



**IUL School of Social Sciences**

Department of Social and Organizational Psychology

The Link Between Interpersonal and Interorganizational Networking: The Role of Start-Up  
Members' Achievement Affect

Maria Beatriz Belo do Carmo Esperança

Dissertation submitted as partial requirement for the conferral of Master in Social and  
Organizational Psychology

**Supervisor:**

PhD, Aristides Ferreira, Assistant Professor,

ISCTE – University Institute of Lisbon

October, 2017





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Grata por tudo.

## Resumo

O estudo atual teve um duplo propósito. Em primeiro lugar, analisar o efeito moderador do afeto pela realização no trabalho por parte dos membros de uma *start-up* na relação entre a construção da rede pessoal de contatos e a importância percebida das relações interorganizacionais (IORs) com *stakeholders* ao nível da *start-up*. Em segundo lugar, estudar o efeito mediador do afeto pela realização no trabalho por parte dos membros de uma *start-up* na relação entre a manutenção da rede de contactos pessoal e a importância percebida das IORs com investidores ao nível da *start-up*. Uma amostra de 469 colaboradores (135 *start-ups* da Alemanha e 65 *start-ups* de Portugal) preencheu um questionário. Com o objetivo de analisar as variáveis de construção da rede de contactos interpessoal, manutenção da rede de contactos interpessoal, importância percebida das IORs com *stakeholders* e importância percebida das IORs com investidores por *start-up*, as respostas às respetivas escalas foram agregadas ao nível da *start-up*. Num período pós-estudo, com o objetivo de compreender a relação entre as redes de contacto individuais e as redes de contacto interorganizacionais e o papel do afeto pela realização dos membros de *start-up* nessa relação, uma amostra de 19 membros de diferentes *start-ups* portuguesas (50% CEOs) participou em entrevistas qualitativas. Os resultados para o modelo de moderação mostraram que para os membros de *start-up* com maiores níveis de afeto pela realização no trabalho, a frequência com que se dedicam à construção da rede de contatos interpessoal teve correlação positiva significativa com a importância percebida das IORs com *stakeholders*. Os resultados para o modelo de mediação, mostraram um efeito indireto da frequência com que se dedicam à manutenção da rede pessoal de contatos na importância percebida das IORs com investidores, através do afeto pela realização dos membros da *start-up*.

**Palavras-Chave:** start-ups, afeto pela realização pessoal, redes de contactos interpessoal, redes de contacto interorganizacional



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### Abstract

The current study had a twofold purpose. In the first place, to examine the moderating effect of start-up members' achievement affect at work in the link between interpersonal network building and the perceived importance of the interorganizational relationships (IORs) with stakeholders. Secondly, to examine the mediating effect of start-up members' achievement affect at work in the relationship between interpersonal network maintenance and the perceived importance of the IORs with investors. A sample of 469 employees from 135 German start-ups and from 65 Portuguese start-ups filled in a questionnaire. Aiming to analyze the variables of interpersonal network building, interpersonal network maintenance, perceived importance of the IORs with stakeholders and the perceived importance of the IORs with investors by start-up, the answers to the corresponding scales were aggregated at the start-up level. In a post study period, aiming to understand how interpersonal networking leads to interorganizational networking as well as the role of start-up members' achievement affect in that link, a sample of 19 members from different Portuguese start-ups (50% CEOs) participated in qualitative interviews. Results for the moderation model showed that for start-up members reporting higher levels of achievement affect, the devotion towards interpersonal network building had a significant positive correlation with the perceived importance of IORs with stakeholders. For the mediation model, results showed an indirect effect of the devotion towards interpersonal network maintenance on perceived importance of IORs with investors through start-up members' achievement affect.

**Key words:** start-ups, achievement-affect, entrepreneurial networking, interpersonal networking, interorganizational relationships





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**Glossary of acronyms**

CFA – *Confirmatory Factor Analysis*

CFI – *Comparative Fit Index*

CR – *Construct Reliability* ASV – *Average Shared Variance*

AVE – *Average Variance Extracted*

HI RMSEA - *Upper limit of a 90% confidence interval for the population value of RMSEA*

IORs – *Interorganizational relationships*

IFI – *Incremental Fit Index*

LO RMSEA - *Lower limit of a 90% confidence interval for the population value of RMSEA*

MSV – *Maximum Shared Variance*

RMSEA - *Root Mean Square Error of Approximation*

SNS - *Social Networks Sites*

## Introduction

Currently, due to the very uncertain external context, important changes in organizations' motivational strategies have been noted (Pinho & de Sá, 2013). Owing to the demands and competitiveness in the external context, the work complexity is increasing (Tamayo & Paschoal, 2003). The start-up members besides being able to find creative solutions to come across several problems (Pinho & de Sá, 2013), also need to learn about the business market and expand their social capital through their interpersonal network (Burt, 1992), and through interorganizational relationships (IORs) with stakeholders (*e.g.*, customers, associations, research organizations), and IORs with investors (*e.g.*, companies that invest in the business they are developing such as venture capital enterprises, start-up incubators, business angels). These relationships exist for several reasons, such as: financial support, social support, for counseling towards business development, professional and personal development (Dimov, 2007; Reynolds, 2007).

In that sense, since social network is a source of relevant information about business opportunities (Hills & Singh, 2004; Ozgen & Sanderson, 2006), social networking is crucial when it comes to find important business opportunities (Singh, Hills, Lumpkin & Hybels, 1999). Thereby, the first years of a start-up are essential to establish important relationships (Baron, 2007). Entrepreneurs must create business opportunities, ask for feedback, validate their ideas and gather human, financial and material resources in order to establish the start-up in the business market (Dimov, 2007).

Moreover, the resource-based view states that the underlying factors of competitive advantage consist in the set of unique and specific resources and capabilities resources within the organization (*e.g.*, Barney, 1991, 1995, 2001). Further studies suggest that the human capital of a company is the most important factor when it comes to competitiveness because it brings together all the skills, knowledge and employees' individual experiences relevant to the business (Edvinsson & Malone, 1997). Therefore, since start-up companies are composed by people who seek opportunities to increase social capital and broaden the company's impact on the business market - reaching potential customers, investors and partners - it is necessary to ensure the work conditions that maximize the performance, motivation and satisfaction in employees' work, by

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valuing their role in the company (Chen & Lin, 2003; Dess & Picken, 1999; Edvinsson & Malone, 1997; Tamayo & Paschoal, 2003).

In the same line, there is evidence that personal networking is, to a large extent, linked to individual factors, such as achievement motivation (Stam, Arzlanian & Elfring, 2013) which, in turn, is positively correlated to the organization growth (Lee & Tsang, 2001). Besides that, in a recent meta-synthesis, Brandstätter (2011) concluded that the need for achievement (similar to achievement affect) is positively linked to entrepreneurship. Consequently, it can be assumed that business opportunities are created through individuals who intent to achieve more for their start-up and who successfully engage other social actors into their business ideas with the purpose to develop them collectively (Dimov, 2007), enhancing the company services or products.

Summing up, the importance of social networks to the expansion of both human and social capital of the company is noteworthy. Studies of how start-up members manage their social capital have contributed to the understanding of the start-ups' growth process (Lux, 2005) (*e.g.*, Baron & Markman, 2003; Hoang & Antoncic, 2003). However, although the determining role of individual factors in the entrepreneurs' behavior is recognized, there are still some unresolved issues regarding the role of motivation and personality traits (Shane & Venkataraman, 2000), such as the role of achievement affect in the link between interpersonal networking and the importance given to IORs.

Taking the above into account, our main goal is to understand the link between the devotion (in terms of the frequency of network behaviors) towards interpersonal networking and the perceived importance of IORs, considering the role of start-up members' achievement affect on that link. Besides that, we distinguish two types of IORs (a) IORs with stakeholders and (b) IORs with investors in order to develop an instrument able to access start-up members' perceived importance to these two types of IORs separately, something that was never done. In addition, our sample of start-up members regards CEOs and employees because we consider that their network behaviors are equally relevant to the company.

In the next section, we introduce the literature review based on theory and previous research that states the link between interpersonal networking and interorganizational networking, as well as the concept of achievement affect and its possible role in that link (followed by the respective hypotheses). In the following sections, it is described the research setting, methodology and the study results. Finally, it is presented the discussion that includes

theoretical and practical implications, limitations, suggestions for future research and the overall conclusion.

## **I. Theory and hypotheses**

Before any explanation it is important to clarify that we assume the prospect that each start-up member (employees and CEO's) has an important role in the area in which it operates, in most cases, the start-up is only composed by managers of different areas. Besides that, according to the vocation choice model, individuals tend to operate in environments whose personality fits and when that happens, personal performance as well career satisfaction tends to be higher (Holland, 1985). Likewise, individuals who have high need for achievement (similar to achievement affect) tend to work on challenging jobs (such on start-ups) because it keeps them interested and motivated to increase their performance along with the team members (Edgerton & Roberts, 2014; McClelland, 1961). Therefore, similarly to Braun, Ferreira, Schmidt and Sydow (in press), we assume an inclusive perspective that considers employees and entrepreneurs (CEOs/Co-founders), in the sense that they are members who work together towards the achievement of better results for the start-up (Lee & Tsang, 2001; Hunter, 2013).

### **Interpersonal and Interorganizational Networks**

Besides the important role of start-up members and the environmental characteristics, social networking is also important to the entrepreneurial process and success (Birley, 1985; Jenssen & Koenig, 2002; Liñán, Urbano & Guerrero, 2011). Social networks and social capital have been equated in several studies (Rodan & Galunic, 2004). Social networks defined as a set of relationships between people (interpersonal network), organizations (interorganizational network), countries, families, etc. (Kadushin, 2012). Social capital is a multidimensional concept defined as the aggregation of the current resources and resources that can be obtained through interpersonal and interorganizational networks (Nahapiet & Ghoshal, 1998).

Social networks (interpersonal and interorganizational networks) have been analyzed as being drivers of entrepreneurial ventures and performance (e. g., Carter, Gartner, & Reynolds 1996; Lichtenstein, Carter, Dooley & Gartner, 2007; Zhao, Seibert & Lumpkin, 2010). From social networking perspective, entrepreneurs often expand their social capital through social networks in order to compensate for lack of resources in their start-up (especially financial or

human capital) (Pinho & de Sá, 2014; Ostgaard & Birley, 1996). Meaning that entrepreneurs are embedded in networks composed by several social actors and organizations that provide access to vital resources for the start-ups' establishment and development (Shaw & Conway, 2000), giving access to good opportunities (Butler & Hansen, 1991) and help to enhance business financial performance (Baron & Markman, 2003). Likewise, research on interorganizational networks suggests that, by means of networking, the success of start-ups can be influenced (Hoang & Antoncic, 2003; Watson, 2007). For instance, interorganizational collaboration may provide small businesses with (external) economies of scale, without causing the diseconomies that are usually associated with large firms (Julien, 1993). Therefore, the start-up organizational actors' social network represents a competitive advantage at the early growth phase by giving them access to resources that are external to the firm (Jarillo, 1989; Mohr, Garnsey & Theyel, 2014; Shane & Venkataraman, 2000) such as customers, finance, suppliers and know-how (Floyd & Wooldridge, 1999; Shane & Venkataraman, 2000). Thus, interpersonal and interorganizational networking contributes to the long-term survival and success of any company (Brüderl & Preisendörfer, 1998; Hansen, 1995; Pinho & de Sá, 2014; Golden & Dollinger, 1993).

Accounting the interpersonal and interorganizational networks, which are the subject of these studies, it is striking how arbitrarily the interpersonal and interorganizational relationships were used in entrepreneurship research (O'Donnell, Gilmore, Cummins & Carson, 2001). Against the backdrop of very small businesses consisting of just one person, the individual and organizational level obviously collapses. Yet businesses often consist of at least several people, a founding individual or team and some employees. Therefore, a differentiation between organizational and individual relationships is necessary because personal networking can vary (a) individually between organizational members and (b) in comparison to how interorganizational relationships are built as such. Due to this source of contradiction, the possible interaction effect between interpersonal networking activities and interorganizational network development falls short (O'Donnell et al., 2001). In order to solve this issue, in the present study within networking, we distinguished interpersonal networks from interorganizational networks.

Interpersonal networks are characterized as being a set of relationships between two or more individuals, being the result of networking behaviors such as the frequency with which they devote to build and to maintain network contacts (Forret & Dougherty, 2004; Lutans, Rosenkrantz & Hennessey, 1985). On the other hand, interorganizational networks are



characterized as being a set of relationships (or IORs) between two or more organizations that collaborate towards the same goals (Payan, 2007) and to increase their public value (O’Leary & Vij, 2012). Therefore, the more network behaviors towards building relationships, the greater the network of contacts and the greater the range of valuable resources available (Podolny & Baron, 1997). In addition, importance given to social networks change according to the start-up needs, thus it is important for start-up members to develop different types of IORs as start-up develops (Butler & Hansen, 1988).

Furthermore, we distinguished two different types of IORs. This distinction between stakeholders and investors seems appropriate. Stakeholders are defined as individuals or organizations who conditionate or are conditioned by the organizations’ goals attainment (Freeman, 1984) and investors, often assumed as stakeholders without distinction, are individuals or organizations who invest financial capital into the start-up (Harrison & Mason, 1995), thus, depend on organizations’ financial needs and are dependent of organizations’ overall success. In other words, stakeholders include a set of individuals (*e.g.*, employees, customers) or organizations (*e.g.*, associations, research organizations) that support organizations (giving feedback, sharing know-how and contacts, etc.) in adapting to environmental changes in an effective manner and, by doing so, help to enhance performance and yet create competitive advantages (Dyer and Singh, 1998; Sydow, Schüßler, & Müller-Seitz, 2016).

On the other hand, investors are mostly linked to the company for financial reasons (Harrison & Mason, 1995). Despite of the lack of information on financial sources of small ventures, it is known that unlike large companies, start-ups have access to different types of organizations that provide financial support - investors - such as start-up incubators, venture capital enterprises or business angels/ informal venture capitalists (Pinho & de Sá, 2013). While start-up incubators and formal venture capitalists are important in terms of access to a wide range of resources (financial and social) and in terms of given feedback and support in business management (Harrison & Mason, 1995; Zhang & Li, 2010), individuals who invest their money in start-ups - business angels - (Westhead & Wright, 2000), are important because they usually hold great business experience and are willing to give the best advices in order to give a greater meaning to their invested money (Harrison & Mason, 1995). Moreover, when investors are deciding about whether they should invest, or not, depends on the established relationship of trust with the venture (Wetzel, 1987). Thus, since it is necessary to have members who can establish

contacts with investors to delineate the company's financial strategy (Leontiades, 1982), members who devote to their interpersonal networking maintenance may afford to maintain IORs with crucial investors to the start-up financial support.

Considering the above statements, start-ups that are more active in establishing a large and sustainable social network are more likely to succeed at the company implementation (Carter et al., 1996; Lichtenstein et al., 2007; Zhao et al., 2010). Meaning that start-ups composed by several people with proactive characteristics (i.e., autonomous, resilient, ambitious, etc.) are more likely to be successful in a long-term perspective (Frese, 2009; Frese & Gielnik, 2014).

Accordingly, as we assume that stakeholders require a greater focus on building the relationship and to create a bond of trust (important for a lasting relationship) (Sydow et al., 2016), we aimed to analyze whether the importance given to IORs with stakeholders would be greater as individuals report more network building behaviors towards their interpersonal network. Besides that, as we assumed that IORs with investors require more maintenance and attention (frequent contact) to ensure maximization of common advantages (Wolff & Moser, 2006), we aimed to analyze if the importance given to IORs with investors would be greater as individuals report more network behaviors towards their interpersonal networking maintaining, accounting that start-up members' achievement affect can influence these links.

### **Achievement Affect**

The concept of achievement affect derives from the concept of need for achievement formulated by McClelland, Clark, Roby and Atkinson (1958) and has been described as a complex set of values regarding entrepreneurial activity (McClelland, 1961, 1965). Also, it is similar to the achievement motivation concept, defined as an implicit unconscious motivation assimilated through hedonic reinforcement of behavior outcomes (Tan & Ng, 2015). Motivation can be considered an intention to work towards a specific goal that elicits proactive behavior (Locke, 1968). Likewise, personal achievement affect at work or achievement motivation at work can be equated to intrinsic motivation to be successful at work, in the sense that intrinsic motivation regards an internal mechanism that moves the individual towards the established goals in order to feel accomplished and manage the sense of self-development process (Castro, 2002; Edgerton & Roberts, 2014).

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In a similar vein of motivational studies by Herzberg (1959) and Deci and Ryan (1987), in the motivational synergy model, two types of motivation were distinguished - intrinsic motivation and extrinsic motivation - and, contrary to other authors, Amabile (1993) claimed that they are complementary. According to the motivational synergy model, intrinsically motivated employees engage in work and seek to use their personal skills to improve their work (Amabile, 1993). On the other hand, extrinsically motivated employees engage in work to achieve goals that are external to their own work (Amabile, 1993). Unlike extrinsic motivators, intrinsic motivators can have a profound and long-term effect on individuals' behavior and are related to psychological rewards (George & Sabapathy, 2011) and to greater self-efficacy and expectations of success (Afonso & Leal, 2009; McClelland, 1961, 1965). Furthermore, individuals who integrate intrinsic motivation with extrinsic motivation might have higher levels of creativity and productivity at work (Amabile, 1993). It should also be noted that, as McClelland (1965) argued, individuals who intrinsically have higher levels of need for achievement (similar to achievement affect), are more likely to be resilient, proactive and engage in several activities that promote business success, such as expanding their social capital in order to obtain helpful and useful resources. In addition, previous research found that achievement motivation is a psychological factor that determines the entrepreneurial behavior, and it is associated to a higher risk propensity and broad access to business opportunities (*e.g.*, Sambasivan, Abdul & Yusop, 2009).

Summing up, when individuals have higher levels of achievement affect, they are more intrinsically motivated to achieve better results towards the organization and in a long-term perspective, to stand out in relation to their peers (Kadushin, 2012). However, the activation of this intrinsic motivation can be influenced by the organizational and social setting (Eisenstadt, 1963), that can promote, or not, the need to achieve goals towards their job. Meaning that it is possible to enhance the start-up members intrinsic motivation by dynamize social activities within the organization members (*e.g.*, team building activities, challenge contests).

Furthermore, previous research demonstrated that interpersonal networking is, to a large extent, linked to achievement motivation (Stam et al., 2013). According to Kadushin (2012), in his exploration of network theory, there are psychological foundations that explain the human social network behavior and are wrongly ignored by social network analysts: (a) the primary need to feel safe and (b) the primary need to reach out. Being both motivational and cognitive, these foundations explain what leads people to allocate effort towards interpersonal network building

and identify the limitations of network management abilities (Kadushin, 2012). Accordingly, it can be assumed that the need to feel safe promotes motivation to maintain social networks that induce feelings as comfort and support (Kadushin, 2012) for the start-up team. In parallel, it can be assumed that the need to reach out promotes motivation to build relationships which have not yet been made (Kadushin, 2012), which can be a good beginning strategy to reach out investors or stakeholders that will help to increase the performance and growth of the start-up in the business market (Pinho & de Sá, 2014; Shaw & Conway, 2000). Moreover, the motivation to seek a status (also referred as envy) has also been studied as being generated through the network itself (Kadushin, 2012). This motivation is common among individuals who have high levels of need for achievement (McClelland, 1961, 1975, 1985), and describes the individuals leaning to compare themselves with others' positions (in the interpersonal and interorganizational network) that they aspire to achieve, as well as their desire to stand out from the rest of their colleagues in terms of professional performance (McClelland, 1961, 1975, 1985; Kadushin, 2012).

As acclaimed, start-up companies are composed by people who seek opportunities to increase social capital and broaden the company's impact on the business market, reaching potential stakeholders and investors. Social networking is crucial when it comes to find opportunities (Singh et al., 1999), since social network is a source of relevant information about opportunities (Hills & Singh, 2004; Ozgen & Sanderson, 2006). However, opportunities may depend on environmental factors, but also depend largely on individual factors (Hunter, 2013). Therefore, it can be assumed that opportunities are created through individuals who intent to achieve more for their business and who successfully engage other social actors into their business ideas with the purpose to develop them collectively (Dimov, 2007) thus, enhance the company services or products.

Considering the above literature, if start-ups members give importance to building relationships with stakeholders and with investors, it means that they have not only (a) the intention and the need to increase their social capital, accessing to social support and feelings of safeness, but also (b) the need to reach out where there are no connections yet, especially with investors, aiming to enhance the business respective growth and performance.

Individuals that have high levels of achievement affect are motivated to engage other social actors (such as stakeholders) in order to have feedback to improve their work and strategical responses towards the business market (Dimov, 2007), thus, tend to build a large

personal network. Besides that, comparing to individuals who have lower levels of achievement affect, individuals who have higher levels of achievement affect are motivated to achieve professional goals no matter what it takes and tend to have higher work performance (Weiner, 1980). Thus, are more oriented to the establishment of external contacts with potential investors and manage to maintain a valuable network of contacts both inside and outside the company (*e.g.*, Van de Ven, Hudson, & Schroeder, 1984).

Therefore, we aimed to test two models: a (1) moderation model, where we expect that start-up members who frequently devote to their interpersonal network building and simultaneously have higher levels of achievement affect (comparing to those who have not) give more importance to IORs with stakeholders; and a (2) mediation model, where we expect that the frequent devotion towards interpersonal network maintenance is correlated to the importance given to IORs with investors, and that this correlation is better explained when start-up members' achievement affect is introduced in the model.

Thus, we propose the following hypotheses (see Figure 1):

*H1- Interpersonal network building is positively related to the start-ups' perceived importance of IORs with stakeholders at the start-up level, for start-ups members reporting higher levels of achievement affect.*

*H2- There is a positive indirect effect of interpersonal network maintenance at the start-up level on perceived importance of IORs with investors through start-up members' achievement affect at work.*

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## **II. Research setting and methodology**

In this section, we present the methodology strategy, the data-collection procedures, sample demographics, the variables and their respective instruments as well as their validity tests.

In order to analyze the different links that can be assumed between the interpersonal networking and interorganizational networking, (a) within interpersonal networking, we assessed the interpersonal network building and the interpersonal network maintenance separately, (b)

within interorganizational networking, we assessed the importance that the start-up members attribute to IORs with stakeholders and to IORs with investors separately.

Moreover, aiming to analyze the variables of interpersonal network building, interpersonal network maintenance, perceived importance of IORs with stakeholders and perceived importance of IORs with investors at the start-up level, the answers to the corresponding scales were aggregated at the start-up level through the SPSS variable aggregate function (IBM Corporation, 2013). Meaning that, similarly to Braun et al. (in press), we elected a two-level research design, as we included variables measured at the individual level (i.e., achievement affect) and at the start-up level (i.e., interpersonal building network, interpersonal maintenance network, perceived importance of IORs with stakeholders and perceived importance of IORs with investors). Thus, increasing the understanding of the interpersonal and interorganizational dynamics complexity within an organization, which involve individual processes and group processes (Costa et al., 2013).

### **Sample and Procedure**

Websites on start-up activity, as well as company register databases in Germany and Portugal per end of year 2013 were screened, and thereby target start-ups have been identified. Aiming to substantiate our results' external validity, two countries with large cultural differences were addressed (i.e., germanic european cluster vs. latin cluster; Gupta & Hanges, 2004), 200 companies in Germany and 100 in Portugal were approached by telephone. In furtherance to choose the companies, the same criteria were applied as by Boso, Story and Cadogan, (2013), namely: (a) independent companies that were not part of any corporate group; (b) firms with individual (or a team of) entrepreneurs as owners of at least 50% of the ownership; and lastly, (c) organizations with a rather small headcount of full-time employees. It was also ensured that the firms were reasonably young ( $M = 3.98$ ,  $SD = 4.08$ ) and typically knowledge-intensive. Subsequently, the start-up members, employees (59.9% of the sample) and CEOs (40.1% of the sample), were approached with a questionnaire, which was administered either in person or online. According back translation procedure (Brislin,1986), the scales' items used in the current study were translated into the German and Portuguese languages (see Appendix A). Complete responses included a total of 469 organizational members (69% male) from 200 German and Portuguese start-ups (135 and 65 start-ups, respectively). Considering the initial list, this

corresponds to a representativeness of 68% for Germany and 64% for Portugal. Also, 64.2% of the companies were founded in 2010 or later. The majority of the companies (57.6%) had six or less employees at the end of the latest business period. Specific industries represented include IT/Internet/Web 2.0 (49.9%), Marketing/Media (9.5%), Retailing (7.1%), Optical Industry/Raw Materials/Materials (4.4%), Engineering (7.6%), Telecommunications (3.3%), Biotechnology (1.9%), Consulting (1.4%), and others (14.9%).

In pursuance to deepen the results of the quantitative analyses, in a post-study period, qualitative interviews were conducted. The interviews took place in 2017 and the sample consisted of 29.2% of the Portuguese start-ups that had participated in the study in 2013. The conducted interviews took a semi-structured form in order to capture as much information as possible from the interviewee's perspective (Íñigo & Mazo, 2008). For this effect, 26 start-ups members from Portuguese start-ups were approached by telephone and 19 start-ups members participated (response rate 73%). From this sample, nine respondents were CEOs, one was Co-founder and nine were employees, all from different start-ups (see Table 7).

### **Instruments**

In the present study, self-report instruments were included to measure constructs such as achievement affect, interpersonal network building, interpersonal network maintenance, perceived importance of IORs with investors and perceived importance of IORs with stakeholders, as well as control variables (country and status). Previously, the psychometric evidence for all the self-report measures was tested (see Table 1).

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INSERT TABLE 1 ABOUT HERE

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**Achievement affect.** This construct measures how well respondents feel when they achieve good results in the performance of daily work tasks and their affection for these achievements (i.e., personal achievement affect at work). It was assessed with seven items as part of the Entrepreneurial Attitude Orientation scale by Robinson, Stimpson, Huefner and Hunt (1991). Two example items are: "I get my biggest thrills when my work is among the best there is" and "I get a sense of pride when I do a good job on my business projects". All items were measured on a four-point rating scale ranging from 1 (*never / very seldom*) to 4 (*very often / always*). Where high scores correspond to higher levels of achievement affect. Through Principal

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Components Analyses a single factor was found (7 items; 48.7 % of the total explained variance;  $\alpha = .80$ ).

**Interpersonal Networking.** Networking is a construct that reflects individuals' behavior towards building, using or maintaining relationships (Witt, 2004) that give access to resources and that are valued for work activities (Wolff & Moser, 2006; Wolff, Schneider-Rahm & Forret, 2011). In that sense, this construct measures the network behaviors towards interpersonal networking and respective frequency (Wolff et al., 2011). Interpersonal networking measures were adapted from External Contacts Scale by Wolff et al. (2011), measuring the factors of interpersonal network building (e.g., "I take on honorary jobs which could also be useful to me professionally"); interpersonal network maintenance (e.g., "I meet with acquaintances from other organizations, I approach them to catch up on news and changes in their professional lives"); and interpersonal network use (e.g., "I use my contacts outside my company, to ask for business advice"). All items were measured on a four-point rating scale ranging from 1 (*never/very seldom*) to 4 (*very often/always*). Where, higher scores correspond to a higher devotion to interpersonal network building, maintenance or use. An initial analysis of all 22 items was conducted. Through Principal Component Analyses (with Varimax Rotation) and Kaiser criteria (extraction for eigenvalues above 1) the rotated matrix revealed that ten items were removed from the analysis because (a) they had lower loading below to .40 in all of the factors or (b) had cross-loadings with two or more factors. Thereafter, the Principal Component Analyses was applied again, and three factors were retained with 62.37% of the total explained variance. The dimension interpersonal network maintenance appeared in the first factor (5 items; 24.73% of the total explained variance;  $\alpha = .84$ ), whereas the second factor was interpersonal network use (4 items; 21.97% of the total explained variance;  $\alpha = .78$ ). Lastly, the third factor was interpersonal network building (3 items; 15.66% of the total explained variance;  $\alpha = .64$ ). Although three factors were found, the interest of this study was in the antecedents for the network use, that is, network building and network maintenance factors (Wolff & Moser, 2009). Interpersonal network building involves making several connections to reach more important contacts and interpersonal network maintenance is related to instrumental concerns (e.g., maintain contacts with investors that provide highly important resources) (Wolff & Kim, 2012). We took this decision considering a longitudinal study where Wolff and Moser (2009) found that the use of external contacts did not



have as much importance as network building and maintenance to the career success and argued that using external contacts frequently can be assumed as not enough competence at work. In the same line, Ostgaard and Birley (1996) stated that as in the first years the venture is vulnerable, building new contacts correspond to a wider range of business possibilities in the future. Thus, maintaining contacts is crucial because losing contacts at this stage is detrimental (Ostgaard & Birley, 1996).

**Interorganizational relationships.** This construct measures the importance given to IORs with stakeholders and IORs with investors and it was self-developed based on relationship types reported by O'Donnell et al. (2001). Thus, it assesses the perceived importance of investors (*e.g.*, "Collaboration with a venture capital enterprise"), and the perceived importance of stakeholders (*e.g.*, "Promising business relations with clients/customers") relationships. The participants had to state the importance of each IOR type for their enterprise. All items were measured on a five-point rating scale ranging from 1 (*very low importance*) to 5 (*very high importance*). Where, higher scores correspond to higher levels of perceived importance of IORs. Through Principal Component Analyses (with Varimax Rotation) and the Kaiser method, we found perceived importance of IORs with investors in the first factor (3 items; 28.62% of the total explained variance;  $\alpha = .74$ ). Whereas, perceived importance of IORs with stakeholders appeared in the second factor (4 items; 27,31% of the total explained variance;  $\alpha = .63$ ). The aim was not only to distinguish between stakeholders (*e.g.*, customers, associations, research organizations) and investors (companies that invest in the start-up business), but also to contribute to further research on this topic.

### **Control Variables**

In order to exclude alternative explanations, several variables were controlled which – according to previous research – may have an influence on the interpersonal network-IORs relationship. For example, the occupational status can influence the interpersonal networking (Vissa, 2011). Apart from that, there can be cross-cultural differences between some countries (Kelley, Peters & O'Connor, 2009). Accordingly, the following control variables were introduced in the two tested models: (1) occupational status (CEO *vs.* employee) and (2) country (Germany *vs.* Portugal).

### Measurement model and common method variance

In order to test the validity of the variables included in this study, for the moderation model (i.e., effect of personal achievement affect at work on the relationship between interpersonal network building and perceived importance of IORs with stakeholders at the start-up level) and for the mediation model (i.e., personal achievement affect at work mediates the relationship between interpersonal network maintenance and perceived importance of IORs with investors at the start-up level), we performed confirmatory factor analysis (CFA). In addition, due to the self-reported data, common method variance may affect the relationship between variables. According to the Harman's single factor test (Podsakoff, MacKenzie & Podsakoff, 2003), if there is common method variance, one factor will emerge from the CFA, using AMOS 23.0 (Arbuckle, 2011).

Regarding the moderation model, a model with three factors was tested (i.e., personal achievement affect at work, interpersonal network building and perceived importance of IORs with stakeholders at the start-up level) and yielded a good fit to the data ( $\chi^2(66) = 196.855, p < .001, \chi^2/df = 2.983, CFI = 0.923, IFI = 0.922, RMSEA = 0.065, LO = 0.055, HI = 0.076$ ). In addition, the results revealed that a single-factor model did not provide good-fit indices ( $\chi^2(68) = 281.969, p < .001, \chi^2/df = 4.147, CFI = 0.873, IFI = 0.874, RMSEA = 0.082, LO = 0.072, HI = 0.092$ ). Thus, results showed that the factorial structure in CFA was adjusted and that the common method variance did not bias the moderation model results.

Further, concerning the convergent validity, the composite reliability (CR) scores were higher than .70, and the average variance extracted (AVE) for the three constructs was near .50, supporting the instruments' convergent validity (Hair, Black, Babin & Anderson, 2010). Discriminant validity was also confirmed with the average shared variance (ASV) and maximum shared variance (MSV) scores being below the AVE score (Hair et al., 2010) (see Table 2).

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INSERT TABLE 2 ABOUT HERE  
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Regarding the mediation model, a model with three factors was tested (i.e., personal achievement affect at work, interpersonal network maintenance and perceived importance of IORs with investors at the start-up level) and yielded a good fit to the data ( $\chi^2(74) = 91.029, p < .05, \chi^2/df = 1.230, CFI = 0.993, IFI = 0.993, RMSEA = 0.022, LO = 0.000, HI = 0.036$ ). In

addition, the results revealed that a single-factor model did not provide good-fit indices ( $\chi^2(82) = 450.087, p < .001, \chi^2/df = 5.489, CFI = 0.845, IFI = 0.846, RMSEA = 0.098, LO = 0.089, HI = 0.107$ ). Thus, results showed that the factorial structure in CFA was adjusted and that the common method variance did not bias the mediation model results.

Further, concerning the convergent validity, the composite reliability (CR) scores were higher than .70, and the average variance extracted (AVE) for the three constructs was near .50, supporting the instruments' convergent validity (Hair et al., 2010). Discriminant validity was also confirmed with the average shared variance (ASV) and maximum shared variance (MSV) scores being below the AVE score (Hair et al., 2010) (see Table 3).

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### III. Results

In this section we present the results towards the verification of the formulated hypotheses pictured in Figure 1 regarding the link between interpersonal networking and perceived importance of interorganizational relationships (IORs) at the start-up level, as well as the role of achievement affect in this link (i.e., moderation and mediation models). Moreover, we present the qualitative analysis results regarding the interviews conducted in a post-study period.

#### Descriptive statistics

In Table 4, means, standard deviations and zero-order correlations of the study variables are presented. Variables were fairly correlated with all correlations below .50, which suggests independence and absence of multi-collinearity between variables (Barbaranelli, 2003).

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### Hypothesis testing

In furtherance of test the conceptual model, we used PROCESS macro for SPSS (Hayes, 2013)<sup>1</sup>. Moreover, to test the indirect effect for the mediation model, 5000 bootstrap samples were requested, and significance was determined based on 95% bias-corrected confidence intervals (CI) (i.e., when the CI did not contain zero, the estimate was interpreted as being significant). The results concerning the moderation model are represented in Table 5 and the results concerning the mediation model are represented in Table 6.

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According to the literature, moderation is supported if the inclusion of the interaction term results in a significant improvement in the variance explained for perceived importance of IORs with stakeholders (Aiken and West, 1991). Simple moderation was examined using Model 1 in PROCESS macro (Hayes, 2013). Achievement affect was examined as a simple moderator of the relationship between interpersonal network building at the start-up level and perceived importance of IORs with stakeholders at the same level. Country (Portugal vs. Germany) and status (CEO vs. employee) were as covariates. The overall model was significant ( $F_{(5,463)}=41.61$ ,  $p<.001$ ), accounting for 31.0% of the overall variance in perceived importance of IORs with stakeholders scores ( $R^2=.31$ ). Consistent with hypothesis 1, there was a significant interaction effect between interpersonal network building and personal achievement affect at work ( $B= .251$ ,  $t_{(463)} = 2.865$ ,  $p< .005$ , 95% CI =.079, .423), which indicates that personal achievement affect at work is a significant moderator between interpersonal network building and perceived importance of IORs with stakeholders. The nature of the moderating effect suggests an increasing magnitude in the correlation between interpersonal network building and perceived importance of IORs with stakeholders across increasing values of personal achievement affect at work. Specifically, the results indicated that the correlation between interpersonal network building and perceived importance of IORs with stakeholders increases in magnitude from low ( $B= -.544$ ,  $t_{(463)} = -.750$ ,  $p =.454$ ) to moderate ( $B= .078$ ,  $t_{(463)} = 1.384$ ,  $p =.167$ ) to high ( $B=.215$ ,  $t_{(463)} = 3.049$ ,  $p<.005$ ) levels of personal achievement affect at work. However, the relationship between

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<sup>1</sup> Macro written by Andrew Hayes, version 2.03, May 2013.

interpersonal network building and perceived importance of IORs with stakeholders at the start-up level it is only moderated by start-up members' achievement affect at work in their higher levels, and not in their lower and medium levels (see Figure 2).

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INSERT FIGURE 2 ABOUT HERE

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INSERT TABLE 6 ABOUT HERE

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Simple mediation was examined using Model 4 in PROCESS macro (Hayes, 2013). Achievement affect was examined as a mediator between interpersonal network maintenance (at the start-up level) and perceived importance of IORs with investors (at the same level) (Table 6). Country (Portugal *vs.* Germany) and status (CEO *vs.* employee) were entered as covariates. The full model with personal achievement affect at work included as a mediator was significant ( $F_{(3,465)} = 8.780, p < .001, R^2 = .05$ ). Results revealed significant effects of interpersonal network maintenance on personal achievement affect at work (path a) ( $B = .258, t_{(465)} = 5.527, p < .001, 95\% CI = .166, .350$ ) and of personal achievement affect at work on interpersonal network maintenance (path b) ( $B = .291, t_{(464)} = 3.567, p < .001, 95\% CI = .131, .452$ ). The direct effect (path c') of the interpersonal network maintenance on perceived importance of IORs with investors, after accounting for personal achievement affect at work, remained significant ( $B = .264, t_{(465)} = 3.102, p < .005, 95\% CI = .097, .431$ ). Although path c' remained significant, there was a significant indirect effect of interpersonal network maintenance on perceived importance of IORs with investors through personal achievement affect at work, demonstrated by the bootstrapped 95% CI of the indirect effect ( $B = .075, SE = .029, 95\% CI = .029, .144$ ). These results suggested a partial mediation between interpersonal network maintenance and perceived importance of IORs with investors through start-up members' achievement affect at work, consistent with hypothesis 2, confirming that interpersonal network maintenance is positively correlated to perceived importance of IORs with investors through start-up members' achievement affect.

### Qualitative interview's analyses

Considering the quantitative analysis results, the main goal of conducting qualitative interviews was to understand how interpersonal networking (building and maintenance) leads to interorganizational networking (with stakeholders and investors) and to answer the following question:

*Why does achievement affect assume a moderator role in one link and a mediator role in another link?*

Thus, specific goals were to understand the quantitative results regarding: (a) the moderator role of achievement affect in the link between interpersonal network building and perceived importance of IORs with stakeholders; (b) the moderator role of achievement affect in the link between interpersonal network maintenance and perceived importance of IORs with investors (Table 7).

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The qualitative analysis was divided according to the themes explored through the interviews and illustrative evidence was selected for each theme (see Table 8). When asked about (a) the role of achievement affect in the link between interpersonal network building and IORs with stakeholders, interviewees have pointed out that team members who seek to achieve goals at work tend to be more active in their interpersonal work and, therefore, more capable to reach and establish IORs with stakeholders that provide vital (mostly social) resources to the start-up. Because they strive and focus on specific stakeholders, going beyond what is required. When asked about (b) the role of achievement affect in the link between interpersonal network maintenance and IORs with investors, the interviewees responded that the relationships with investors must be maintained through time because it is important to update investors on the results of their investments in order to keep them interested. In that sense, they pointed out that start-up members who strive to achieve goals at work tend to be more capable to maintain IORs because they cope better with the business market unpredictability and instability, managing to communicate the start-up financial needs convincingly and effectively. In addition, they referred

that features such as enthusiasm, honesty and persistence are common in these individuals and are also crucial to for the start-up assert its value (Table 8).

Therefore, regarding the moderation model, start-up members who give more importance to the IORs with stakeholders tend to be those who have high levels of achievement affect, and, simultaneously devote more time to build their interpersonal network. This may occur because they recognize that in order to achieve better results, they must connect to important social actors that give them access a wide range of resources. In other words, comparing to other members (low in achievement affect) they never give up on what is proposed and go beyond what is asked, contributing to the start-up growth in business market.

On the other hand, regarding the mediation model, we can explain the partial indirect effect of the interpersonal network maintenance on perceived importance of IORs with investors through start-up members' achievement affect, arguing that the majority of the interviewees mentioned that maintaining relationships with investors is an important factor in keeping them interested, and in addition, when start-up has individuals striving for better results, certainly those individuals are crucial to maintain those relationships due the resilience and perseverance associated with their achievement affect. Thus, we can assume that start-up members who have higher achievement affect definitely give more importance to investors.

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#### **IV. Discussion**

The present study sheds light into the link between interpersonal networking and interorganizational networking, as well as the role of achievement affect in that link. Our results corroborated the two proposed hypotheses: (1) interpersonal network building is positively correlated to the start-ups' perceived importance of interorganizational relationships (IORs) with stakeholders for start-ups members reporting higher levels of achievement affect; (2) there is a (positive) partial indirect effect of interpersonal network maintenance on perceived importance of IORs with investors through start-up members' achievement affect at work.

In addition, in a post-study period, these results were explored through conducted interviews. The qualitative analysis revealed that start-ups value individuals who have high achievement affect because they tend (a) to be more active in their own interpersonal networking,

(b) to easily establish relationships with social actors (individuals or organizations) external to the start-up, and (c) to be more resilient, thus, more persistent and capable to cope with business market instability. Therefore, the results of our qualitative analysis corroborated our quantitative results, showing that (1) start-up members who are more devoted to their interpersonal network building and, simultaneously, have higher levels of achievement affect, tend to give more importance to stakeholders because they recognize that to achieve better results, they must rely on them in order to receive feedback and know-how to improve their performance; and (2) the devotion towards the interpersonal network maintenance explains the importance given to the IORs with investors and the start-up members' achievement affect also has a contribution. Because in the first place, investors need to be kept up-to-date, so start-up members who are more likely to maintain relationships within their interpersonal networking, tend to establish long-term IORs with investors. Secondly, if those start-up members have high levels of achievement affect, they will be more capable to cope with issues related to the nature of these relationships.

### **Theoretical implications**

The established framework disentangles the interpersonal from interorganizational networking and provides evidence on how networking activities of start-up members relate to their perceived importance of IORs. Therefore, provides an advance in the literature regarding the distinction of different types of IORs (*cf.*, O'Donnell, 2001) and in the literature that states a link between interorganizational and interpersonal networking (*cf.*, Brüderl & Preisendörfer, 1998; Hansen, 1995; Golden & Dollinger, 1993). The rational established to distinguish IORs with stakeholders from IORs with investors provided two advantages, (1) allowed to develop an instrument to access start-up members' given importance to these IORs separately, and (2) allowed to verify different relationships between two types of network behavior towards interpersonal networking (building and maintaining contacts) and the importance given to these IORs.

In addition, our research provides an advance to the literature that states the relation between achievement affect and networking (*cf.*, Stam et al., 2013) and provides a contribute to the research on tie formation in the entrepreneurial process (Elfring & Hulsink, 2007), as we verified that start-up members' achievement affect plays an important role in the link between



interpersonal networking and interorganizational networking. Showing that achievement affect is a prerequisite for interorganizational networking, which can enhance start-up performance (*e.g.*, Zhao, et al., 2010). Moreover, we found that start-up members' achievement affect (part of their intrinsic motivation) determines their behavior towards their interpersonal networking management and their perceived importance of IORs with other organizational actors, such as stakeholders and investors. In that sense, we verify what was stated by McClelland (1965) when describing the characteristics of individuals who have high need for achievement, founding that start-up members with higher levels of achievement affect tend to be perceived as being proactive (in establishing relationships) and more resilient (in maintaining relationships).

Summing up, there is literature and research stating that the role of start-up members' social networks is a competitive advantage (Shane & Venkataraman, 2000) and that social networks are crucial to expand the start-up social capital (Lux, 2005). However, the role of individuals' achievement affect in social network theories has not yet been completely studied. In this line, our study is one of the first studies that points out the role of achievement in the link between interpersonal and interorganizational networking, complementing the exploration of the network theory by Kadushin (2012). Kadushin (2012) stated two types of psychological foundations behind the motivation to build social networks that can be related to achievement affect, in the sense that individuals with higher levels of achievement affect tend to feel the need to be safe and the need to reach out (comparing to individuals with lower levels of achievement affect).

### **Practical implications**

Our qualitative results corroborated the Greve and Salaff (2003) assumptions stating that networking has three major advantages for entrepreneurs, such as: (1) network size, the more they build contacts, the more they get valuable resources; (2) better positioning, the more notability in the network of contacts, the sooner they reach the more important contacts (Blau, 1977; Burt, 1992); and (3) relationship structure, a greater number of connections (Scott, 1991), as well as the opportunities, resources and support received (Burt, 1992). In addition, our results confirmed the Volmer, Orth and Wolff (2017) findings about reciprocity and trust role on the collaboration between social actors, that showed to be vital to an effective exchange of valuable resources (such as social support, information or advice).

Acknowledging that in a long-term perspective (a) start-ups composed by several people with proactive characteristics (i.e., autonomous, resilient, ambitious, etc.) not only, are more likely to be successful (Frese, 2009; Frese & Gielnik, 2014), but also more likely to have a larger social network (Zhao et al., 2010); and (b) the start-up members must connect to several stakeholders and investors through their social networks activities in order to gather valuable (financial and material) resources (Gartner 1985; Dimov, 2007). According to our results, in order to stimulate start-up members' proactive characteristics, attention must be paid to the achievement affect. For this effect, HR managers can customize a motivational program for each member aiming to attain directly their intrinsic goals and values (Tamayo & Paschoal, 2003). Social activities within the start-up members, such as team building activities or challenge contests may be dynamized allowing to enhance intrinsic and extrinsic motivation, essential for a better performance at work (Amabile, 1993).

### **Limitations and future research**

Although the models yield interesting results towards a sizable sample (=469), these models do not allow us to analyze the dynamic nature of individual and organizational variables (Li & Zhang, 2007). Further research should examine the causal relationship between these variables with a longitudinal study. Besides that, self-reported data was used to measure the variables that provided data from entrepreneurs' perceptions. However, several actions were taken, considering previous psychometric studies and the Harman's single factor test (Podsakoff et al., 2003), showing that common method variance is not problematic in this study. In addition, we complement the study with a qualitative approach, making the results more robust. Finally, our results may be affected because the sample is only composed by German and Portuguese start-ups, considering that Portugal faced economic turbulence in recent times, this may have affected the results of the study (*e.g.*, importance given to the investors). Thus, the findings should be cautiously interpreted.

For future studies, the network concept should not continue to be used arbitrarily (O'Donnell et al., 2001) but clearly distinguish specific types of IORs (*e.g.*, investors versus stakeholders). In addition, further studies can benefit from including a qualitative approach similar to ours, detecting the underlying processes involved in the different types of IORs. Also, in future studies on social networks, researchers may include variables regarding intrinsic

motivation and consider samples that integrate CEOs and employees because there is already evidence that they are equally important when it comes to interorganizational network (*e.g.*, Braun et al., in press). Moreover, since nowadays people constantly connect to each other online (*cf.*, Wok & Hashim, 2014), it is important to analyze the role of Social Network Sites (SNS) (such as Facebook, LinkedIn, Skype, etc.; Wok & Hashim, 2014) for the interpersonal and interorganizational networks' growth. Furthermore, it would be interesting to study the individual characteristics of multi-level marketing companies' employees, known as entrepreneurs that, in order to reach higher positions in the company, must build their own network and must sell a product or service (Merlin, 2012). Therefore, research could be done in order to understand how the personal levels of achievement affect in such company influences the link between interpersonal network building and the employees' success in terms of the professional network size (including different types of IORs) and their position within the company.

### **Conclusion**

Our results reinforce the multidimensionality of networking concept stated in a recent longitudinal study by Volmer et al. (2017). Besides that, we found empirical evidence for the fact that the devotion towards different networking dimensions (building vs. maintaining) has distinct results regarding the given importance to different IORs (stakeholders vs. investors). In this case, while the devotion towards interpersonal building is positively related to a greater perceived importance of IORs with stakeholders (only in the group of start-up members who have high levels of achievement affect), the devotion towards interpersonal maintenance is positively related to a greater perceived importance of IORs with investors (noting that start-up members' achievement affect indirectly affects this relationship, reinforcing it).

Therefore, we can conclude that start-ups with members who have high levels of achievement affect are also start-ups whose members give more importance to the construction and maintenance of the interpersonal and interorganizational network, consequently they have access to a wider range of resources (Podolny & Baron, 1997). In other words, achievement affect is a requisite when it comes to establishing and maintaining IORs.

Moreover, our study is one of the first studies that states the role of achievement in the link between interpersonal and interorganizational networking, contributing to an approach that integrates variables at the individual level (such as intrinsic motivation to be successful at work)

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and variables at the organizational level (such as devotion to interpersonal networking and importance given to IORs) in order to understand the complexity of the underlying processes involved in the start-ups' day-to-day.

Summing up, these results bear relevance, not only for research and theory about interpersonal and interorganizational networking in the entrepreneurial process, but also practical relevance for entrepreneurs and HR managers helping them to know what to take into account when planning strategic IORs that can help the start-up performance and business market position.

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A. Tables

Table 1. *Factor analysis and instruments characteristics*

Constructs	Number of Items	Number of Factors	Dimension(s)	Cumulative Percentage of Explained Variance	Cronbach Alpha(s)
1. Achievement Affect	7	1		48.70	.80
2. Interpersonal Network	12	3	Maintenance (5)	50.03	.81
			Use (4)		.79
			Building (3)		.64
3. IORs <sup>a</sup>	7	2	Investors (3)	55.93	.74
			Stakeholders (4)		.63

*Note.* <sup>a</sup>= Interorganizational relationships.

Table 2. *Measurement model: construct reliability (CR), average variance extracted (AVE), maximum shared variance (MSV) and average shared variance (ASV) regarding moderation model*

Variables	CR	AVE	MSV	ASV
1.Achievement Affect	0.81	0.39	0.04	0.03
2. Interpersonal Network Building	0.71	0.47	0.04	0.04
3.IORs <sup>a</sup> with Stakeholders	0.73	0.45	0.04	0.03

*Note.* <sup>a</sup>=Interorganizational relationships.

Table 3. *Measurement model: construct reliability (CR), average variance extracted (AVE), maximum shared variance (MSV)–and average shared variance (ASV) regarding mediation model*

Variables	CR	AVE	MSV	ASV
1.Achievement Affect	0.82	0.40	0.24	0.14
2. Interpersonal Network Maintenance	0.83	0.50	0.24	0.13
3.IORs <sup>a</sup> with Investors	0.74	0.49	0.04	0.03

*Note.* <sup>a</sup>=Interorganizational relationships.

Table 4. Means, SDs and Pearson's correlations between variables under study

	Level 1		Level 2		<i>R</i>				
	<i>M</i>	<i>SD.</i>	<i>M</i>	<i>SD.</i>	3	4	5	6	7
1 Country <sup>a</sup>					.248**	.403**	.059	.537**	.028
2 Status <sup>b</sup>					-.090	-.100*	-.095*	.067	.139**
3 Achievement Affect	3.27	.54			(0.80)	.191**	.261*	.100*	.187**
4 Interpersonal Network Building			1.65	.50		(0.64)			
5 Interpersonal Network Maintenance			2.33	.51		.241**	(0.81)		
6 IORs <sup>c</sup> with Stakeholders			2.97	.66		.266**	-.059	(0.63)	
7 IORs with Investors			2.93	.93		.058	.171**	.180**	(0.74)

Note. Level 1 and 2, *N*=469. Between brackets are the Cronbach's alpha reliability scores.

\* *p* < .05. \*\* *p* < .01; <sup>a</sup>0=Germany, 1=Portugal; <sup>b</sup>0= CEO, 1=Employee; <sup>c</sup> IORs= Interorganizational relationships.



Table 5. *Moderation model results*

Independent variables	IORs <sup>c</sup> with Stakeholders		Bias-corrected and accelerated 95% CI	
	<i>B</i>	<i>SE</i>	Lower level	Upper level
Constant	2.693***	.044	2.607	2.779
Country <sup>a</sup>	.735***	.063	.612	.858
Status <sup>b</sup>	.086	.053	-.018	.189
Interpersonal Network Building (X)	.078	.057	-.033	.190
Achievement Affect (M)	-.046	.049	-.142	-.051
Interpersonal Network Building * Achievement Affect (X*M)	.251**	.088	.079	.423
<i>Conditional effects</i>				
Low Achievement Affect	-.058	.077	-.210	.094
Medium Achievement Affect	.078	.057	-.033	.190
High Achievement Affect	.215**	.070	.076	.353
$R^2 = .31^{***}$				
$F_{(5,463)} = 41.61$				

Note. \*\* $p < .01$ ; \*\*\* $p > .001$ ; covariates included <sup>a</sup>0=Germany, 1=Portugal; <sup>b</sup>0= CEO 1=Employee; <sup>c</sup> IORs= Interorganizational relationships.

Table 6. *Mediation Model Results*

	Achievement Affect		IORs <sup>c</sup> with investors			
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Intercept	2.62***	0.12	1.95***	0.21	1.18***	0.3
<i>Total effect</i>						
Interpersonal Network Maintenance			0.34**	0.83		
<i>Direct effects</i>						
Interpersonal Network Maintenance	0.26**	0.05			0.26	0.85
Achievement Affect					0.29***	0.82
Country <sup>a</sup>	0.28***	0.52	0.34	0.92	-0.47**	0.94
Status <sup>b</sup>	0.75	0.48	0.29**	0.86	0.32***	0.85
Total <i>R</i> <sup>2</sup>	0.13***		0.05***		0.08***	
<i>F</i> test	<i>F</i> <sub>(3,465)</sub> =22.6		<i>F</i> <sub>(3,465)</sub> =8.78		<i>F</i> <sub>(4,464)</sub> =9.93	
<i>Indirect effect</i> using Bootstrap	0.75	0.03				
95% BCa CI	0.03, 0.14					

Note. \*\**p*<.01; \*\*\**p*>.001.

Unstandardized regression coefficients reported.

Bootstrap sample size = 5000, BCa = bias-corrected accelerated, CI = confidence interval.

Covariates included in the tested model: <sup>a</sup>0=Germany, 1=Portugal; <sup>b</sup>0= CEO 1=Employee; <sup>c</sup> IORs= Interorganizational relationships.

Table 7. *Qualitative interviews in post-study*

#	Duration	Industry	Position	Intreview focus
1	00:11:00	Technology	CEO	The relation between interpersonal and interorganizational networking
2	00:14:00	Family support services	CEO	Importance of people devoted to establishing IORs with stakeholders
3	00:15:00	Food Industry	Process engineer	The role of achievement affect on building IORs with stakeholders
4	00:15:00	Architecture	CEO	Importance of people devoted to establishing IORs with stakeholders
5	00:17:00	Technology	Manager	The role of achievement affect on maintaining IORs with investors
6	00:10:00	Tourism	Consultant	The role of achievement affect on building IORs with stakeholders
7	00:10:00	Security	Administrative	The role of achievement affect on building IORs with stakeholders
8	0011:00	Agriculture	Co-founder	The role of achievement affect on building IORs with stakeholders
9	00:10:00	Real Estate Investment	CEO	The role of achievement affect on maintaining IORs with investors
10	00:10:00	BioTechnology	Quality Manager	The role of achievement affect on the start-up
11	00:10:00	Technology	Operational Manager	The role of achievement affect on maintaining IORs with investors
12	00:15:00	Technology	CEO	Importance of people devoted to maintaining IORs with investors
13	00:10:00	Health	Manager	The role of achievement affect on the start-up
14	00:10:00	Technology	CEO	The role of achievement affect on building IORs with stakeholders
15	00:15:00	Tourism	CEO	The relation between interpersonal and interorganizational networking
16	00:10:00	Secutiry	CEO	The relation between interpersonal and interorganizational networking
17	00:15:00	Technology	Marketing Manager	The relation between interpersonal and interorganizational networking
18	00:10:00	Architecture	CEO	The relation between interpersonal and interorganizational networking
19	00:15:00	Technology	Consultant	The relation between interpersonal and interorganizational networking

Table 8. *Evidence for the relation between interpersonal and interorganizational networking*

Theme	Illustrative evidence
The relation between interpersonal and interorganizational networking	‘We meet several people in various companies through our regular range of friends and other stakeholders that we meet at some events. (...) Many of the employees have their network of contacts and this facilitates everything, that is, we are able to enter the market more easily, we can find investors much more easily’ (Manager at a Technology Start-up)
The role of achievement affect on the start-up	‘If it is not on a basis of friendship, the person will only help if they realize the value to the companies, and in the beginning, this is complicated.’(CEO of a Technology Start-up)
The role of achievement affect on building IORs with stakeholders	‘We can only evolve with employees who have achievement affect, who want more and better for themselves and for the company, because if they want more for themselves, they will also want more for the company.’ (CEO of a Security Start-up)
The role of achievement affect on maintaining IORs with investors	‘The best way to connect with companies is through the people who make the start up to have a several initiatives, so they have to be completely committed to a certain company. They have to strive to go beyond what would be considered the normal approach that we make in the professional scope. We have to go to the personal level.’ (Manager at a Technology Start-up)
Importance of people devoted to establishing IORs with stakeholders	‘We have to aggregate the personal part with the professional part to achieve the best results. Without masking our interests by being false in our approach. (...) More than enthusiasm is persistence, the will to win and to continue until the market really shows that there is no room to invest.’ (Manager at a Technology Start-up)
Importance of people devoted to maintaining IORs with investors	‘If you always keep one or two people in your structure with this ability to do the famous RP, the so-called Public Relations, a person who generates contacts, generates lusts, speaks in the product with motivation, you will maintain these relationships throughout time and you will always be motivated to do better.’ (CEO of a Tourism Start-up)
	‘They have already failed in the past and help us not to fail in the same things and give us help in situations we do not know how to deal with and they have some experience and are able to point us to the best path.’(Operational Manager at a Technology Start-up)

B. Figures

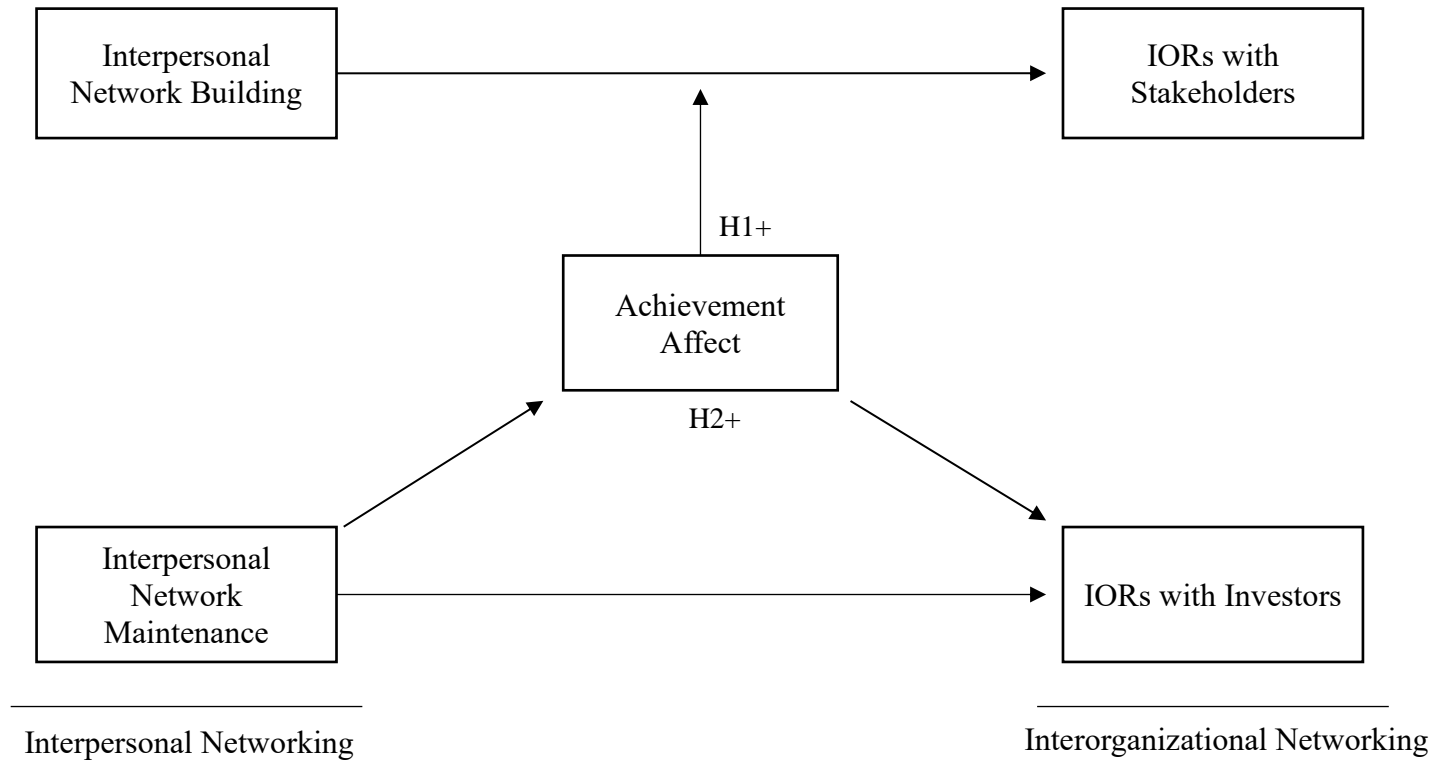


Figure 1. Hypotheses model of moderation effect of start-up members' achievement affect between interpersonal network building and perceived importance of interorganizational relations with stakeholders and mediation effect of start-up members' achievement affect between interpersonal network maintenance and perceived importance of interorganizational relations with investors.

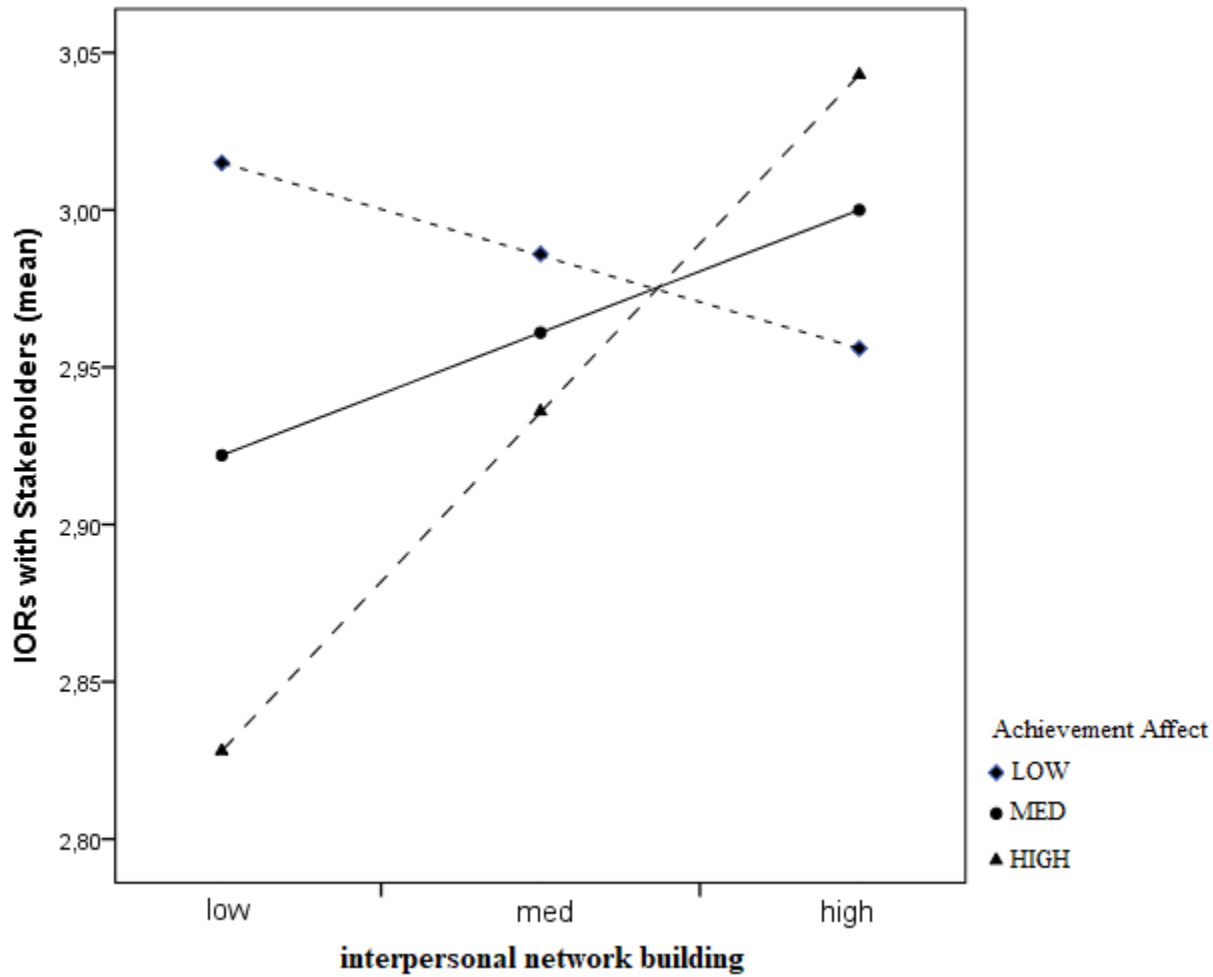


Figure 2. Moderating effect of start-up members' achievement affect on the link between interpersonal network building and perceived importance of IORs with stakeholders.

Appendix

Appendix A: Instruments

**Achievement-Affect Scale (subscale from entrepreneurial attitude orientation scale (Robinson, Stimpson, Huefner & Hunt 1991))**

For each of the following statements, use the following scale:

Never/very seldom	Sometimes	Frequently	Very often/always
1	2	3	4

1. I get my biggest thrills when my work is among the best there is.
2. I get a sense of pride when I do a good job on my business projects.
3. I feel proud when I look at the results I have achieved in my business activities.
4. I feel depressed when I don't accomplish any meaningful work.
5. I feel good when I have worked hard to improve my business.
6. I get a sense of accomplishment from the pursuit of my business opportunities.
7. I always feel good when I make the organizations I belong to function better.

**Interpersonal Network Building Scale (adapted from subscale "external contacts" (Wolff, Schneider-Rahm & Forret, 2011))**

For each of the following statements, use the following scale:

Never/very seldom	Sometimes	Frequently	Very often/always
1	2	3	4

1. I take on honorary jobs which could also be useful to me professionally.
2. I take part in professional association meetings (*e.g.*, trade union, chambers of commerce, American financial association).
3. I am an active member of a professional association (*e.g.*, trade union, chambers of commerce, American financial association).

**Interpersonal Network Maintenance Scale (adapted from subscale “external contacts” (Wolff, Schneider-Rahm & Forret, 2011))**

For each of the following statements, use the following scale:

Never/very seldom	Sometimes	Frequently	Very often/always
1	2	3	4

1. When instructions or work documents are not stated clearly, I ask acquaintances outside of my company for clarification.
2. I meet with acquaintances from other organizations, I approach them to catch up on news and changes in their professional lives.
3. I exchange professional tips and hints with acquaintances from other organizations.
4. I confide in acquaintances outside of the organization for job related matters.
5. When I can’t solve a problem at work I call acquaintances from other organizations and ask for advice.

**Interorganizational Relations with Stakeholders Scale (self-developed scale based on relationship types reported by O’Donnell, Gilmore, Cummins and Carson (2001))**

How important were the following considerations to the foundations of your enterprise? For each of the following statements, use the following scale:

Very Low Importance	Low Importance	Neutral	High Importance	Very High Importance
1	2	3	4	5

1. Promising business relations with suppliers.
2. Promising business relations with clients/customers.
3. Promising business relations with research organizations (public or private).
4. Business model based on a division of labor/work sharing business model (e.g., link/connector in a Supply Chain).



Running Head: THE LINK BETWEEN INTERPERSONAL AND INTERORGANIZATIONAL NETWORKING

**Interorganizational Relations with Investors Scale (self-developed scale based on relationship types reported by O'Donnell, Gilmore, Cummins and Carson (2001))**

For each of the following statements, use the following scale:

Very Low Importance	Low Importance	Neutral	High Importance	Very High Importance
1	2	3	4	<b>5</b>

1. Collaboration a Venture Capital enterprise (incl. CVC).
2. Promising business relations with incubators.
3. Collaboration with a third-party (*e.g.*, Business Angels).