Leonardelli, 2016), considering both Betas ($\beta$) and errors ($\mu$). A first test checked if INNCAPAB acts as a mediator in the relationship between ORGCREAT and INTINVOL. The test assesses $\beta$ and $\mu$ in two steps: the relationship between ORGCREAT (VI) with INNCAPAB (DV) and the relationship between INNCAPAB (IV) and INTINVOL (DV). The mediation resulted on p=0.00302054, confirming the mediator effect of INNCAPAB.

A second test checked if ENTCAPAB acts as a mediator in the relationship between ORGCREAT with INTINVOL. The test assesses $\beta$ and $\mu$ in two steps: The
relationship between ORGCERAT (VI) with ENTCAPAB (DV) and the relationship between ENTCAPAB (IV) and INTINVOL (DV). The mediation resulted on p=0.00493978, confirming the mediator effect of ENTCAPAB.

Results confirm that in Brazilian audiovisual firms a modification of 100% in the resource organizational creativity generates a change of 18.5% in their international involvement if mediated by both innovative and entrepreneurial capabilities. This model confirms the expectations about the influence of organizational creativity in international involvement. Organizational creativity acts as a building block, as mentioned by Javidan (1998), to constitute innovative and entrepreneurial capability in similar proportion, nulling any direct relationship between organizational creativity with international involvement. Results demonstrate that both the objective and the subjective roles of organizational creativity have a complementary association when a firm gets involved in international markets.

Finally, Model V evaluates if the time of the activity and the size of the firm have affected the results.

5.5.5 Model V.

Model V aimed to verify if there was an association between the time of existence of the firms and their size, considering revenue, and the number of employees in the relation of organizational creativity with international involvement. Control variables were added in the Model IV to evaluate such relationship. Results confirmed that there was no significant change in results including control variables. Moreover, there was no significance in such variables. Thus, this research discarded other influences in the results. Apparently, time of experience and size do not have association in the relationship between organizational creativity with international involvement, confirming the relevance of this study.
Conclusion

To answer the research question *how organizational creativity associates with the firm’s international involvement*, the main objective of this research aimed to detect the roles, primary or secondary, of organizational creativity in international involvement. This primary objective had specific ones. The first was to search for theoretical literature on the role of creativity as an organizational resource. The second was to identify variables in the relationship of organizational creativity with international involvement. The third was to investigate the audiovisual industry looking for vicissitudes in its international involvement. Finally, the fourth specific objective was to assess the relationship between organizational creativity with international involvement.

This research achieved the first specific objective, paving the search for the roles of creativity in the firm. The theoretical literature on the roles of creativity as an organizational resource has its foundation in Penrose’s assumption about the central role of creativity during the resource accumulation and the experimentation process (Penrose, 1959). Without rejecting other possible roles of organizational creativity in the firm, this study concentrated into two trails, the objective role of nurturing innovation and the subjective role, improving the capacity of solving problems facing uncertainty, taking into account the dynamic feature of creativity in a firm.

The objective role of organizational creativity has implications for the innovative capability that generates innovation. Amabile studies (for example Amabile, 1998; Amabile, 1988; Amabile, 1996; Amabile, 1997) supplied initial contributions in this trail. The subjective role of organizational creativity acts on entrepreneurial capability permitting firms to behave more creatively. The theoretical contribution helped its diverse sense. Kor et al. (2007) connected the role of creativity in the entrepreneurial behavior; Mosakowski (1998) explained the conversion of individual skills into organizational capabilities, and the Effectuation Theory (for instance, Read & Sarasvathy, 2005; Sarasvathy, 2001) provided a broad perspective on the dimensions of entrepreneurial behavior.

This research accomplished the second specific objective, identifying variables on the relationship of organizational creativity with international involvement. This search was complementary, bearing in mind empirical and theoretical investigation. Hints emerged during the first entrance into the empirical field (Vasconcellos et al., 2013; Vasconcellos et al., 2015) as well as during interviews with entrepreneurs. Such clues,
along with the theoretical investigation permitted to identify scales already validated. Thus, combining scales of organizational creativity (Amabile et al., 1996; Moultrie & Young, 2009), innovative capability (Jiménez-Jiménez & Sanz-Valle, 2011; Zahra & George, 2002), effectuation assessments as an entrepreneurial capability measurement (Chandler et al., 2011), and international involvement (Knight & Kim, 2009) it was possible to propose a framework to measure its variables. The observable variables permitted to assess the relationship between organizational creativity (independent variable) with international involvement (dependent variable), mediated by innovative and entrepreneurial capabilities (mediating variables).

This research achieved the third specific objective, investigating the audiovisual industry looking for vicissitudes in its international involvement. The trail of investigation started with exploratory studies, visits to conferences of the audiovisual industry, speeches of entrepreneurs, an interview with a representative of the major international industry agent (MPAA), reading of industrial reports (for example, ABPITV, 2016; FIRJAN, 2012, 2013, 2014; SIAESP, 2015; SIAPAR, 2015; SIAV-RS, 2015; SICAV-RJ, 2015), governmental reports (ANCINE, 2013, 2015; APEX BRASIL, 2016; Cinema do Brasil, 2016), and international reports (UNCTAD, 2010; UNESCO, 2013a, 2013b). Results revealed a dynamic and heterogenic industry strongly dependent on entrepreneurial attitudes. Of course, even audiovisual being a specific industry of the creative economy, this vast and dynamic segment still deserves further investigation for each researcher that intends to go deeper in this scenario.

This study also accomplished the fourth specific objective assessing the relationship between organizational creativity with international involvement. The application of the research instrument got 78 valid responses that allowed to accomplish an understanding of the relationship among variables. The regression analysis technique resulted in a rich panorama, permitting to explore data and provide analysis to comprehend how organizational creativity and international involvement have their connections, direct or indirectly.

These four specific objectives helped to achieve the primary purpose of this research, i.e., to detect the roles, primary or secondary, of organizational creativity in the international involvement. The results attested that organizational creativity, as an high-level resource, does have a relationship with international involvement, despite the weak statistical power of explanation. Organizational creativity has indirect connections to international involvement, as organizational creativity nurtures both innovative and
entrepreneurial capability accomplishing the assumptions assigned in the introductory chapter.

While nurturing innovation, organizational creativity promotes the innovative capability, accomplishing the assumption that there is an objective role of organizational creativity. Organizational creativity enhances the possibility that a firm has to involve in international markets considering that innovative capability as the capacity of generating innovation in an organization.

By its turn, while organizational creativity nurtures entrepreneurial capability, this study confirms the subjective role of organizational creativity. The more organizational creativity a firm develops; the more entrepreneurial capability a firm improves. Entrepreneurial capability mediates the organizational creativity role in international involvement, considering that the entrepreneurial capability has implications on international involvement.

This study responded to the research question considering the achievement of the main and specific objectives. Organizational creativity has implications for international involvement as a base for developing innovative (in an objective role) and entrepreneurial capabilities (in a subjective role). Statistical analysis confirmed that there is a mediation of such capabilities in this relationship.

This study offers contributions on different levels, such as theoretical, organizational, industrial, and public policies. At the theoretical level, this study helped in fulfilling the gap between organizational creativity with international involvement. As a leading resource, organizational creativity is crucial for developing innovative and entrepreneurial capabilities. This finding confirms Penrose’s proposition about the role of creativity in the firm and also offer subsidies to attest the competence construction proposed by Javidan (1998). Referring to international business studies this research confirms the expected results while assimilates entrepreneurship (Johanson & Vahlne, 2009) and the effectuation process to expand international business studies at the behavioral level (Schweizer et al., 2010). Concomitantly, this research also contributes to fulfill the gaps in organizational creativity studies proposed by Zhou and Shalley (2008) as a possibility of expanding knowledge about the roles of creativity in the direction of innovation, entrepreneurship, and international business.

Complementary results also attested that the relationship between organizational creativity with innovative and entrepreneurial capabilities has subtleties. The relationship looks more relevant considering the connection between organizational creativity with
organizational innovation, bearing in mind the relationship with innovative capability. A possible explanation is that organizational innovation has behavioral implications that could be associated with organizational creativity. This connection also has complementary results considering the relationship of organizational creativity with entrepreneurial capability. First, the causation dimension of entrepreneurial capability has a direct and positive relationship not only with organizational creativity but also with international involvement. A possible explanation is that organizational creativity nurtures the solving-problem ability to develop better scenarios, as preconized by the causation logic. By its turn, the effectuation dimension confirms its multidimensional feature. Although experimentation and flexibility sub-dimensions of the effectuation dimension have implications on the relationship between organizational creativity with international involvement, results do not confirm such relationship if taking into account affordable loss and pre-commitment sub-dimensions of the effectuation dimensions of entrepreneurial capability.

At the organizational level, this research offers some findings to explore. For example, this is evident that there is an association between the degree of creativity a firm has and how this firm gets involved internationally. Even that a creative climate could improve or be enhanced by the international involvement, results attested that the direct connection is not significant if measured with mediating variables. It is necessary to promote creativity as a mean for developing capabilities that would permit a firm to expand its international involvement.

Paralelly, creativity is not a holy grail. Creativity is a pre-requisite to innovate (Amabile, 1996), but needs conditions to develop other capabilities. Organizational innovation for example, as a dimension of innovative capability, has a crucial role to offer conditions to improve international involvement, but it is not the same taking apart product and process innovation. There are similar results in entrepreneurial capability. Results attested that creativity has direct implications in the capacity of building scenarios and developing the plans a firm has, as there is a direct implication of the causation dimension in the relationship between organizational creativity with international involvement. The same happens between experimentation and flexibility, sub-dimensions of the effectuation dimension of entrepreneurial capability. Nevertheless, affordable loss and pre-commitment sub-dimensions of the effectuation dimension of entrepreneurial capability have no implications for the relationship between creativity with international involvement.
At the industrial level, this research confirmed prior findings of the heterogeneity, entrepreneurial features, and lack of connection between their members. There is no relationship between size (revenue and quantity of employees) with the time of existence of their firms. It is a challenge for industry representatives, as they have to address decisions and policies at different levels. The audiovisual industry has strong entrepreneurial characteristics, confirming the previous investigation that denoted a misunderstanding about the roles of the individual and the firm (FIRJAN, 2014). Firms of audiovisual industry do not know each other. Respondents showed difficulty to compare their results to their competitors, for example.

At the public policy level, the implications are wider. Not only in Brazil but also in several countries governments are fostering the creative economy (UNESCO, 2013b). In audiovisual industry, for example, results are convergent in identifying a broad range of local producers depending on governmental support to expand and to go global. This study contributes to denote the relevance of creativity in this process. The more creative a firm is; the more international involvement happens and vice-versa, despite its non-direct relationship nature. Creativity is a leading resource that depends on divergent and convergent thinking to be converted into innovation or to improve the decision-making process as a solving problem mechanism. Programs of international insertion have to understand this path to get faster and more efficient results.

Besides its contributions, this study has limitations. First, the investigation occurred in a single industry and a single country. Comparative studies could explain in what magnitude the roles of organizational creativity in international involvement can be generalized. Second, as an intangible resource the measurement of organizational creativity presented some low loads in the statistical assessment. A better result could be supported integrating other creativity measurements cited in this study, like Ekvall’s Model (Moultrie & Young, 2009) or other measurements identified by Sullivan and Ford (2010). A comprehensive organizational creativity measurement could have added 20 questions to the survey that probably would cause rejection among respondents. Third, this study has a transversal feature. It means that respondents reflected their responses based on their perceptions in a momentum. A longitudinal research could evaluate if the relationship of organizational creativity with international involvement is a recursive flow or not.

At the end of this study, other avenues of investigation appeared. The constructs used in this study have dimensions with several connections among them. The role of
organizational innovation, for example, necessarily must be investigated deeply. Another alternative of investigation is to expand the Effectuation Theory to the creative economy, strongly involved in entrepreneurial behavior. This study did not evaluate the relationship between innovative capability with entrepreneurial capability, mainly in international business studies. Finally, this study was focused on the organizational level; multidimensional studies including individual, and interorganizational relationships could expand the comprehension about the role of organizational creativity in international involvement.

Finally, this study recovers the title: Does creativity matter? Yes, creativity matters as a pillar for building capabilities that expand possibilities to a firm get involved in international markets more effectively. It is not a simple question of owning or not an asset; organizational creativity results of a combination of resources, management practices and organizational motivation as highlighted by Teresa Amabile (1996). Organizational creativity fundamentally fosters firm’s capabilities, such as innovative and entrepreneurial capabilities to convert such organizational creativity in a wide and effective international involvement.
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Appendix A

Identification

1. Which industry is your firm in?

| Production of ad films |
| Production of TV films |
| Production of cinema films and audiovisual |
| Other: specify ___________________________ |

2. How many workers does your firm have?

(In the research scope, workers mean partners, employees, trainees, and any other professional that collaborates directly to your firm, even informally).

____________ (numeric field)

3. Regarding revenue, what is the size of your firm?

(Following IBGE criterion)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Gross annual revenue (R$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>Less or equal to R$ 2.4 m</td>
</tr>
<tr>
<td>Small</td>
<td>Over than R$ 2.4 m and less or equal to R$ 16 m</td>
</tr>
<tr>
<td>Medium</td>
<td>Over than R$ 16 m and less or equal to R$ 90 m</td>
</tr>
<tr>
<td>Medium-large</td>
<td>Over than R$ 90 m and less or equal to R$ 300 m</td>
</tr>
<tr>
<td>Large</td>
<td>Over than R$ 300 m</td>
</tr>
</tbody>
</table>

4. What is the foundation year of your firm?

5. What was the first year of international sales?

6. Does your firm sell abroad?

7. Does your firm have a representative agent abroad?

8. Does your firm have a partnership with foreign firms?

9. Does your firm have a sales subsidiary abroad?

10. Does your firm have a production subsidiary abroad?

Regarding your company, how do you agree to the following statements?

1= totally disagree  TO 5 = totally agree

Organizational Motivation

<table>
<thead>
<tr>
<th>Factorial loads</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

11. The organization shows the value of creativity via internal and external publications

12. The organization is oriented towards risk and opportunity instead of towards the status quo

13. The organization is proud of its employees and their achievements

14. The organization is enthusiastic about the abilities of its members

15. The organization adopts an offensive strategy towards the future

16. Management systems and processes are flexible and adaptable

Resources

17. There is an adequate time to produce innovative ideas

18. All staff has the expertise to complete their job creatively

19. Unlimited funds are made freely available to all members of the organization

20. Members have free access to all organizations information resource

21. A wide range of training opportunities is available to all employees

Management practices

22. Project teams are given complete autonomy with their job

23. Individuals’ skills and interests are a major factor in team selection

24. Project goals are clearly defined at the beginning of the work assignment

25. Supervisors provide regular, clear feedback and support

26. Work groups are formed based on complementary personalities

Product innovation

27. We improve on current products and services better than our competitors

28. We develop entirely new products and services faster and better than our competitors

29. We develop new products to new markets faster and better than our competitors

30. We invest on improving our products and services more than our competitors

31. We invest in developing new products and services more than our competitors

32. We are the first company in our industry to introduce new products and services

Process innovation

33. We adopt new technologies frequently

34. We develop new technologies

35. We adopt new technologies more frequently than our competitors

36. We are strong in improving our production process

37. We develop new processes more frequently than our competitors

38. We are the first company to introduce new process in the industry
<table>
<thead>
<tr>
<th>Organizational innovation</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>0.800</th>
</tr>
</thead>
<tbody>
<tr>
<td>39. We are the first company in the industry to develop innovative management systems</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0.819</td>
</tr>
<tr>
<td>40. We used to change our organizational structure to promote innovation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0.710</td>
</tr>
<tr>
<td>41. We are the first company in the industry to introduce new business concepts and practices</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0.899</td>
</tr>
<tr>
<td>Causation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42. We analyzed long run opportunities and selected what we thought would provide the best returns</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0.641</td>
</tr>
<tr>
<td>43. We developed a strategy to best take advantage of resources and capabilities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0.856</td>
</tr>
<tr>
<td>44. We designed and planned business strategies</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0.750</td>
</tr>
<tr>
<td>45. We organized and implemented control processes to make sure we met objectives</td>
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<td>47. We had a clear and consistent vision for where we wanted to end up</td>
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<td>50. The product/service that we now provide is essentially the same as originally conceptualized</td>
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<td>51. The product/service that we now provide is substantially different from what we first imagined</td>
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<td>52. We tried a number of different approaches until we found a business model that worked</td>
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<td>56. We allowed the business to evolve as opportunities emerged</td>
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<td>57. We adapted what we were doing to the resources we had</td>
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<td>58. We were flexible and took advantage of opportunities as they arose</td>
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<td>59. We avoided courses of action that restricted our flexibility and adaptability</td>
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<td>60. We used a substantial number of agreements with customers, suppliers and other organizations and people to reduce the amount of uncertainty</td>
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<td>61. We used pre-commitments from customers and suppliers as often as possible</td>
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<td>62. The contracts and the relationships we had before founding our firm helped to reduce uncertainty</td>
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<td>63. As much as possible, we contacted clients and suppliers before assuming commitments</td>
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<td>64. We consulted firms and people of the same industry we knew before establishing our firm to know if they would support us</td>
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<td>65. Top management tends to see the world, instead of just the domestic market, as our firm’s marketplace</td>
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<td>66. The prevailing organizational culture at our firm (management’s collective value system) is conducive to active exploration of new business opportunities abroad</td>
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<td>67. Management continuously communicates its mission to employees to succeed in international markets</td>
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<td>68. Management develops human and other resources for achieving our goals in international markets</td>
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<td>69. The organization marketing planning process leads the firm to be much better than main competitors</td>
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<td>70. Control and evaluation of marketing activities lead the firm to be much better than main competitors</td>
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<td>71. Skill to segment and target individual markets lead the firm to be much better than main competitors</td>
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<td>72. Ability to use marketing tools (product design, pricing, advertising, etc.) to differentiate our product lead the firm to be much better than main competitors</td>
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<td>73. Our firm is at the leading technological edge of our industry in international markets</td>
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<td>74. We invented a lot of the technology embedded in this product</td>
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<td>75. Our firm is highly regarded for its technical expertise among our channel members in international markets</td>
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<td>76. In the design and manufacture of this product, we employ some of the most skilled specialists in the industry</td>
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<td>77. We are recognized in international markets for products that are technologically superior</td>
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<td>78. Management communicates information throughout our firm about our successful and unsuccessful customer experiences in this market</td>
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<td>79. All our managers understand how everyone in our firm can contribute to creating value for the customers in this market</td>
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<td>80. Top management frequently discusses the strengths and weaknesses of our major competitor(s) there</td>
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<td>81.</td>
<td>If a competitor launched an intensive campaign targeted at our customers there, we would implement a response immediately</td>
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<td>82.</td>
<td>Our business functions (e.g., marketing/sales, manufacturing, finance) are integrated in serving the needs of this market</td>
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<td>83.</td>
<td>How many clients does your firm have? (domestic and international markets)</td>
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<td>84.</td>
<td>How many clients abroad does your firm have?</td>
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<td>85.</td>
<td>During the last 3 years, how many countries does your firm sell its products to?</td>
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<td>86.</td>
<td>Considering the whole revenue during the last 3 years, what is the percentage of domestic sales?</td>
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<td>87.</td>
<td>Considering the whole revenue during the last 3 years, what is the percentage of international sales?</td>
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<td>88.</td>
<td>Considering the goal of sales to international markets during the last 3 years, what was the percentage your firm achieved?</td>
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<td>89.</td>
<td>Considering the goal of profit in international sales during the last 3 years, what was the percentage your firm achieved?</td>
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<td>90.</td>
<td>Considering the goal clients conquered in international markets during the last 3 years, what was the percentage your firm achieved?</td>
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(*) N/U – Not used
### Appendix B

#### Descriptive Statistics

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