
The link between interpersonal and interorganisational networking: the role of start-up members' achievement-related affect

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Abstract: This research examined the effect of start-up members' achievement-related affect on the link between interpersonal and interorganisational relationships (IORs). A sample of 469 employees from 135 German and 65 Portuguese start-ups (questionnaires) and a sample of 19 staff members of different Portuguese start-ups (interviews) participated in the current study. The regression results for the moderation model show that, for higher levels of achievement-related affect, interpersonal network building has a significant positive correlation with their perceived importance of IORs with non-investor stakeholders. Moreover, the indirect effect between interpersonal network maintenance and perceived importance of IORs was mediated by start-up members' achievement-related affect. This research sought to contribute to the interpersonal and interorganisational networking literatures. Findings suggest that motivations of achievement-related affect play a moderator or mediator role depending on the different profiles of the stakeholders (investors vs. non-investors).

Keywords: start-ups; achievement-related affect; entrepreneurial networking; IORs; interorganisational relationships.

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1 Introduction

Start-up staff members need to find creative solutions when encountering a variety of problems, as well as to learn about their businesses' market and expand their social capital through their interpersonal networks (Pinho and de Sá, 2013). Interorganisational relationships (IORs) play an important role in rationalising start-up professionals' relationships with non-investor stakeholders (e.g., customers, associations, and research organisations) and with investor stakeholders (Pruthi and Wright, 2019). The latter can be companies that invest in the start-ups' area of business, such as venture capital enterprises, start-up incubators, and business angels (Weigand, 2019). These IORs serve various purposes including, among others, financial support, social support, business development advice, and professional and personal development (Dimov, 2007; Reynolds, 2007).

Alongside to previews research (e.g., Lee et al., 2001), the present study on a meta-level builds upon two theoretical frameworks: the resourced-based theory and the social capital theory. The resourced-based theory describes companies' internal resources as the main resource to obtain good results (Barney, 2001). The social capital theory describes network relationships with external entities as a crucial resource to a greater

performance (Burt, 1997). Both point out to internal and external resources that have valuable benefits to the company's growth. The literature on resource-based theory reports that the underlying factors of competitive advantages are a set of unique and specific resources and capabilities within each organisation (e.g., Barney, 2001). In addition, previous studies have suggested that companies' human capital is the most important factor contributing to competitiveness because this capital brings together all the skills, knowledge, and individual experiences of employees that are relevant to the business in question (Chen and Lin, 2003). Start-up companies are thus composed of people who seek opportunities to increase their social capital and broaden their companies' impact on the market, thereby reaching potential customers, investors, and partners. Start-up managers must ensure work conditions that maximise the performance, motivation, and satisfaction of their employees by valuing their role in the company (Chen and Lin, 2003).

Researchers have also found evidence that personal networking is, to a large extent, linked to individual factors such as achievement motivation (Stam et al., 2013), which, in turn, are positively correlated with organisational growth (Winter, 2010). In a recent metasynthesis study, Brandstätter (2011) further concluded that the need for achievement – similarly to achievement-related affect – is positively linked to entrepreneurship. Business opportunities can thus be assumed to be created by individuals who intend to achieve more for their start-ups and who successfully involve other social actors in developing their business ideas collectively (Dimov, 2007), thereby enhancing these companies' services and/or products.

Overall, social networks are extremely important to the expansion of both the human and social capital of companies (McGrath et al., 2018). Studies of how start-up team members manage their social capital have contributed to a fuller understanding of start-ups' growth processes (e.g., Baron, 2007). However, although the determining role of specific factors in entrepreneurs' behaviour has been confirmed, some unresolved issues exist regarding the function of motivation and personality traits (Shane and Venkataraman, 2000), such as the role of achievement-related affect in the link between interpersonal networking and the importance given to IORs.

Taking the above findings into account, the present study's main goal was to understand the connection between entrepreneurs' devotion to interpersonal networking – whether they concentrate on building new personal relationships or to maintain the ones they already have – and their perceived importance of the organisational relationship with stakeholders who invest and stakeholders that provide support on the start-up development of ideas and structure.

In the current literature there is no clear distinction between non-investor and investor stakeholders, nor connection between the entrepreneurs' achievement related-affect and the importance given to these IORs. Consequently, the research model considered the role of start-up staff members' achievement-related affect in this relationship and made distinction between two types of IORs.

By designing a model with such features, we intend to understand if the start-up members that invest more in building new relationships, will value relationships with non-investor stakeholders. And if this is more evident in members who have high levels of achievement-related affect. Secondly, we intend to understand if the start-up members that invest more in maintaining the relationships they already have, will value relationships with non-investor stakeholders. And if this is explained through their achievement-related affect levels.

Therefore, our study will add value to the literature by linking the achievement related-affect construct to the link between the engagement in interpersonal networking (both internal resources) and the perceived importance of interorganisational networking with investor and non-investor stakeholders (an external resource).

In other words, our proposal is to contribute to a greater understanding for both social capital and resourced-based theory not only for what we mentioned above, but also for making distinctions within IORs that we consider important for further investigation.

1.1 Interpersonal and interorganisational networks

While start-up team members and business environment characteristics have an extremely significant role, social networking is also important to entrepreneurial processes and successes (Liñán et al., 2011). Social networks can be defined as a set of relationships between, for example, people (i.e., interpersonal networks), organisations (i.e., interorganisational networks), countries, and families (Kadushin, 2012). Social capital is a multidimensional concept defined as the aggregation of current resources and resources obtained through interpersonal and interorganisational networks (McGrath et al., 2018).

Social networks (i.e., interpersonal and interorganisational networks) have been analysed as drivers of entrepreneurial ventures and performance (e.g., Zhao et al., 2010). From a social networking perspective, entrepreneurs often expand their social capital through social networks to compensate for their start-ups' lack of resources – especially financial or human capital (Pinho and de Sá, 2014). This means that entrepreneurs are embedded in networks comprised of various social actors and organisations that provide access to resources vital to start-ups' establishment and development (Shaw and Conway, 2000). These networks thus provide access to good opportunities (McGrath et al., 2018) and help enhance businesses' financial performance (Baron, 2007).

Given the significance of the interpersonal and interorganisational networks examined in these previous studies, the literature reveals a noticeably arbitrary use of interpersonal relationships and IORs in entrepreneurship research (O'Donnell et al., 2001). For extremely small businesses consisting of just one person, the individual and organisational level obviously collapses into one, but small businesses often consist of at least several people: a founder or founding team and some employees. Therefore, differentiating between organisational and individual relationships becomes necessary because personal networking can vary both between individual organisational members and in the way IORs are developed. Given these contradictory patterns, the possible effect of interactions between interpersonal networking activities and interorganisational network development falls short of adequately explaining start-up staff members' behaviours (O'Donnell et al., 2001). To deal with this issue, in this study we differentiated between interpersonal networks and interorganisational networks within networking behaviours.

In addition, literature commonly tends to consider the concept stakeholders as unidimensional (e.g., Clarke and Rhodes, 2020). However, it is possible to differentiate stakeholders based on the characteristics of their contributions to the business (e.g., financial vs. intellectual). Hence, and considering our research context, in this research we assume that there are different types of IORs by making a distinction between non-investor and investor stakeholders. Non-investor stakeholders are defined as individuals or organisations who condition or are conditioned by the respective organisations'

attainment of goals (Freeman, 1984), and that are focused on providing resources such as knowledge or skills that are valuable for the start-up development (Sydow et al., 2016). In contrast, investor stakeholders, who are often assumed to be a homogenous group of stakeholders, are individuals or organisations who invest financial capital into start-ups (Harrison and Mason, 1995; Weigand, 2019) often focused on their return on investment (Pollack and Bosse, 2014). The latter stakeholders thus vary according to start-ups' financial needs and depend on these firms' overall success for their own success.

In other words, non-investor stakeholders include individuals (e.g., employees and customers) or organisations (e.g., associations and research organisations) that support start-ups (e.g., giving feedback and sharing know-how and contacts). These stakeholders assist entrepreneurs in effectively adapting to environmental changes, thereby helping enhance organisational performance and create competitive advantages (Sydow et al., 2016). Conversely, investor stakeholders are mostly linked to companies for financial reasons (Harrison and Mason, 1995). Despite the scant information on the financial resources of small ventures, studies have shown that, unlike large companies, start-ups have access to different types of organisations that provide financial support (Weigand, 2019). These are investor stakeholders such as start-up incubators, venture capital enterprises, business angels, and/or informal venture capitalists (Pinho and de Sá, 2013).

The present study assumed, therefore, that non-investor stakeholders require start-up managers to focus more on building relationships and creating bonds of trust, which are important for lasting relationships (Sydow et al., 2016). We sought to analyse whether the importance given to IORs with non-investor stakeholders is greater if individuals who report more network building behaviours aimed at strengthening their interpersonal network. In addition, we assumed that IORs with investor stakeholders require more maintenance and attention (i.e., frequent contact) to ensure the maximisation of shared advantages (Wolff et al., 2011). Thus, this research aimed to analyse if the importance given to IORs with investor stakeholders is greater for individuals who report more networking behaviours geared toward maintaining their interpersonal networks. We also took into account that start-up staff members' achievement-related affect can influence these links.

1.2 Achievement-related affect

The concept of achievement-related affect has been described as a complex set of values regarding entrepreneurial activities (McClelland, 1965). Achievement-related affect is also similar to the concept of achievement motivation, which is defined as an implicit, unconscious motivation assimilated through hedonic reinforcement of behaviour outcomes (Tan and Ng, 2015). Motivation can be considered the intention to work toward specific goals that elicits proactive behaviour (Edgerton and Roberts, 2014). Personal achievement-related affect or achievement motivation at work can further be equated to the intrinsic motivation to be successful at work. This process is an internal mechanism that moves individuals to work toward established goals in order to feel they have accomplished something and to strengthen their sense of being involved in self-development processes (Edgerton and Roberts, 2014).

In this study we will use the term 'achievement-related affect' as a psychological concept – closely linked to achievement motivation – measured in scales where it is possible to know how often individuals feel well when they achieve good results in their

performance of daily work tasks and their positive feelings towards these achievements. Plus, by drawing on the resource-based theory, we will consider the achievement-related affect of start-up employees as an intangible resource that may impact positively their business subsistence and success. This is particularly relevant since the resource-based theory postulates that all organisations hold unique resources and attributes that can affect their companies' competitive advantage and success (Barney, 2001). Considering our research context, according to the same author, start-ups specifically tend to engage in entrepreneurial strategies that foster and aim the enlargement of intangible resources with the target of subsistence or growth.

Prior studies have also demonstrated that interpersonal networking is, to a large extent, linked to achievement motivation (Stam et al., 2013). According to Kadushin (2012), his exploration of network theory revealed that psychological foundations explain human social networking behaviour and include two primary needs that have been ignored by social network analysts: to feel safe and to reach out to others. Since these needs are both motivational and cognitive, they account for why people expend much effort on interpersonal network building, as well as clarifying the limitations of network management abilities (Kadushin, 2012).

Thus, this study assumed that the need to feel safe fosters the motivation to maintain social networks that make start-up teams feel comfortable and well supported (Kadushin, 2012). Concurrently, the current research included the assumption that the need to reach out strengthens the motivation to build new relationships (Kadushin, 2012). This can be a good initial strategy as entrepreneurs reach out to investor or non-investor stakeholders that will help to increase their start-ups' performance and growth in the relevant markets (Pinho and de Sá, 2014; Shaw and Conway, 2000).

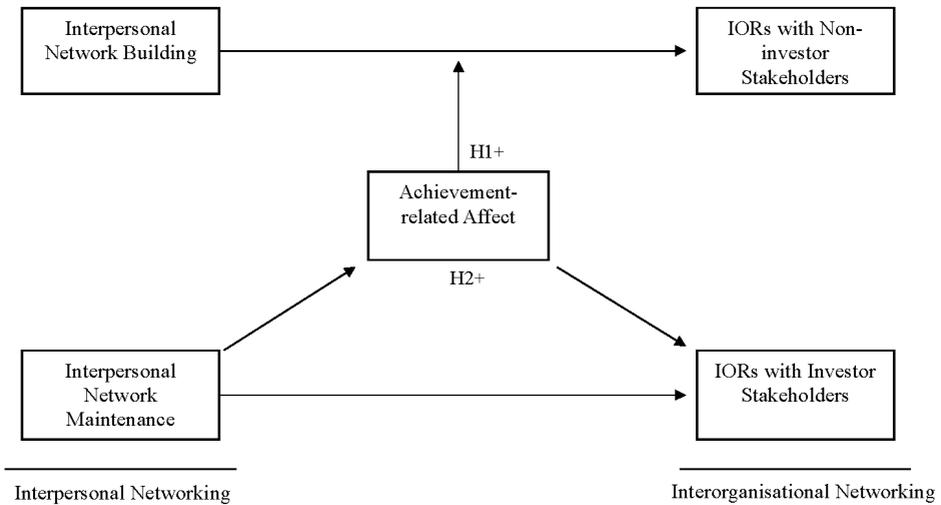
Individuals who have high levels of achievement-related affect are motivated to engage with other social actors (e.g., non-investor stakeholders) in order to get feedback on how to improve their work and strategic responses to market trends (Dimov, 2007). These people, therefore, tend to build larger personal networks. Compared to individuals who have lower levels of achievement-related affect, entrepreneurs who have higher levels of this affect are motivated to achieve professional goals no matter what this requires, and these individuals tend to perform better at work (Edgerton and Roberts, 2014).

Given the above findings, the present study sought to test a moderation model that included start-up staff members who frequently devote effort to interpersonal network building and who simultaneously have higher levels of achievement-related affect. We expect that achievement-related affect influences the strength of the relationship between interpersonal network building and IORs with non-investor stakeholders. Based on previous research (e.g., Wang et al., 2017), we believe that entrepreneurs' achievement-related characteristics are more relevant to understanding the relationship between interpersonal network building and investor stakeholders, than with non-investor stakeholders. In fact, investor stakeholders are more demanding and require entrepreneurs with drive and persistence to fulfil targets, as well as a tendency to approach success (Rauch and Frese, 2000). These 'required' requisites are so determining that they will buffer (mediate) the correlation between interpersonal network building and investor stakeholders. In the case of non-investor stakeholders, these characteristics are less

relevant but still important, affecting the strength of the relationship between interpersonal network building and non-investor stakeholders. Therefore, we infer that these professionals, as compared to those who do not have this type of achievement affect, give more importance to IORs with non-investor stakeholders. We proposed the following hypothesis (see Figure 1):

Hypothesis 1: Interpersonal network building is positively related to start-up members' perceived importance of IORs with non-investor stakeholders involved at the start-up level, especially for start-up staff reporting higher levels of achievement-related affect.

Figure 1 Hypotheses model of moderation effect of start-up members' achievement-related affect on interpersonal network building and perceived importance of IORs with non-investor stakeholders and mediation effect of start-up members' achievement-related affect on interpersonal network maintenance and perceived importance of IORs with investor stakeholders



Previous research shows a relationship between venture capitalists' bargaining power and the perception that entrepreneurs' joint control and monitor costs (Wang et al., 2017). Employees who rank high in achievement motivation, take moderate risks and are more responsible for the company's results. Moreover, personal control associated with achievement motivation is an important variable explaining the emergence of entrepreneurial success (Winter, 2010). The greater the entrepreneur's financing need, the more likely investor stakeholders will be attracted to entrepreneurs who value joint control, achievement and responsibility (Wang et al., 2017). On the base of these assumptions, we argue that the influence of the achievement-related affect on IORs with investor stakeholders is stronger than the direct influence of the interpersonal network maintenance variable. Investments carry moderate to high risks that require a previous evaluation of the personality and motivation of the entrepreneur. Therefore, the relationship between the interpersonal network maintenance and IORs with investor stakeholders is explained by the role of the achievement acts of the entrepreneurs.

The present study assumed that opportunities are created through individuals who seek to achieve more for their business and who successfully engage other social actors. They network in order to develop their business ideas collectively (Dimov, 2007) and enhance their companies' services or products. In the current research, we developed a mediation model in which we expected that individuals' frequent devotion of effort to maintaining interpersonal networks is correlated with the importance these entrepreneurs give to IORs with investor stakeholders. This correlation is better explained when start-up members' achievement-related affect is introduced into the model, as postulated below:

Hypothesis 2: Interpersonal network maintenance at the start-up level has a positive indirect effect on start-up members' perceived importance of IORs with investor stakeholders, through start-up staff members' achievement-related affect at work.

2 Methodology

2.1 Sample and procedure

Websites on start-up activity, as well as company register databases in Germany and Portugal, were screened to identify target start-ups. We chose these two countries because, although they are both European, they diverge in terms of institutional infrastructure for entrepreneurship and social and economic characteristics (Mendonça and Grimpe, 2016). These two countries' extensive cultural differences (i.e., Germanic European vs. Latin European) contributed to substantiating the external validity of our results (Gupta and Hanges, 2004).

Telephone calls were made soliciting the participation of 200 companies in Germany and 100 in Portugal. These firms were chosen based on the criteria also applied by Boso et al. (2013). These were

- independent companies that were not part of any corporate group
- firms with individual or a team of entrepreneurs with at least 50% of the ownership,
- organisations with a quite small staff of full-time employees.

We also ensured that the firms were reasonably young in terms of years in operation (mean = 3.98; standard deviation [SD] = 4.08), as well as being mostly knowledge-intensive.

After the start-ups agreed to participate, their staff members – employees (59.9% of the sample) and chief executive officers (CEOs) (40.1% of the sample) – were asked to fill out a questionnaire, which was administered either in person or online. Following a back-translation procedure (Brislin, 1986), the measurement scales' items used in this study were translated into German and Portuguese. The completed questionnaires were filled out by a total of 469 organisational members (69% male) from 200 German and Portuguese start-ups – 135 and 65 start-ups, respectively. Based on the initial list of firms, this corresponds to 68% of all start-ups for Germany and 64% for Portugal.

Of the final sample, 64.2% of the companies were founded in 2010 or later. The majority of these companies (57.6%) had six or less employees at the end of the most recently concluded business period. Specific industries represented include information

technology/internet/Web 2.0 (49.9%), marketing/media (9.5%), retail (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 addition, qualitative interviews were conducted to deepen the results of the quantitative analyses. The sample consisted of 29.2% of the Portuguese start-ups that had participated in initial quantitative study. The interviews followed a semi-structured format to capture as much information as possible from the interviewees' perspective. To this end, 26 start-up staff members received telephone calls, of which 19 participated, for a response rate of 73%. Of this sample, nine respondents were CEOs, one was a co-founder, and nine were employees – all from different start-ups (see Table 1).

Table 1 Qualitative interviews in post-study

<i>No.</i>	<i>Duration</i>	<i>Industry</i>	<i>Position</i>	<i>Interview focus</i>
1	00:11:00	Technology	CEO	The relationship between interpersonal and interorganisational networking
2	00:14:00	Family support services	CEO	Importance of people devoted to establishing IORs with non-investor stakeholders
3	00:15:00	Food industry	Process Engineer	The role of achievement-related affect in building IORs with non-investor stakeholders
4	00:15:00	Architecture	CEO	Importance of people devoted to establishing IORs with non-investor stakeholders
5	00:17:00	Technology	Manager	The role of achievement-related affect in maintaining IORs with investor stakeholders
6	00:10:00	Tourism	Consultant	The role of achievement-related affect in building IORs with non-investor stakeholders
7	00:10:00	Security	Administrative	The role of achievement-related affect in building IORs with non-investor stakeholders
8	00:11:00	Agriculture	Co-founder	The role of achievement-related affect in building IORs with non-investor stakeholders
9	00:10:00	Real estate investment	CEO	The role of achievement-related affect in maintaining IORs with investor stakeholders
10	00:10:00	Biotechnology	Quality Manager	The role of achievement-related affect in start-ups
11	00:10:00	Technology	Operational Manager	The role of achievement-related affect in maintaining IORs with investor stakeholders

Table 1 Qualitative interviews in post-study (continued)

No.	Duration	Industry	Position	Interview focus
12	00:15:00	Technology	CEO	Importance of people devoted to maintaining IORs with investor stakeholders
13	00:10:00	Health	Manager	The role of achievement-related affect in start-ups
14	00:10:00	Technology	CEO	The role of achievement-related affect in building IORs with non-investor stakeholders
15	00:15:00	Tourism	CEO	The relationship between interpersonal and interorganisational networking
16	00:10:00	Security	CEO	The relationship between interpersonal and interorganisational networking
17	00:15:00	Technology	Marketing Manager	The relationship between interpersonal and interorganisational networking
18	00:10:00	Architecture	CEO	The relationship between interpersonal and interorganisational networking
19	00:15:00	Technology	Consultant	The relationship between interpersonal and interorganisational networking

2.2 Instruments

Achievement-related affect. This construct measures how well respondents feel when they achieve good results in their performance of daily work tasks and their positive feelings toward these achievements (i.e., personal achievement-related affect at work). The construct was assessed with seven items from the Entrepreneurial Attitude Orientation scale developed by Robinson et al. (1991) (e.g., “I get my biggest thrills when my work is among the best there is.” “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 (1 = ‘Never/very seldom’ to 4 = ‘Very often/always’). Higher scores correspond to higher levels of achievement-related affect. Using principal component analysis, a single factor was found (7 items; 48.7% of total explained variance; $\alpha = 0.80$).

Interpersonal networking (building and maintenance). Interpersonal networking measures were adapted from the scale assessing external contacts developed by Wolff et al. (2011). All items were measured on a four-point rating scale (1 = ‘Never/very seldom’ to 4 = ‘Very often/always’). Higher scores correspond to a stronger devotion to interpersonal network building, maintenance, or use.

An initial analysis of all 22 items was conducted. After principal component analysis with varimax rotation, as well as Kaiser criteria in which eigenvalues above 1 were extracted, the rotated matrix revealed that 10 items had to be removed from further analyses. These items had a loading below 0.40 in all factors or had cross-loadings with two or more factors. Next, principal component analysis was conducted again, and three factors were retained with 62.37% of the total explained variance (see Table 2). The dimension of interpersonal network maintenance appeared as the first factor

(five items; 24.73% of total explained variance; $\alpha = 0.84$), whereas the second factor was interpersonal network use (four items; 21.97% of total explained variance; $\alpha = 0.78$). The last factor was interpersonal network building (three items; 15.66% of total explained variance; $\alpha = 0.64$).

Table 2 Factor analysis and instrument characteristics

<i>Constructs</i>	<i>Number of items</i>	<i>Number of factors</i>	<i>Dimensions</i>	<i>Cumulative percentage of explained variance</i>	<i>Cronbach's alphas</i>
1. Achievement-related affect	7	1	n/a	48.70	0.80
2. Interpersonal network	12	3	Maintenance (5) Use (4) Building (3)	50.03	0.81 0.79 0.64
3. IORs	7	2	Investor stakeholders (3) On-investor stakeholders (4)	55.93	0.74 0.63

Although three statistically significant factors were found, this study's main focus was the antecedents for network use, that is, network building and network maintenance factors (Wolff and Moser, 2009). The decision to restrict the present research was taken based on a longitudinal study by Wolff and Moser (2009), who found that the use of external contacts did not have as much importance as network building and maintenance in successful professional careers. The cited authors argue that using external contacts frequently can be assumed to be a sign of these professionals' insufficient competence to do their work well.

Interorganisational networking (non-investor and investor stakeholders). This construct measures the importance given to IORs with both non-investor and investor stakeholders, and the scale was developed for this study based on relationship types reported by O'Donnell et al. (2001). This instrument thus assesses the perceived importance of relationships with investor stakeholders (e.g., "collaboration with a venture capital enterprise") and non-investor stakeholders (e.g., "promising business relationships with clients and/or customers"). The respondents had to evaluate the importance of each IOR type for their start-up. All items were measured on a five-point rating scale (1 = 'Very unimportant' to 5 = 'Extremely important'). Higher scores correspond to higher levels of perceived importance of IORs.

Using principal component analysis with varimax rotation, as well as the Kaiser method, we found perceived importance of IORs with investor stakeholders was the first factor (three items; 28.62% of total explained variance; $\alpha = 0.74$). Perceived importance of IORs with non-investor stakeholders appeared as the second factor (four items; 27.31% of total explained variance; $\alpha = 0.63$).

2.3 Control variables

To exclude alternative explanations, we controlled for several variables that, according to previous research, may have an influence on the interpersonal network – IORs relationship. For example, occupational status can influence interpersonal networking

(Pruthi and Wright, 2019; Vissa, 2011). In addition, significant cross-cultural differences can exist between countries (Kelley et al., 2009). Thus, two control variables were introduced into the two tested models: occupational status (CEO vs. employee) and country (Germany vs. Portugal).

2.4 Measurement model and common method variance

We performed confirmatory factor analysis (CFA) in order to test the validity of the variables included in this study. This was done first for the moderation model (i.e., effect of personal achievement-related affect at work on the relationship between interpersonal network building and perceived importance of IORs with non-investor stakeholders at the start-up level). We then tested the mediation model (i.e., personal achievement-related affect at work as a mediator of the relationship between interpersonal network maintenance and perceived importance of IORs with investor stakeholders at the start-up level). Due to the self-reported data used, common method variance could affect the relationships between variables. According to Harman's single factor test (Podsakoff et al., 2003), if common method variance exists, one factor will emerge from CFA when using AMOS 23.0 software.

Regarding the moderation model, a model with three factors was tested (i.e., personal achievement-related affect at work, interpersonal network building, and perceived importance of IORs with non-investor stakeholders at the start-up level). This yielded a good fit to the data (χ^2 [66] = 196.855; $p < 0.001$; $\chi^2/df = 2.983$; confirmatory fit index [CFI] = 0.923; incremental fit index [IFI] = 0.922; root mean square error of approximation [RMSEA] = 0.065; low [LO] = 0.055; high [HI] = 0.076). The results also reveal that a single-factor model does not provide good fit indices (χ^2 [68] = 281.969; $p < 0.001$; $\chi^2/df = 4.147$; CFI = 0.873; IFI = 0.874; RMSEA = 0.082; LO = 0.072; HI = 0.092). Thus, CFA showed that the factorial structure was adequately adjusted and that common method variance did not bias the moderation model's results.

Regarding convergent validity, the composite reliability (CR) scores are higher than 0.70, and the average variance extracted (AVE) for the three constructs is close to 0.50, thereby confirming 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 falling below the AVE score (Hair et al., 2010) (see Table 3).

Table 3 Measurement model: CR, AVE, MSV, and ASV for moderation model

<i>Variables</i>	<i>CR</i>	<i>AVE</i>	<i>MSV</i>	<i>ASV</i>
1. Achievement-related affect	0.81	0.39	0.04	0.03
2. Interpersonal network building	0.71	0.47	0.04	0.04
3. IORs with non-investor stakeholders	0.73	0.45	0.04	0.03

Regarding the mediation model, a model with three factors was tested (i.e., personal achievement-related affect at work, interpersonal network maintenance, and perceived importance of IORs with investor stakeholders at the start-up level). The test yielded evidence of a good fit to the data (χ^2 [74] = 91.029; $p < 0.05$; $\chi^2/df = 1.230$; CFI = 0.993; IFI = 0.993; RMSEA = 0.022; LO = 0.000; HI = 0.036). The results also reveal that a

single-factor model does not provide good fit indices ($\chi^2 [82] = 450.087$; $p < 0.001$; $\chi^2/df = 5.489$; CFI = 0.845; IFI = 0.846; RMSEA = 0.098; LO = 0.089; HI = 0.107). The CFA thus confirmed that the factorial structure was well adjusted and that common method variance did not bias the mediation model's results.

Furthermore, the CR scores are higher than 0.70, and the AVE for the three constructs is near 0.50, which provides support for the instruments' convergent validity (Hair et al., 2010). Discriminant validity was also confirmed, with the ASV and MSV scores falling below the AVE score (Hair et al., 2010) (see Table 4).

Table 4 Measurement model: CR, AVE, MSV and ASV regarding mediation model

<i>Variables</i>	<i>CR</i>	<i>AVE</i>	<i>MSV</i>	<i>ASV</i>
1. Achievement-related affect	0.82	0.40	0.24	0.14
2. Interpersonal network maintenance	0.83	0.50	0.24	0.13
3. IORs with investor stakeholders	0.74	0.49	0.04	0.03

2.5 Aggregation statistics

Similarly to Braun et al. (2018), we elected to use a two-level research design. We included variables measured at the individual level (i.e., achievement-related affect) and at the start-up level (i.e., interpersonal building network, interpersonal maintenance network, perceived importance of IORs with non-investor stakeholders, and perceived importance of IORs with investor stakeholders). The purpose of this aggregation was to assess the extent to which individuals from the same start-up share similar perceptions of these constructs. The validity of the four team-level variables were tested through intraclass correlation ($ICC_{[1]}$), reliability of mean scores ($ICC_{[2]}$), and within group agreement (r_{wg}).

For the non-investor stakeholders variable, the value of r_{wg} is 0.660. For the investor stakeholders variable, the value of r_{wg} is 0.719. For the maintenance variable, the value of r_{wg} is 0.646, while, for the building variable, the value of r_{wg} is 0.794. Although some values are above 0.70, which would justify the aggregation of individual scores at the team level (Dunlap et al., 2003), they are quite close to the cut-off point of 0.70, which might be because our sample is only based on start-ups.

For the stakeholders variables, the $ICC_{[1]}$ is 0.47 for investors and 0.29 for non-investors (i.e., between the recommended values of 0.50 and 0.20). This suggests that about 47% and 29% of the total variability in the non-investor stakeholders variable and investor stakeholders variable can be explained by team membership (Bliese, 2000). For the building variable, the $ICC_{[1]}$ is 0.31 (i.e., between the recommended values of 0.50 and 0.20), suggesting that about 31% of the total variability in the building variable can be explained by team membership (Bliese, 2000). However, for the maintenance variable, the $ICC_{[1]}$ is 0.13, which indicates that only 13% of the total variability in the maintenance variable can be explained by team membership (Bliese, 2000).

The $ICC_{[2]}$ is 0.65 for the investor stakeholders variable and 0.49 for the non-investor stakeholders variable, revealing higher values than the ones presented by the $ICC_{[1]}$ and showing that the group means are reliable (Bliese, 2000). In addition, the $ICC_{[2]}$ values are 0.25 and 0.52 for the maintenance and building variables, respectively, which are higher values than the ones presented by the $ICC_{[1]}$, thus showing that the group means are reliable (Bliese, 2000).

3 Results

3.1 Descriptive statistics

Table 5 presents the means, standard deviations, and zero-order correlations of the study variables. These variables are fairly well correlated with all correlations below 0.50, which suggests their independence and the absence of multi-collinearity between variables.

Table 5 Means, SDs, and Pearson's correlations between variables under study

	Level 1		Level 2		R				
	M	SD	M	SD	3	4	5	6	7
1 Country ^a					0.248**	0.403**	0.059	0.537**	0.028
2 Status ^b					-0.090	-0.100*	-0.095*	0.067	0.139**
3 Achievement-related affect	3.27	0.54			(0.80)	0.191**	0.261*	0.100*	0.187**
4 Interpersonal network building			1.65	0.50		(0.64)			
5 Interpersonal network maintenance			2.33	0.51		0.241**	(0.81)		
6 IORs with non-investor stakeholders			2.97	0.66		0.266**	-0.059	(0.63)	
7 IORs with investor stakeholders			2.93	0.93		0.058	0.171**	0.180**	(0.74)

M = mean; for Levels 1 and 2, number = 469; Cronbach's alpha reliability scores are between brackets; * $p < 0.05$; ** $p < 0.01$; ^a0 = Germany, 1 = Portugal; ^b0 = CEO, 1 = employee.

3.2 Hypothesis testing

In further tests of the conceptual model, we used PROCESS macro for SPSS (Hayes, 2013).¹ To test the indirect effect for the mediation model, 5,000 bootstrap samples were requested, and significance was determined based on 95% bias-corrected confidence intervals (CIs). That is, when the CI did not contain zero, the estimate was interpreted as being significant. The results for the moderation model are presented in Table 6, and the results for the mediation model are shown in Table 7.

According to the existing literature, moderation is supported if the inclusion of the interaction term results in a significant improvement in the variance explained for, in this case, the perceived importance of IORs with non-investor stakeholders. Simple moderation was examined using PROCESS macro's Model 1 (Hayes, 2013). Achievement-related 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 included as covariates.

Table 6 Moderation model results

<i>Independent variables</i>	<i>IORs with non-investor stakeholders</i>		<i>Bias-corrected and accelerated 95% CI</i>	
	<i>B</i>	<i>SE</i>	<i>Lower level</i>	<i>Upper level</i>
Constant	2.693***	0.044	2.607	2.779
Country ^a	0.735***	0.063	0.612	0.858
Status ^b	0.086	0.053	-0.018	0.189
Interpersonal network building (X)	0.078	0.057	-0.033	0.190
Achievement-related affect (M)	-0.046	0.049	-0.142	-0.051
Interpersonal network building * Achievement-related affect (X * M)	0.251**	0.088	0.079	0.423
<i>Conditional effects</i>				
Low achievement-related affect	-0.058	0.077	-0.210	0.094
Medium achievement-related affect	0.078	0.057	-0.033	0.190
High achievement-related affect	0.215**	0.070	0.076	0.353
$R^2 =$	0.31***			
$F_{(5,463)} =$	41.61			

** $p < 0.01$; *** $p > 0.001$; covariates included; ^a0 = Germany, 1 = Portugal; ^b0 = CEO, 1 = employee.

Table 7 Mediation model results

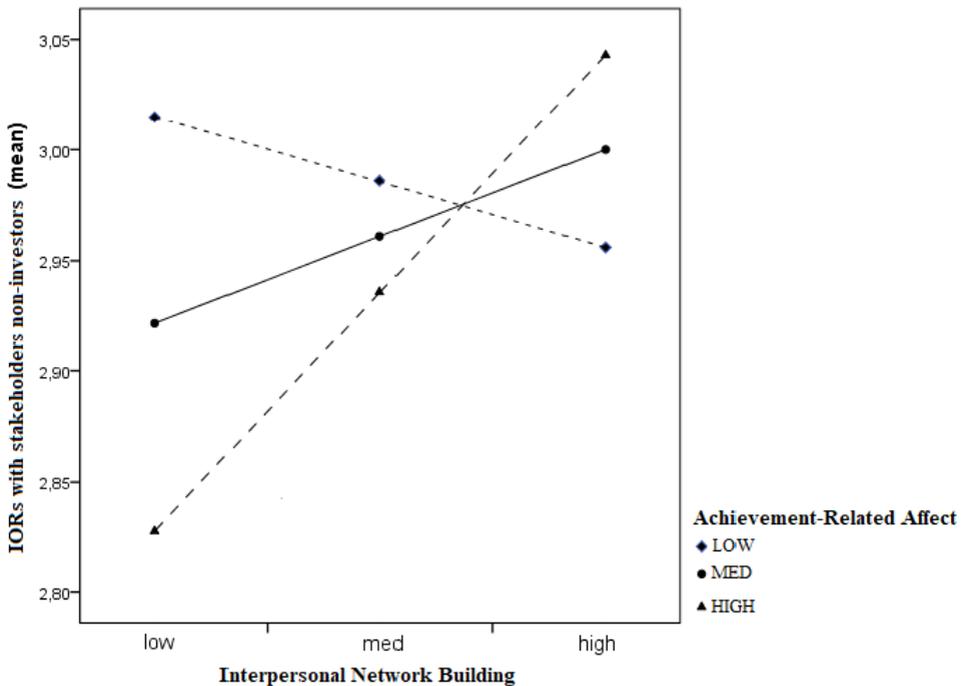
	<i>Achievement-related affect</i>		<i>IORs with investor stakeholders</i>			
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Intercept	2.62***	0.12	1.95***	0.21	1.18***	0.30
<i>Total effect</i>						
Interpersonal network maintenance	-	-	0.34**	0.83	-	-
<i>Direct effects</i>						
Interpersonal network maintenance	0.26**	0.05	-	-	0.26	0.85
Achievement-related affect	-	-	-	-	0.29***	0.82
Country ^a	0.28***	0.52	0.34	0.92	-0.47**	0.94
Status ^b	0.75	0.48	0.29**	0.86	0.32***	0.85
Total R^2	0.13***	-	0.05***	-	0.08***	-
<i>F Test</i>	$F_{(3,465)} = 22.6$		$F_{(3,465)} = 8.78$		$F_{(4,464)} = 9.93$	
<i>Indirect effect using bootstrap</i>	0.75	0.03	-	-	-	-
95% BCa CI	0.03, 0.14					

** $p < 0.01$; *** $p > 0.001$; Unstandardised regression coefficients reported; bootstrap sample size = 5000; BCa = bias-corrected accelerated; covariates included in tested model: ^a0 = Germany, 1 = Portugal; ^b0 = CEO, 1 = employee.

The overall model was significant ($F_{(5,463)} = 41.61; p < 0.001$), accounting for 31.0% of the overall variance in perceived importance of IORs with stakeholder variable scores ($R^2 = 0.31$). Consistent with Hypothesis 1, a significant interaction effect exists between interpersonal network building and personal achievement-related affect at work ($B = 0.251; t_{(463)} = 2.865; p < 0.005; 95\% \text{ CI} = 0.079, 0.423$). This indicates that personal achievement-related affect at work is a significant moderator of the link between interpersonal network building and perceived importance of IORs with non-investor stakeholders.

The nature of the moderating effect suggests an increasing magnitude in the correlation between interpersonal network building and perceived importance of IORs with non-investor stakeholders for increasing values of personal achievement-related affect at work. More specifically, the results indicate that the correlation between interpersonal network building and perceived importance of IORs with non-investor stakeholders increases in magnitude from low ($B = -0.544; t_{(463)} = -0.750; p = 0.454$) to moderate ($B = 0.078; t_{(463)} = 1.384; p = 0.167$) to high ($B = 0.215; t_{(463)} = 3.049; p < 0.005$) levels of personal achievement-related affect at work. However, the relationship between interpersonal network building and perceived importance of IORs with non-investor stakeholders at the start-up level is only moderated by start-up members' achievement-related affect at work at the highest levels and not at lower and medium levels (see Figure 2).

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



Simple mediation was examined using PROCESS macro's Model 4 (Hayes, 2013). Achievement-related affect was examined as a mediator between interpersonal network maintenance at the start-up level and perceived importance of IORs with investor stakeholders at the same level (see Table 7). Country (Portugal vs. Germany) and status (CEO vs. employee) were entered as covariates. The full model with personal achievement-related affect at work included as a mediator was significant ($F_{(3,465)} = 8.780$; $p < 0.001$; $R^2 = 0.05$).

The results reveal significant effects of interpersonal network maintenance on personal achievement-related affect at work (i.e., path a) ($B = 0.258$; $t_{(465)} = 5.527$; $p < 0.001$; 95% CI = 0.166, 0.350) and of personal achievement-related affect at work on interpersonal network maintenance (i.e., path b) ($B = 0.291$; $t_{(464)} = 3.567$; $p < 0.001$; 95% CI = 0.131, 0.452). The direct effect (i.e., path c) of interpersonal network maintenance on perceived importance of IORs with investor stakeholders – after accounting for personal achievement-related affect at work – remains significant ($B = 0.264$; $t_{(465)} = 3.102$; $p < 0.005$; 95% CI = 0.097, 0.431). Although path c is still significant, analyses showed a significant indirect effect of interpersonal network maintenance on perceived importance of IORs with investor stakeholders through personal achievement-related affect at work. This was demonstrated by the bootstrapped 95% CI of the indirect effect ($B = 0.075$; standard error [SE] = 0.029; 95% CI = 0.029, 0.144).

These results suggest a partial mediation between interpersonal network maintenance and perceived importance of IORs with investor stakeholders through start-up members' achievement-related affect at work. This result is consistent with Hypothesis 2, confirming that interpersonal network maintenance is positively correlated with perceived importance of IORs with investor stakeholders, through start-up members' achievement-related affect.

3.3 *Qualitative interview analyses*

Given the quantitative analyses' results, the main goal of conducting qualitative interviews was to understand how interpersonal networking (i.e., building and maintaining these) leads to interorganisational networking with non-investor stakeholders and investor stakeholders. In addition, the interviews were used to answer the following question: why does achievement-related affect assume a moderator role in one relationship and a mediator role in another?

Thus, the specific objectives were to understand the quantitative results regarding two roles. The first was the moderator role of achievement-related affect in the link between interpersonal network building and perceived importance of IORs with non-investor stakeholders. The second was the mediator role of achievement-related affect in the relationship between interpersonal network maintenance and perceived importance of IORs with investor stakeholders.

The qualitative analysis focused on the themes explored through the interviews, and illustrative evidence was selected for each theme (see Table 8). The interviewees were asked about the first moderator role of achievement-related affect in the link between interpersonal network building and IORs with non-investor stakeholders. The interviewees pointed out that team members who seek to achieve goals at work tend to be more active in interpersonal networking and, therefore, more capable of reaching and

establishing IORs with non-investor stakeholders that provide vital but mostly social resources to the start-ups. This is because these team members strive to find and focus on specific non-investor stakeholders, going beyond what is required.

Table 8 Evidence for relationship between interpersonal and interorganisational networking

<i>Theme</i>	<i>Illustrative Evidence</i>
The relationship between interpersonal and interorganisational networking	<p>“We have met several people in various companies through our regular group of friends and other stakeholders whom we have met at some events. ... Many of the employees have their networks of contacts, and this facilitates everything, that is, we are able to enter the market more easily. We can find investor stakeholders much more easily.” (Manager of a technology start-up)</p> <p>“If relationships are not based on friendship, people will only help if they see the value of doing this for their companies, and, in the beginning, this is complicated.” (CEO of a technology start-up)</p>
The role of achievement-related affect in start-ups	<p>“We can only evolve with employees who have achievement-related affect and who want more and better things 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)</p>
The role of achievement-related affect in building IORs with non-investor stakeholders	<p>“The best way to connect with companies is through people who have developed several initiatives for start-ups, so they have to be completely committed to a specific company. They have to strive to go beyond what would be considered the normal approach within this profession. We have to get down to the personal level.” (Manager of a technology start-up)</p>
The role of achievement-related affect in maintaining IORs with investor stakeholders	<p>“We have to aggregate the personal with the professional to achieve the best results without masking our true interests by using a dishonest approach. ... More important than enthusiasm is persistence: the will to win and to continue until the market really shows that there is no more room for investment.” (Manager of a technology start-up)</p>
Importance of people devoted to establishing IORs with non-investor stakeholders	<p>“If you always keep one or two people within your structure with this ability to do the famous PR – the so-called public relations – a person who creates contacts, generates desires, and is motivated to speak about the product. We can maintain these relationships over time, and we will always be motivated to do better.” (CEO of a tourism start-up)</p>
Importance of people devoted to maintaining IORs with investor stakeholders	<p>“They have already failed in the past and help us not to fail in the same ways, assisting us in situations we do not know how to deal with. They have some experience, and they are able to point the way to the best path.” (Operational manager of a technology start-up)</p>

Interviewees were then asked about the second mediator role of achievement-related affect in the connection between interpersonal network maintenance and IORs with investor stakeholders. The start-up staff interviewed responded that relationships with investor stakeholders must be maintained through time because investor stakeholders need to receive updates on the results of their investments to keep them interested. The interviewees pointed out that team members who strive to achieve goals at work tend to be better able to maintain IORs because these individuals cope more easily with market unpredictability and instability and manage to communicate their start-ups' financial needs convincingly and effectively. In addition, those interviewed reported that features such as enthusiasm, honesty, and persistence (i.e., achievement-related affect)

are common among these staff members and are crucial when asserting the start-ups' value (see Table 8).

Therefore, regarding the moderation model, start-up staff members who give more importance to IORs with non-investor stakeholders tend to be those who have high levels of achievement-related affect and, simultaneously, devote more time to building their interpersonal networks. This may be because they recognise that, to achieve better results, they must connect with important social actors who give them access to a wide range of resources. In contrast to other staff members who are low in achievement-related affect, they never give up on proposed initiatives and go beyond what others ask of them, thereby contributing to their start-ups' growth in the relevant markets.

Regarding the mediation model, we sought to explain the partial indirect effect of interpersonal network maintenance on perceived importance of IORs with investor stakeholders through start-up staff members' achievement-related affect. We found that most interviewees mentioned that maintaining relationships with investor stakeholders is an important factor in keeping them interested. In addition, when start-ups include individuals who strive for better results, these people are clearly crucial to maintaining relationships due their resilience and perseverance, which is associated with their achievement-related affect. Thus, the assumption can be made that start-up staff members who have higher achievement-related affect definitely give more importance to investor stakeholders. In other words, our qualitative findings suggested that achievement-related affect influences the strength (i.e., moderates) of a relationship between interpersonal networks and IORs with non-investors, and explains (i.e., mediates) the relationship between interpersonal networks and IORs with investors.

4 Discussion

The present study's results shed light on the link between interpersonal networking and interorganisational networking, as well as the role of achievement-related affect in that link. Our quantitative and qualitative results corroborate the two proposed hypotheses. First, interpersonal network building is positively correlated with start-ups' perceived importance of IORs with non-investor stakeholders for start-up staff members reporting higher levels of achievement-related affect. Second, the findings include a positive, partial indirect effect of interpersonal network maintenance on perceived importance of IORs with investor stakeholders through start-up members' achievement-related affect at work.

In other words, members who have higher levels of motivation towards their work achievements, demonstrate more devotion to the construction of their personal contacts and give more importance to IORs with non-investor stakeholders. Conversely, members that demonstrate more devotion to the maintenance of their personal contacts, give more importance to IORs with investor stakeholders and this is explained, to a certain extent, by their levels of motivation towards their work achievements.

These findings lead to a contribution, allowing to find connections that can be valuable to the start-ups that pretend to reach different types of stakeholders and creating a better understanding for what might be happening in their networks.

4.1 Theoretical and practical implications

The proposed framework disentangles interpersonal networking from interorganisational networking and provides details of how the networking activities of start-up team members relate to their perceived importance of IORs. These findings thus enrich the well established social capital theory and contribute to advancing research on distinctions between different types of IORs (cf., O'Donnell et al., 2001) and provide further support for prior studies that have reported a link between interorganisational and interpersonal networking (cf., Hansen, 1995).

Our research's approach included distinguishing between IORs with non-investor stakeholders and IORs with investor stakeholders, which provided two advantages. First, this facilitated the development of an instrument capable of separately assessing the importance start-up staff members' give to these two types of IORs. Second, this approach allowed us to verify different relationships between two types of network behaviours in interpersonal networking (i.e., building and maintaining contacts) and the importance entrepreneurs give to these IORs.

In addition, our findings deepen the well-known resource-based theory (Barney, 2001) by highlighting the role of start-ups internal intangible resources, among which should be considered the achievement-related affect of start-up members. Plus, our results constitute an advance in the literature that focuses on the relationship between achievement-related affect and networking (Stam et al., 2013). The present findings further contribute to the social capital theory (Burt, 1997) on tie formation in the entrepreneurial process (Elfring and Hulsink, 2007) as the current study verified that start-up team members' achievement-related affect plays an important role in the link between interpersonal and interorganisational networking. We showed that achievement-related affect is a prerequisite for IORs, which can enhance start-ups' performance (e.g., Zhao et al., 2010) by strengthening the relationship with IORs with non-investors or by explaining the relationship within IORs with investors.

Moreover, the results reveal that start-up staff members' achievement-related affect – a part of their intrinsic motivation – determines how they manage their interpersonal networks. In this context, this study is one of the first to highlight the role of achievement-related affect in the relationship between interpersonal and IORs, thereby complementing Kadushin's (2012) exploration of network theory. This affect also influences how much perceived importance these team members give to IORs with other organisational actors, such as non-investor and investor stakeholders. Thus, we were able to verify McClelland's (1965) description of the characteristics of individuals who have a high need for achievement. We found that start-up staff with higher levels of achievement-related affect tend to be perceived as being proactive in establishing relationships and more resilient in maintaining these relationships.

From a long-term perspective, start-ups composed of various individuals with proactive characteristics (e.g., autonomy, resilience, and ambition) are more likely not only to be successful (Frese and Gielnik, 2014) but also to have a larger social network (Zhao et al., 2010). These start-up members also must connect to different non-investor and investor stakeholders through their social networks activities in order to gather valuable financial and material resources (Dimov, 2007). According to the study's results, attention must be paid to achievement-related affect in order to stimulate start-up members' proactive characteristics. Thus, human resource managers need to consider customising motivational programs for each team member to target more directly these

individuals' intrinsic goals and values (Chen and Lin, 2003). The literature shows that investor stakeholders are more prone to develop networks with entrepreneurs that value personal control, goal setting and responsibility (Wang et al., 2017). Therefore, in line with our results, those responsible for start-ups should detect and select members with high achievement-related profiles to delegate responsibilities to them to successfully approach these investors and obtain valuable benefits for the company.

Regarding the strategies that start-ups can adopt, considering our results, in order to empower entrepreneurs psychologically, management support should be fostered through coaching and financial support (Schmidt and Heidenreich, 2019) contributing for higher levels of achievement-related affect that will have impact in their networking building and maintenance skills. As recent research has shown, network brokerage improves entrepreneurial orientation performance (Strengé and Rank, 2018). Accordingly, entrepreneurs who are motivated to work towards their start-up goals are more likely to act as brokers and, as a result, their business will benefit by obtaining valuable resources (e.g., financial support, information and knowledge), that will increase their performance and longevity in the business market (Weigand, 2019).

In addition, considering that relationships between start-ups and companies are actively sought, the likelihood of creating the relationship depends on the opportunity presented by the entrepreneurs (Mainela, 2011). Therefore, start-up members should not only consider IORs to be of high importance but also, to provide good opportunities to the stakeholders (non-investors and investors).

4.2 Limitations and future research

Although the models yield interesting results for a sizable sample of start-up staff members (number = 469), these models did not allow us to analyse the dynamic nature of individual and organisational variables (Li and Zhang, 2007). Further research is needed to examine the causal relationship between these variables in a longitudinal study. In addition, self-reported data were used to measure the variables in order to gain insights into entrepreneurs' perceptions. However, several actions were taken to deal with possible issues, following the example of previous psychometric studies. This included using Harman's single factor test (Podsakoff et al., 2003), which confirmed that common method variance is not a problem in the present study. We also complemented the research with a qualitative approach to make the results more robust.

Finally, our results may be affected by the sample's composition of German and Portuguese start-ups, especially given that Portugal has experienced economic turbulence in recent times. This may have influenced this study's findings (e.g., the importance given to investor stakeholders), so they should be interpreted with caution.

Future studies should not use the network concept arbitrarily (O'Donnell et al., 2001) but instead clearly distinguish between specific types of IORs (e.g., investor vs. non-investor stakeholders). In addition, further research could benefit from including a qualitative approach similar to ours to detect the underlying processes involved in developing different types of IORs. In studies of social networks, researchers may also want to include variables regarding intrinsic motivation and consider samples that integrate CEOs and employees because evidence has already been found that they are both equally important in interorganisational networks (e.g., Braun et al., 2018).

Moreover, since people currently are constantly connecting to each other online (Wok and Hashim, 2014), researchers must analyse the role of social network sites

(e.g., Facebook, LinkedIn, and Skype) in interpersonal and interorganisational networks' growth. Other studies could be conducted to understand how personal levels of achievement-related affect at work influence the link between interpersonal network building and employees' success in terms of their professional networks' size – including different types of IORs – and their position within companies.

4.2.1 Conclusion

Our results reinforce the evidence for the multidimensionality of networking concepts reported in a recent longitudinal study by Volmer et al. (2017). In addition, the present research found that devotion to different networking dimensions (i.e., building vs. maintaining contacts) has distinct results regarding the importance given to different IORs (i.e., non-investor vs. investor stakeholders). Finally, the current study is also one of the first studies to examine the role of achievement-related affect in the relationship between interpersonal and interorganisational networking.

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Note

¹PROCESS macro version 2.03 was written by Hayes (2013).