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Building the First Business Relationships: Incubatees in University Business Incubators (UBIs)

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Abstract: University Business Incubators (UBIs) are ideal spaces for supporting and developing novice entrepreneurs and their businesses. In the current study, we explore whether such incubators can also be considered an ideal space for building dyadic relationships between incubatees based on trust and knowledge exchange, and whether this can encourage commitment in the relationship. To this end, we propose that the perception of shared values from the academic world may foster such trust. Furthermore, perceiving there may be supplementary and complementary resources encourages the exchange of knowledge, the specific resource on which UBI businesses are based. At the same time, empathy between academic incubatees leads to relational commitment being reinforced.

Keywords: business-to-business relationships, incubators, exchange of knowledge, trust, commitment

1 Introduction

Business incubators are areas created to support firms that are taking their first steps, and are designed to promote entrepreneurial initiatives. This business support initiative is present in the world of university through University Business Incubators (UBIs), since they encourage transfer of technology and scientific knowledge, foster entrepreneurship, and the marketing of cutting edge research (Lockett and Wright 2005).

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University spin-offs involve entrepreneurs from academia and are based on knowledge. Yet the knowledge they possess is not always enough to make a business viable and successful. An entrepreneur's individual knowledge may prove insufficient unless it is coupled with that of other companies or entrepreneurs. In fact, exchanging knowledge and resources is needed to create a company and this requires linking up with new actors (Carter, Gartner, and Reynold 1996). Relationships can strengthen the sustainability of a business, added to which its access to the market accelerates. This is the context in which UBIs become an enabling environment for entrepreneurs to engage in relationships with other incubatees in an effort to exchange knowledge. In contrast to the market, incubators act as protected environments, particularly for entrepreneurs from the academic or scientific world who may lack business experience. Therein, individuals share spaces, activities, and this can encourage contact between them. In short, incubators constitute a privileged environment for starting up relationships among new entrepreneurs, where many transaction costs that would otherwise be incurred in the market (through searching for information and evaluating other entrepreneurs or agents) are eliminated.

Despite these supposed advantages, mere proximity and contact may not necessarily lead to relationships between entrepreneurs. Entrepreneurs located in UBIs (incubatees) come from the world of academia and their businesses are based on knowledge. Incubatees may be reluctant to exchange knowledge for fear of opportunistic behaviour or plagiarism of innovative ideas. In addition, they are likely to have acquired comparable experience and knowledge given their similar academic background. On the other hand, they have very few signals with which to evaluate other incubatees. While in the market, firms can be evaluated by results, reputation or previous exchanges, novel entrepreneurs can only be assessed in terms of objectives, values, or knowledge. This may lead to rejecting or not being interested in engaging in relationships with other academic incubatees.

Research into incubators has focused mainly on exploring their success factors (Rubens, Jackson, and Andrews 2011), their development (Bruneel et al. 2012; McAdam and McAdam 2008; Schwartz 2012), and different kinds of incubator (Cooper 1985; Schwartz and Hornych 2010). However, few studies have concerned themselves with describing or exploring the relationships established between entrepreneurs working in such incubators (Ahmad and Ingle 2011; McAdam and Marlow 2008; Redondo-Carretero and Camarero-Izquierdo 2017; Redondo and Camarero 2019), despite the enormous interest in relationships among entrepreneurs expressed in relationship marketing literature and in network marketing

literature, and the particular features that govern relationships in business incubators.

In particular, the support services that incubators provide to their incubatees include those which connect entrepreneurs to their peers, and with other stakeholders (Bergek and Norrman 2008; Bruneel et al. 2012; Eveleens et al. 2017; Redondo and Camarero 2017, 2019; Spigel 2017). The role of incubators as intermediaries in creating network relationships and solving weak network problems has also been studied (van Rijnsoever 2020; van Weele et al. 2018a). Yet the mechanisms concerning how incubators drive networking remain underdeveloped (Eveleens, van Rijnsoever, and Niesten 2017; Theodorakopoulos, Kakabadse, and McGowan 2014).

The literature has considered the role that networks play for individual nascent companies (Ter Wal et al. 2016; Witt 2004), yet it has failed to come up with a comprehensive network approach on issues such as why certain incubators, as part of entrepreneurial ecosystems, can make valuable connections and relationships, while others are unable to do so (Alvedalen and Boschma 2017).

Empirically, there are no studies focussing on dyadic relationships between incubators. Moreover, even the mechanism known as peer coupling, which refers to activities that increase opportunities for contact between entrepreneurs, has scarcely been explored (van Rijnsoever 2020). These activities include coaching, workshops and other actions that help incubatees to acquire capacities and resources to manage relationships (Niesten and Jolink 2015; Schilke and Goerzen 2010). However, relationships are stronger between entrepreneurs when they are small and are located in homogeneous working communities such as incubators (van Weele, Steinz, and van Rijnsoever 2018b).

In this context, we attempt to address the following research questions: Are UBIs propitious spaces for building dyadic relationships between entrepreneurs? What factors can build relationships based on trust, exchange of knowledge and commitment?

After conducting the current study, as a summary, results indicate that; (1) the values shared between incubatees influence the development of trust; (2) complementary and, particularly, supplementary resources facilitate the exchange of knowledge; and (3) empathy between entrepreneurs, and a relationship based on trust and exchange of knowledge, can generate relational commitment.

The present research makes a twofold contribution to the relationship marketing and resources approaches. First, it finds empirical evidence of the antecedents and development of dyadic relationships between entrepreneurs in a specific context: UBIs. Incubators offer a protected environment, thus facilitating contacts between companies, but where the previous business experience of novice entrepreneurs is scarce or non-existent and where the usual signals (the other party's reputation, previous exchanges, etc.) for establishing a relationship based on trust with others

entrepreneurs are absent. Second, supplementary (common to both parties) and complementary resources take the relationships that are forged beyond the incubation period. The case of supplementary resources is especially noteworthy. Incubation is an environment in which the types of resources that entrepreneurs possess are similar in the sense that they usually have the specific knowledge but lack market experience. While this seems to limit the advantages of interaction and collaboration, both supplementarity and complementarity of this specific knowledge may prove valid for building relationships in nascent businesses.

2 Theoretical Framework and Hypotheses Development

Relationship marketing has been considered in numerous industries and in emerging contexts (Khojastehpour and Johns 2014). However, there are still other application scenarios, including relationships in the field of incubators. In the present section, and for the analysis of the dyadic relationships established between incubatees, we ask the following questions: Which relational variables define and characterize the relationship between incubatees? What are the bases of trust and commitment in the case of incubatees who lack any previous business relationships?

2.1 Commitment-trust Binomial Between Incubatees

According to the commitment-trust theory (Morgan and Hunt 1994), trust and commitment are the most prominent elements in a relationship. Trust is the belief or conviction about the intentions of the other party within a relationship. In a business-to-business context, trust has been defined as the belief that another company will engage in actions which will result in positive results for the former, and that said company will not undertake unexpected actions which might prove negative (Anderson and Narus 1990). This refers to the other company not showing opportunistic behaviour and to it fulfilling its obligations (Dyer and Chu 2003; Leonidou, Palihawadana, and Theodosiou 2006). Commitment is also a widely studied variable in marketing (Jap and Ganesan 2000; Morgan and Hunt 1994; Siguaw, Simpson, and Baker 1998), and is a central axis in the discipline. Relationship commitment in business relationships was defined by Morgan and Hunt (1994, p. 23) as “an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it”. In order to strengthen a relationship, pledges must be made and agreements reached, but

sacrifices and perseverance are also necessary to make such relationships effective (Murphy, Laczniak, and Wood 2007). Fulfilling promises is important in the relationships between companies and in the relations with the various agents with whom they interact, as a means to achieve other objectives (Grönroos 1994). After reviewing the literature on the relational field in incubators, we have detected that although trust in another incubatee, or between the members of the network in which the incubator is involved, has indeed been studied, commitment is a variable that has not specifically been addressed in the context of relations between incubatees. Therefore, in the context of incubators, we define incubatees' relationship commitment as their intention to invest in the relationship with other incubatees and the willingness to maintain it in the long-term.

According to the trust-commitment theory, trust plays a critical role in building and developing long-term relationships (Morgan and Hunt 1994). Trust also generates competitive advantages, since it improves information sharing routines (Robson, Katsikeas, and Bello 2008; Zaheer, McEvily, and Perrone 1998), facilitates agreements and the creation of positive expectations concerning future contributions to the relationship (Tomkins 2001), thus reinforcing the relationship between firms (Johanson and Mattsson 1987).

Although there is agreement with regard to trust being a basic ingredient for building relationships, in the literature on relationship marketing as well as strategic alliances (e. g., Krishnan, Geyskens, and Steenkamp 2016; Nielsen 2011; Puranam and Vanneste 2009), one gap we have found in business relationship research is that the commitment-trust binomial has not been explored in the context of incubatees. In fact, the relationship between trust and commitment is already an axiom of relationship marketing. Thus, it does not require a hypothetical approach. We propose that the trust-commitment path is also essential when describing the relationships between academic entrepreneurs in incubators. In the field of incubation, trust is a determinant variable in relationship building (McAdam and Marlow 2008), and is more effective than formal mechanisms such as contracts (Bøllingtoft and Ulhøi 2005; Vedel and Gabarret 2014). Moreover, lack of trust is one obstacle as indeed is the lack of knowledge of other incubatees. Both hinder information and knowledge sharing in UBIs, since incubatees do not always feel sure that any information shared with other tenants will be treated confidentially (Cooper, Hamel, and Connaughton 2012). This leads them to fear that any exchange of information and knowledge may prove detrimental to their own interests.

2.2 Knowledge Exchange in UBIs: A Mediator Between Trust and Commitment

The link between UBIs and knowledge is clear, and what universities are aiming to achieve by creating them is to spread scientific and technological knowledge (Jones-Evans and Klofsten 1998; Radosevich 1995). In order to accomplish this, incubators encourage the creation of new knowledge-based companies (Grimaldi and Grandi 2001; Heydebreck, Klofsten, and Maier 2000). One key feature of the knowledge used by university spin-offs is that, in most cases, it is at the embryonic phase of the development of a technology, i.e., proof of concept or initial prototype (Clarysse, Wright, and Van de Velde 2011). Moreover, a key reason for creating companies in academia is to incubate the technology for further development and commercialization (Feldman et al. 2002; Jensen and Thursby 2001; Katila and Shane 2005; Lowe and Ziedonis 2006).

Knowledge exchange is the process whereby the knowledge possessed by an individual can be understood, absorbed and used by other individuals (Ipe 2003). It is a key factor in the different phases of the entrepreneurial process, but especially during the actual creation of a business itself (Gartner 1988), and in its first years of life (Reuber and Fischer 1999). Knowledge exchange as a result of inter-firm relationships can be a source of competitive advantage (Powell, Koput, and Smith-Doerr 1996) and unique business opportunities (Uzzi 1997). Competitive advantages derive from company-level resources as well as capabilities that are difficult to replicate, and which are specific to dyadic and network relationships (Dyer and Singh 1998; Lane and Lubatkin 1998). By building the specific assets of the relationship, sharing knowledge routines and effective mechanisms for it, knowledge can not only be acquired, but also exploited (Yli-Renko, Autio, and Sapienza 2001).

Hence, dyadic relationships between incubatees in UBIs provide an opportunity to exchange knowledge (sharing know-how, experience, or technical knowledge) and to develop competitive advantages in the early stages of a business. This exchange of knowledge between incubatees can be evaluated in terms of magnitude, or total amount of knowledge exchange, and asymmetry, or unbalanced knowledge exchange. The distinction between magnitude and asymmetry was proposed by Gundlach and Cadotte (1994) as the two properties of the interdependency between partners. While magnitude or total interdependence refers to the sum of each firm's dependence on its partner, asymmetry refers to the difference between the firm's dependence on its partner and the partner's dependence on the firm (Geyskens et al. 1996). These two dimensions can be translated to the case of knowledge exchange between incubatees. Knowledge exchange can be

characterized by high or low levels of total knowledge transfer, that is, the *magnitude of knowledge exchange*. Knowledge exchange can also be characterized by the level of asymmetry introduced when one partner can receive more knowledge from another incubatee than the knowledge they are able to give, or vice versa. Indeed, in a situation of knowledge exchange, knowledge receivers are usually characterized by their absorptive capacity; that is, the ability to recognise the value of external information and to assimilate it (Cohen and Levinthal 1990). Thus, we refer to *absorptive asymmetry* in knowledge exchange as the situation in which an incubatee receives more knowledge from another incubatee than the knowledge they themselves transfer.

In the context of incubator relationships, we propose that the magnitude and the asymmetry of knowledge exchange mediates the relationship between trust and commitment.

First, trust encourages the parties to be more willing to give and to receive useful knowledge, thereby reducing the costs of knowledge exchange (Levin and Cross 2004). In the context of inter-organizational relationships, existing literature reveals that trust renders knowledge transfer less costly, such that knowledge-seeking organizations in a trusting relationship are more willing to absorb partners' knowledge (Kim et al. 2012). Literature on personal relationships has also emphasized that mutual help among peers emerges when the interaction between individuals is high and the links between them become more intense: interpersonal trust among team members increases the motivation to work together as well as the levels of helping behaviour (De Jong, Van der Vegt, and Molleman 2007). Analysis of the joint action of knowledge and relationships has shown that when exchanging difficult knowledge (involving complex and scientific knowledge, as in our case study), a strong trust-based relationship is needed for successful transfer (Levin and Cross 2004). In order to transfer know-how and other specific knowledge, incubatees need to have confidence in their partner, that is, to believe that they will not engage in opportunistic behaviours. Therefore, we can contend that trust between incubatees will increase the magnitude of knowledge exchange.

Moreover, incubatees who trust their partner will be ready to give more than they receive since they will not feel vulnerable to opportunism and because they can see it as a way to invest in a potential long-term relationship. Partners in a high-trust relationship are more benevolent and more open to value creation through the exchange of knowledge (Kim et al. 2012). In this sense, Whitehead et al. 2016 maintain that the knowledge source may be characterized by its distributive capability, i.e., the ability to transfer relevant knowledge to a known recipient in order to trigger positive performance. They find that the more distributive capability a partner has, the more likely they are to engage in collaborative activities. Following this reasoning, in the relationships between

incubatees, those who are trusting incubatees will agree to transfer as much knowledge as they receive, and indeed even more than they receive. Since trusting incubatees are less afraid of opportunism, they will agree to distribute their knowledge, thereby reducing the potential for absorptive asymmetry. We thus posit that trust in the partner has a negative effect on absorptive asymmetry. Hence,

H1. *Trust in the partner has a positive influence on the magnitude of knowledge exchange (H1a) and a negative influence on absorptive asymmetry (H1b).*

Second, the exchange of knowledge between incubatees will influence the commitment acquired, since knowledge exchange is an indicator of the parties' goodwill and capabilities, as well as a way of signalling that the relationship can lead to a consolidation of the businesses. When the process of knowledge exchange begins, there is an investment in building a relationship, since the entrepreneurs "open the doors" of their knowledge to other entrepreneurs. In that moment, they place their knowledge in a situation of vulnerability that only makes sense under the expectation of a stable long-term relationship.

Business-to-business literature has demonstrated that when total interdependence between partners in a relationship increases, the efforts to avoid conflicts and maintain (or strengthen) the relationship are greater since they have mutual interests and have more to lose if the partnership ends (Geyskens et al. 1996; Kumar et al. 1995). Similarly, the greater the amount of knowledge exchanged, the lower the intention to end the relationship that has started in the incubator since it may be a win-win opportunity (Kumar et al. 1995). Indeed, one primary motivation for developing B2B relationships is having access to the partner's valuable resources.

In contrast, asymmetric interdependence is seen as a dysfunctional trait of the relationship because of the exploitation opportunities that can result from the imbalance (Geyskens et al. 1996; Kumar et al. 1995). Less dependent partners have relative power (and, therefore, the ability to achieve their goals through their dominance over the other partner), yet they have little motivation to become attached to the other partner. The less dependent partner may choose to withhold support and may also exit the relationship more easily and at a lower cost than the more dependent partner (De Jong et al. 2007). The more dependent partner, however, has more motivation to continue, but in a vulnerable position. Nyaga et al. (2013) note that power asymmetry increases risks and challenges for the weaker party when it lacks any effective mechanisms to monitor the stronger partner's performance.

In the context of knowledge exchange between incubatees, the amount of knowledge exchanged may be asymmetrical. When incubatees receive more knowledge than they transfer – absorptive asymmetry – they will be in a profitable (but dependent) position and will display a greater willingness to commit to the relationship. When a partner is in a weaker position in the relationship because

they are dependent upon the other partner's knowledge, they will comply with the stronger partner's requests for fear of losing business (Nyaga et al. 2013). However, when they give more knowledge than they receive, they will be less dependent on the partner's knowledge and will be more willing to abandon the relationship if this scenario is unlikely to change or if they are afraid of opportunistic behaviour.

As a result, they will be less likely to commit to a long-term relationship. Therefore,

H2. *The magnitude of knowledge exchange (H2a) and absorptive asymmetry (H2b) have a positive influence on the relational commitment.*

To sum up, hypotheses H1 and H2 establish a mediating effect of exchange of knowledge (partial mediation) on the trust-commitment relationship. Trust in other incubatees is a prerequisite for incubatees to become involved in exchanges of knowledge. When these exchanges succeed, there is an express desire to continue and to invest in maintaining the relationship long term.

2.3 Incubatees' Affinity: Shared Values and Empathy

Entrepreneurs who are in UBIs come from the academic world, and are in the same incipient moment at the professional level: starting to build a business based on knowledge. As explained above, incubatees may be interested in establishing contacts and relationships with one another, and in sharing common experiences and concerns. However, problems may arise when deciding who to trust and to what extent (Krishna 2000), especially when incubatees lack external signals, such as a company's reputation in the market. Said fear can decrease among incubatees thanks to certain common aspects, as well as the frequency of the contacts, coupled with the fact that they know who is behind each business and where to find them. According to Stiglitz (2000), trust can be acquired through frequent interactions over a period of time via human actions. In short, the relationship between incubatees is favoured when they share or understand the situation they are experiencing and the values that govern their behaviour. This attitude is summed up in two variables: empathy and shared values.

According to the commitment-trust theory, business relationships are built, among other factors, on the *shared values* between partners (Morgan and Hunt 1994). In the field of inter-firm relationships, it has been found that firms engage in relationships when they identify with other firms with whom they are compatible (Morgan and Hunt 1999; Weitz and Jap 1995). This compatibility refers to the level of congruence of the culture and organizational capacities between companies and to the compatibility between objectives (Sarkar et al. 2001). Similarly, interaction between firms is greater when they are alike, share the same business field, markets or

have similar clients (McAdam and McAdam 2006; Schwartz and Hornych 2008). The literature on managerial psychology has also stressed the role played by common values in building trust between leaders and followers (Gillespie and Mann 2004).

In the specific context of UBIs, incubatees share values from the academic world. Such values include their working philosophy, and a desire to promote and disseminate science through mutual cooperation. These values can help to forge links of sympathy between them since they form part of a specific community. The dyadic relationships are thus based on mutual understanding because both parties are scientists and “speak the same language” and share similar objectives, problems and situations (Abduh et al. 2007; Bøllingtoft and Uhlhøi 2005). The values shared by incubatees can facilitate and promote the building of trust among them (Bøllingtoft and Uhlhøi 2005) as they prove key to restricting the fear of opportunism. For their part, incubator managers can also play a key role in conveying values, creating a good working environment (Tamásy 2002) and establishing the basis for trust-based relationships between them (Schwartz and Hornych 2010). Based on the above, we propose,

H3. *Shared values have a positive influence on trust in the partner.*

Empathy, defined as the ability to identify with the needs of others and pinpoint problematic situations (Mayer and Greenberg 1964), is another affinity factor that determines the relationship between incubatees. In the field of business relationships, empathy is the component that enables the two parties to see the situation from each other’s perspective. The greater the degree of empathy between parties, the fewer the barriers to business-to-business relationship development and consolidation (Conway and Swift 2000).

Relationship marketing literature has highlighted the relevance of empathy when seeking to achieve successful relationships (Day et al. 2013). Academic incubatees who are empathetic will be able to fully understand the situation in which the other incubatees find themselves. This is due to two causes: common origin (academic world), and the same difficulties (they are both novel entrepreneurs). Curiously, empathy may not be related to trust: understanding the other’s position does not necessarily imply they will be trusted. Nevertheless, understanding other incubatees’ difficulties may encourage an entrepreneur to help them and to promote a relationship of collaboration in the incubator. In this sense, the empathy-altruism hypothesis conjectures that when one person feels empathy towards another in need, the former is altruistically motivated to increase the latter’s welfare (Batson and Moran 1999). Batson and Moran (1999) find that empathy-induced altruism could increase cooperation in a one-trial prisoner’s dilemma and that the rate of cooperation is almost as high in a business frame as in a social frame. Thus, a willingness to help other colleagues in their business

projects can emerge that will be translated directly to the intention to commit to a relationship. These relations could extend beyond the time they are in incubation, and continue into the market. Then,

H4. *Incubatee empathy has a positive influence on relationship commitment.*

2.4 Incubatees' Resources: Complementarity and Suppleментарity

According to the resource-based view, as formulated by Barney (1991), unique, valuable, rare, inimitable and non-substitutable resources are fundamental to the development of any kind of entrepreneurial activity. The difficulties in accessing resources during the initial stages of a business are greater than at any other time, and this is when entrepreneurs spend more time engaged in this activity (Greve and Salaff 2003). Therefore, they will be willing to initiate relationships, access new resources, create or modify them (Gulati 1999). In the present research, two characteristics of resources are considered as determinant variables when commencing relations between incubatees: complementarity and suppleментарity.

Complementary resources are the different capacities, knowledge and resources that company A has and which allow the performance of company B to be complemented (Jap 1999). These resources can be of various kinds and may derive from individuals' experiences and backgrounds. Since academic entrepreneurs located in UBIs have hardly any or no previous experience and are eager to build a network of relationships, finding partners who can offer complementary resources allows them to acquire the skills and capabilities they lack and which they need to promote their business.

Marketing literature has identified complementary resources as key to initiating and consolidating relationships between companies. More specifically, and following Morgan and Hunt (1999), companies engage in relationships when they identify others they are compatible with and that have complementary resources which, combined with their own, provide competitive advantages. Sarkar et al. (2001) indicate that, by combining complementary resources and skills, firms can develop projects that could not otherwise be undertaken individually. However, it is necessary to consider that access to complementary resources through market mechanisms is not always feasible, nor is their internal development (Chung et al. 2000; Sarkar et al. 2001). Therefore, relations between companies possessing complementary resources may be the only way for them to engage in certain projects. Given all of the above, we thus propose the following hypothesis,

H5. *Incubatee perception of complementary resources has a positive influence on the magnitude of the knowledge exchanged.*

Supplementary resources. The search for resources that are not available to companies is always risky and, in turn, consumes many resources. In this regard, one significant alternative, and one from which benefits can be derived, is to collaborate with other companies that do not offer complementary, but rather supplementary resources (Ritala, Golnam, and Wegmann 2014). Supplementary resources are those which overlap and are common to both parties (Das and Teng 2000).

In the market, when two entrepreneurs perceive supplementarity (similarity) between their resources they tend to see each other as competitors. Conversely, we propose that in the specific context of academic incubators, entrepreneurs with similar resources are not perceived as rivals. Certainly, a priori, when an incubatee perceives that another has similar resources to their own, they will think that the other incubatee can satisfy both current and potential customer needs much the same as they can. However, when two academic incubatees have similar or related knowledge, they speak the same language. The communication between them will be fluid, and reaching an optimal understanding will require less effort than if they are working in different disciplines. Moreover, generating and exploiting new knowledge through collaboration will be easier, and will increase the scope of an incipient business. In addition, the existence of similar knowledge reduces the costs associated with the knowledge transfer process (Reagans and McEvily 2003). Hence, in the specific context of UBIs, the perception of supplementary resources between clients can lead to a greater exchange of knowledge.

Therefore,

H6. *Incubatee perception of supplementary resources has a positive influence on the magnitude of the knowledge exchanged.*

Figure 1 summarizes the proposed hypotheses.

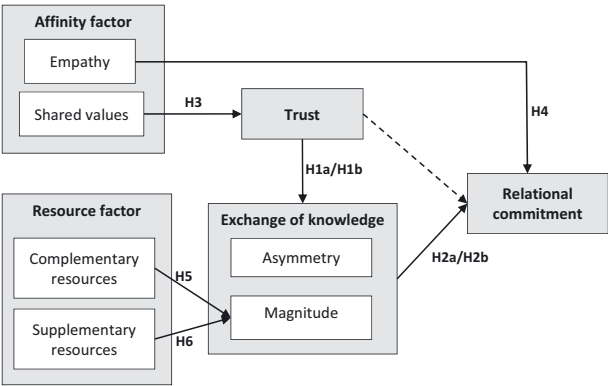


Figure 1: Proposed hypotheses.

2.5 The European Context of Incubation. The Cases of the Netherlands and Spain

The report entitled “The accelerator and incubator ecosystem in Europe” (Salido, Sabás, and Freixas 2013) shows the scope of European incubators, and highlights that Europe has a healthy and prosperous start-up creation system. The number of European incubators has increased substantially because of the crisis, while there are different models based on different premises and conditions for admitting companies as well as different returns demanded. Finally, implementing strong policies and initiatives at a European level could greatly increase the potential of entrepreneurs in the region.

Given the ever-increasing attention being directed towards incubation, in the current study, we focus on two European countries: the Netherlands and Spain. The decision to opt for these two countries was based on the interest they have aroused, with the Netherlands having a longer and more innovative tradition of incubators and entrepreneurship compared to Spain. According to the results of the Global Entrepreneurship Monitor (GEM) 2018/2019 Global Report, in relation to the National Entrepreneurship Context Index (NECI), Spain ranks 16th and the Netherlands 3rd in the ranking of 49 countries (Global Entrepreneurship Research Association 2019).

The literature on incubation has focused on the Dutch context on numerous occasions (e. g., Ebbers 2014; Meyer, Meyer, and Kot 2016; Polzin, Sanders, and Stavlöt 2018; Weijs-Perrée et al. 2016; Witte et al. 2018), as well as on the Spanish context (e. g., Albort-Morant and Oghazi 2016; Bennett, Yábar, and Saura 2017; Ogutu and Kihonge 2016; Redondo-Carretero and Camarero-Izquierdo 2017). Following Albort-Morant and Ribeiro-Soriano (2016), in their bibliometric analysis of international impact of business incubators, the Netherlands and Spain figure amongst the countries where authors produce the most research on incubation. More specifically, the Netherlands has been ranked fourth and Spain eighth in the ranking of the highest productivity rates.

3 Methodology and Data Collection

3.1 Method and Sample Selection

Data were collected through an online questionnaire. When drawing up the questionnaire, we reviewed the academic literature on incubators and entrepreneurship and took into account UBI information by reviewing documents and communication with managers and incubatees located in Spain and the

Netherlands. These steps allowed us to adapt the items to the specific research domain and to propose some *ad hoc* items.

Once the initial version of the questionnaire had been drawn up, we performed a pre-test to ensure content validity. The pre-test was personal and in situ with six incubatees of the Amsterdam Centre for Entrepreneurship (ACE) Venture Lab, set up by the University of Amsterdam, VU University Amsterdam, and the Amsterdam University of Applied Sciences, in November 2013. As a result, we modified certain items so as to draft them in a clearer and more accurate manner and to avoid possible misinterpretation.

The questionnaire was sent to incubatees in UBIs located in Spain and the Netherlands. Since there are no databases of the number of UBIs in Spain and the Netherlands, we consulted each university webpage or phoned to find out the number of incubators. The global population of university incubators in Spain is 53 and 16 in the Netherlands. In order to deliver the questionnaire to incubatees, we contacted all the managers, explained the objectives of the study to them, and requested their collaboration to deliver the online questionnaire to incubatees. After two months and a second reminder to the managers, we received 101 questionnaires; 66 from Spanish incubatees and 35 from Dutch incubatees. By gender, the sample of incubates includes 72 males and 29 females, and by age, 15 were under 25 years old, 58 between 25 and 35 years old, and 28 over 35 years old.

Since we cannot know the exact number of tenants in the incubators (there are no databases of the number of UBIs and incubatees), we calculated an approximate sampling error. First, we calculated the approximate mean number of tenants in the UBIs in each country (from data provided by the managers), and then multiplied this figure by the number of UBIs in Spain, 53, and in the Netherlands, 16. Population size, sample size, and sampling errors, for a confidence level of 95%, are shown in Table 1.

3.2 Measurement Variables

To measure the variables in the model, we used existing measures when possible, but adapted to the incubation context. Five-point Likert scales used and variables

Table 1: Population, sample sizes, and sampling errors.

| Location of incubator | Estimated population | Sample | Sampling error |
|-----------------------|----------------------|--------|----------------|
| Spain | 1.855 ^a | 66 | 11.85 % |
| The Netherlands | 544 ^b | 35 | 16.04% |
| Total | 2.399 | 101 | 9.55% |

^aPopulation of incubators in Spain (53) × Average number of incubatees in Spain (35).

^bPopulation of incubators in the Netherlands (16) × Average number of incubatees in the Netherlands (34).

were measured from the viewpoint of the respondent with regard to a specific incubatee they had been involved with.

One incubatee's *empathy* towards another was measured through a single item, the one displaying the greatest content validity and consistency in the present study, taken from Hogan (1969). In order to identify a scale for measuring the *shared values* with the other party involved in the dyad, a number of works were reviewed. It was decided to use a three-item reflective scale based on Sarkar et al. (2001) given its concurrence with the current research goals. The *supplementarity* and *complementarity* of incubatees' resources was measured using the scales proposed by Lambe et al. (2002); Sarkar et al. (2001). In both cases, and as emerged from the first pre-test, it was necessary to modify the wording of the items in order to improve the understanding thereof and so as to ensure they would not be misinterpreted. The greatest changes were made to *supplementarity of resources*. Given the absence of a reliable and valid scale that could be used, a scale similar to the one employed for the *complementarity of resources* was drawn up. Four reflective indicators for complementarity and three for supplementarity were used. As regards *trust*, and in an effort to ensure that measurement was comprehensive and covered the dimensions of credibility and benevolence, scales taken from the empirical works of Ganesan (1994); McKnight et al. (2002); Sarkar et al. (2001) were used. Specifically, a seven-item reflective scale was devised to measure incubatee *trust* towards those with whom they were cooperating. Mutual *commitment* in the relationship was measured through a reflective scale comprising six indicators, adapted from the scale proposed by Wilson and Vlosky (1997) and also used by Moberg and Speh (2003). *Knowledge exchange* was built based on the items proposed by Yli-Renko et al. (2001) and by Simonin (1999). Four items refer to the knowledge acquired by the respondent incubatee, and four items refer to the knowledge transferred by the respondent incubatee to his/her partner. The eight items were considered as reflective indicators of the dimension *magnitude of knowledge exchange*. To measure asymmetry in knowledge exchange, we calculated the mean of the four items measuring knowledge acquired as well as the mean of the four items measuring knowledge transferred, and obtained an indicator of *absorptive asymmetry* as the ratio between knowledge acquired and knowledge transferred. Finally, we included three control variables: the *country* (0 = Spain; 1 = The Netherlands); the existence of a *time limit* in the incubator (0 = No; 1 = Yes); and the *time in incubation*, as the ratio between the number of months spent in the incubator and the maximum number of months allowed (with 120 being the maximum when there is no limit established).

Table 2 shows the descriptive statistics corresponding to the variables and measures used.

Table 2: Measurement of variables and descriptive statistics.

| | Mean | S.D. | Loadings |
|---|------|-------|----------|
| Empathy | | | |
| I have little difficulty in “putting myself into other people’s shoes” | 3.23 | 1.256 | |
| Shared values ($\alpha = 0.773$; $CR = 0.871$; $AVE = 0.693$) | | | |
| <i>This entrepreneur:</i> | | | |
| His/her values and behavioural norms are congruent with mine | 3.76 | 0.802 | 0.828*** |
| His/her philosophy/approach to business is compatible with mine | 3.59 | 0.866 | 0.785*** |
| His/her goals and objectives are compatible with mine | 3.72 | 0.862 | 0.847*** |
| Complementary resources ($\alpha = 0.866$; $CR = 0.904$; $AVE = 0.703$) | | | |
| <i>This entrepreneur:</i> | | | |
| Has different resources to mine that are very precious to me | 3.50 | 1.119 | 0.821*** |
| His/her resources are necessary to achieve my goals | 3.11 | 1.240 | 0.817*** |
| Has different and complementary resources to mine | 3.66 | 1.023 | 0.854*** |
| His/her resources, combined with mine, enable me to achieve more satisfactory results | 3.89 | 1.048 | 0.856*** |
| Supplementary resources ($\alpha = 0.887$; $CR = 0.929$; $AVE = 0.814$) | | | |
| <i>This entrepreneur:</i> | | | |
| Has similar resources to mine, but nevertheless they are very precious to me | 2.68 | 1.166 | 0.926*** |
| Has similar resources to mine, but supplementary to mine | 2.92 | 1.181 | 0.871*** |
| His/her resources are similar to mine, but when combined, allow me to achieve more satisfactory results | 2.98 | 1.304 | 0.908*** |
| Trust in the incubatee ($\alpha = 0.914$; $CR = 0.931$; $AVE = 0.660$) | | | |
| <i>This entrepreneur:</i> | | | |
| He/she is honest and truthful | 4.30 | 0.701 | 0.834*** |
| The information he/she exchanges with me is reliable | 4.27 | 0.720 | 0.843*** |
| He/she honestly communicates any problem that may affect me | 4.06 | 0.746 | 0.823*** |
| He/she is willing to provide assistance and support when circumstances so require | 4.07 | 0.778 | 0.796*** |
| I believe that he/she acts in my best interest | 3.90 | 0.922 | 0.777*** |
| In general, he/she is a person who honours his/her commitments | 4.11 | 0.799 | 0.836*** |
| He/she is competent and effective | 4.13 | 0.730 | 0.777*** |
| Knowledge exchange – Magnitude ($\alpha = 0.928$; $CR = 0.944$; $AVE = 0.736$) | | | |
| <i>Knowledge transferred</i> | | | |
| I acquire technical knowledge and a tremendous amount of know-how | 3.39 | 1.104 | 0.871*** |
| I learn from his/her knowledge | 3.61 | 0.959 | 0.902*** |
| I assimilate the knowledge that he/she gives me and it contributes to the development of my start-up | 3.57 | 0.973 | 0.855*** |
| <i>Through me, the other entrepreneur:</i> | | | |
| Acquires technical knowledge and a tremendous amount of know-how | 3.62 | 1.028 | 0.781*** |
| Learns from my knowledge | 3.67 | 0.850 | 0.866*** |

Table 2: (continued)

| | Mean | S.D. | Loadings |
|--|------|-------|----------|
| Assimilates the knowledge that I give him/her and contributes to the development of his/her start-up | 3.51 | 1.006 | 0.868*** |
| Knowledge exchange – (absorptive) Asymmetry | | | |
| Ratio knowledge received /knowledge transferred | 0.98 | 0.160 | – |
| Relational commitment ($\alpha = .888$; $CR = .931$; $AVE = .817$) | | | |
| I intend to strengthen our relationship over time | 4.09 | 0.907 | 0.859*** |
| I intend to continue our relationship for a long time | 4.08 | 0.913 | 0.926*** |
| I am committed to sharing ideas and knowledge with him/her | 4.00 | 0.872 | 0.925*** |
| Time limit^a (0 = No; 1 = Yes) | 0.85 | 0.356 | – |
| Time in incubation^a | | | |
| Ratio between months in the incubator/maximum no. of months allowed | 0.57 | 0.505 | – |

(***) $p < 0.001$.

^aWe obtained this information from 80 incubators.

To evidence the homogeneity between Spanish and Dutch incubatees, we performed a test of means for each item (*t*-test of means for independent samples). Specifically, Spanish incubatees gave higher scores to indicators measuring *empathy*. For their part, the Dutch awarded higher scores to *complementarity* and *supplementarity of resources*, *trust* and *exchange of knowledge*. In the light of these results, it can be affirmed that the two samples display a high degree of homogeneity. In order to examine whether common method variance (CMV) is a problem, we performed Harman's one-factor test (Podsakoff et al. 2003). Since there was no single factor accounting for the majority of the covariance among the measures, we concluded that the possible impact of common method bias is not significant in this research.

4 Analysis and Results

Partial least squares (PLS) was used to perform the joint estimation of the measuring model and the structural model. Specifically, we used SmartPLS v3.2 (Ringle, Wende and Becker 2015). To calculate the significance of the factor loadings and the estimated coefficients, bootstrapping was applied to 1,000 subsamples. This analytical technique allows for estimations with a modest sample size and complex structural equation models (i.e., with multiple dependent and independent variables measured with several indicators). Table 2 provides information concerning the outcomes of the reliability and validity analysis of the

measurement scales used. Cronbach's alpha (α), composite reliability (CR), and average variance extracted (AVE) values are given (all well above the recommended thresholds: $\alpha > 0.7$; $CR > 0.7$ and $AVE > 0.6$). Consequently, the reliability of the measurement scales is confirmed. The factor loadings are above 0.7 for all items, thus confirming the convergent validity of the measurement scales.

In order to evaluate discriminant validity, we first followed the criterion of Fornell and Larcker (1981). Table 3 shows the correlation matrix between latent constructs. The main diagonal includes the square root values of the AVE for each construct. Comparing each square root with the correlations in the corresponding row and column will indicate whether there is discriminant validity amongst the latent variables. This condition is met in all cases. A further indicator of discriminant validity is the heterotrait-monotrait (HTMT) ratio of correlations, proposed by Henseler, Ringle, and Sarstedt (2015). This ratio reflects the average of the correlations of indicators in constructs which measure different phenomena, compared to the average of the correlations of indicators within the same construct (Henseler et al. 2015). In order to evaluate discriminant validity through HTMT, correlations should not exceed 0.85 (Clark and Watson 1995; Kline 2011). The values corresponding to the ratio of HTMT correlations for each pair of constructs are included above the principal diagonal of the correlation matrix. As can be seen, only the ratio between trust and relational commitment is at the critical limit, with a value of 0.819, while virtually all the remaining values are well below said limit. Taking all of this into account, discriminant validity amongst all the various latent constructs considered in the research is shown to exist.

Table 4 sums up the model estimation. Findings support the trust-commitment theory. Results show that trust in the other incubatee has a positive impact on commitment to a long-term relationship. The link between trust and commitment is once again borne out. However, the effect of trust on exchange of knowledge is not global. The magnitude of the knowledge exchanged does not increase when one partner trusts the other (H1a is rejected). Moreover, trust in the other partner creates asymmetry in the way knowledge is exchanged. The greater the trust in the other partner, the greater the absorptive asymmetry, i.e., the greater the knowledge received in relation to the knowledge acquired. Thus, hypothesis H1b is rejected. Contrary to our proposal, trust in the partner increases the knowledge absorbed to the detriment of the knowledge transferred. Hypotheses H2a and H2b conjectured a direct and positive relationship between knowledge exchange (magnitude and asymmetry, respectively) and commitment in the relationship with other incubatees, and the results to emerge would appear to provide empirical support for this belief. Both the amount of knowledge exchanged and the absorptive asymmetry; that is, receiving more knowledge in the relationship than the knowledge

Table 3: Correlation matrix and discriminant validity.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
|-----------------------------|--------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|-------------|-------------|-------------|
| (1) Empathy | n.a. | 0.139 | 0.066 | 0.038 | 0.187 | 0.068 | 0.143 | 0.080 | 0.183 | 0.160 | 0.136 |
| (2) Shared values | -0.110 | 0.832 | 0.600 | 0.289 | 0.715 | 0.436 | 0.340 | 0.606 | 0.099 | 0.183 | 0.123 |
| (3) Complementary resources | -0.001 | 0.525 | 0.838 | 0.389 | 0.628 | 0.619 | 0.178 | 0.657 | 0.149 | 0.056 | 0.107 |
| (4) Supplementary resources | -0.035 | 0.251 | 0.389 | 0.902 | 0.496 | 0.591 | 0.085 | 0.430 | 0.300 | 0.073 | 0.178 |
| (5) Trust in the incubatee | -0.180 | 0.618 | 0.582 | 0.457 | 0.813 | 0.524 | 0.195 | 0.819 | 0.122 | 0.069 | 0.208 |
| (6) Knowledge-Magnitude | -0.005 | 0.386 | 0.593 | 0.548 | 0.490 | 0.858 | 0.307 | 0.615 | 0.156 | 0.068 | 0.166 |
| (7) Knowledge-Asymmetry | -0.143 | 0.298 | 0.167 | 0.029 | 0.185 | 0.170 | n.a. | 0.326 | 0.103 | 0.116 | 0.040 |
| (8) Relational commitment | 0.007 | 0.506 | 0.606 | 0.393 | 0.747 | 0.572 | 0.309 | 0.904 | 0.167 | 0.159 | 0.039 |
| (9) Country | -0.183 | -0.025 | 0.089 | 0.285 | 0.109 | 0.145 | -0.103 | 0.158 | n.a. | 0.260 | 0.386 |
| (10) Time in incubation | 0.142 | -0.025 | 0.038 | -0.065 | -0.057 | 0.014 | -0.103 | 0.133 | -0.230 | n.a. | 0.426 |
| (11) Limit of time | -0.121 | -0.005 | 0.014 | -0.156 | -0.175 | -0.141 | 0.036 | -0.030 | -0.344 | 0.423 | n.a. |

Diagonal values indicate the square root of the AVE. Under the main diagonal are the Pearson correlations and above the main diagonal the HTMT ratio of correlations. n.a. Not applicable.

Table 4: Model estimation.

| Proposed hypotheses | | PLS estimate | P values |
|------------------------|---|--------------|----------|
| H1a | Trust → Knowledge exchange (magnitude) | 0.099 | 0.439 |
| H1b | Trust → Knowledge exchange (absorptive asymmetry) | 0.198* | 0.018 |
| | Trust → Relational commitment | 0.650*** | 0.000 |
| H2a | Knowledge exchange (magnitude) → Relational commitment | 0.203** | 0.010 |
| H2b | Knowledge exchange (absorptive asymmetry) → Relational commitment | 0.210*** | 0.000 |
| H3 | Shared values → Trust | 0.633*** | 0.000 |
| H4 | Empathy → Relational commitment | 0.188** | 0.002 |
| H5 | Complementary resources → Knowledge exchange (magnitude) | 0.401*** | 0.000 |
| H6 | Supplementary resources → Knowledge exchange (magnitude) | 0.346*** | 0.000 |
| <i>Control effects</i> | | | |
| | Country ^a → Empathy | -0.183* | 0.052 |
| | Country → Shared values | -0.025 | 0.795 |
| | Country → Complementary resources | 0.089 | 0.368 |
| | Country → Supplementary resources | 0.285** | 0.002 |
| | Country → Trust | 0.124 | 0.103 |
| | Country → Relational commitment | 0.193** | 0.001 |
| | Country → Knowledge exchange (magnitude) | -0.001 | 0.986 |
| | Country → Knowledge exchange (absorptive asymmetry) | -0.125 | 0.151 |
| | Time in incubation (%) → Relational commitment | 0.171 | 0.066 |
| | Time limit ^b → Relational commitment | 0.146* | 0.029 |

(*) $p < 0.05$; (**) $p < 0.01$; (***) $p < 0.001$.

^a0 = Spain; 1 = The Netherlands

^b0 = No; 1 = Yes.

transferred to the partner, have a positive influence on the intention to maintain the relationship in the long term.

The effects of the affinity factors are confirmed. Hypothesis H3 is supported, such that we are able to state that the perception of shared values between incubatees positively impacts on the trust between them. Empathy, perceived as an individual's general trait, also encourages commitment to the relation. As a result, hypothesis H4 is confirmed.

As regards the characteristics of the incubatees' resources, the positive effect of complementarity on the magnitude of the knowledge exchanged can be accepted (hypothesis H5). Similarly, supplementary resources determine the global exchange of knowledge (hypothesis H6).

Finally, the existence of a time limit and the time spent in incubation were included as control variables that might affect relational commitment intention. 85% of incubatees were able to stay in the incubator for a limited period (between

one and six years) and showed a greater intention to consolidate the relationship they had built during incubation. The effect of the percentage of time spent in incubation is significant at a 90% confidence level and indicates that relational commitment is greater when the time spent is longer. In other words, incubatees who are closer to leaving the incubator are eager to maintain the relationships they have started. The country in which the UBI is located was included so as to rule out its effect from the overall model. The location is linked to three variables in the model. Specifically, lower levels of empathy and higher levels of relational commitment and supplementarity of resources in relations were in evidence in the Netherlands. These results might be due to cultural aspects such as greater encouragement of individualism, proactive initiative, dynamism and a clear business vision.

Table 5 shows the indirect and total effects on relational commitment. These results show that the indirect and total effects of shared values, complementarity and supplementarity on commitment are significant. When incubatees share values, as a result of finding themselves at the same starting point in their business, they tend to commit long-term, through increased trust. In turn, complementarity and supplementarity in the resources they possess can boost their commitment towards maintaining a long-term relationship through the exchange of knowledge. In other words, trust and exchange of knowledge act as mediators between complementarity and supplementarity of resources and relational commitment between incubatees.

5 Discussion

In the current work, we seek to explain which determinants lead to the development of relationships between incubatees and how they are characterized in this

Table 5: Indirect and total effects on relational commitment.

| Variables | Indirect effect | Total effect |
|---|-----------------|--------------|
| Empathy | | 0.169** |
| Shared values | 0.431*** | 0.431*** |
| Complementary resources | 0.087* | 0.087* |
| Supplementary resources | 0.075* | 0.075* |
| Knowledge exchange (magnitude) | | 0.218** |
| Knowledge exchange (absorptive asymmetry) | | 0.191*** |
| Trust | 0.060 | 0.681*** |

(*) $p < 0.05$; (**) $p < 0.01$; (***) $p < 0.001$.

specific context, where there are no previous business relationships or signals such as reputation in the market.

The main results of our study are the following: (1) the trust-commitment binomial is the main element defining relationships between incubatees; (2) complementary and supplementary resources are the bases for knowledge exchange in trust-commitment relationships; and (3) commitment in the relationship is determined by empathy, the existence of trust and the exchange of knowledge between parties.

Specifically, empathy between incubatees, as a result of being entrepreneurs in the same business incubator, encourages relational commitment between them. Individuals are eager to maintain a business relationship with other incubatees only because they share a common situation and feel they must help each other. And how does confidence in the partner emerge? When tenants of a UBI share values and standards of conduct (since both parties are scientific and speak the same language) as well as goals and objectives (because they pursue similar and compatible business objectives) a basis for trust is established among them. In short, dyadic relationships between incubatees are more likely to emerge when there is mutual understanding.

One relevant finding of this study is the key role played by knowledge exchange in the relationships between entrepreneurs. Knowledge exchange mediates the relationship between trust and relational commitment. When one incubatee trusts another, the former is predisposed to receive knowledge from the latter, even more than the knowledge transferred, thus increasing the asymmetry in the knowledge exchange. This absorptive asymmetry, that is, receiving more than giving, is a reason to maintain the relationship. The other motivation is the amount of knowledge transferred between members. In this case, the magnitude of the exchange depends both on the complementary and the supplementary resources of the parties. The existence of complementary resources stands out as being key to relationships between entrepreneurs within business incubators. Knowledge exchange may emerge between entrepreneurs who seek to obtain complementary benefits by integrating their functional specialization. Since entrepreneurs located in business incubators have hardly any previous experience and are predisposed to build a network of relationships, finding partners who can offer complementary resources allows them to acquire the skills and capabilities they lack to promote their business. Moreover, our research shows that in the specific context of academic incubators, entrepreneurs with similar resources are not perceived as rivals, although both can offer the same solution (in the form of a product or service) to the same customer. UBIs' collaborative (and not internally competitive) environment, coupled with the characteristics of academic entrepreneurs, leads those who have similar resources to build relationships that last

beyond the incubation period. These relationships flow even more from the beginning due to sharing knowledge from the same sector of activity and professional language. Hence, the perception of supplementary resources between tenants leads to trust, exchange of knowledge and, ultimately, to relationship building. This is because academic entrepreneurs focus more on science than on economic profit, contrary to what might be expected from market entrepreneurs. Moreover, relationships between firms with supplementary resources allow for the right size required to generate innovations.

Finally, the decision to opt for UBIs of two different European countries, the Netherlands and Spain, was not random. The Netherlands is a country with a longer and more innovative tradition of incubators and entrepreneurship compared to Spain. With the development of our research, we expected to find empirical differences between both and we introduced the country as a control variable. Specifically, we found that in the Netherlands there are higher levels of relationships between incubatees with supplementary resources, and on the part of the institutions (university and manager) there is greater promotion of entrepreneurial initiative.

5.1 Theoretical and Managerial Implications

The main theoretical contribution of our study to future research derives from gaining a better conceptual understanding of dyadic and internal relationships in the scope of UBIs through relationship marketing and the resource-based view. More specifically, we contribute to the literature by (1) linking UBIs (spaces where entrepreneurs stay for a limited period of time) to the relationship marketing approach; (2) enabling a better understanding of the antecedents of relationships between academic incubatees (shared values, complementary and supplementary resources); and (3) measuring the characterization of these specific relationships in terms of trust, relational commitment and exchange of knowledge.

Some managerial implications emerge from this study, especially for incubator managers. Firstly, there are implications for the selection policy concerning the adequate mix of incubatees sharing the incubator. The recommendation is a balance between incubatees with complementary resources and incubatees with supplementary resources. Diversity, in other words, the coexistence of incubatees with different academic backgrounds or different abilities in business areas (such as engineering, design, production, marketing, etc.), allows them to share skills and to improve their capabilities before venturing out into the market. However, communalities, namely the coexistence of incubatees with supplementary resources (similar academic backgrounds or similar abilities in business areas), are

also recommended for leveraging business potential. Entrepreneurs can join forces to obtain results in specific research areas and, therefore, increase the scope of their business projects.

Despite this emphasis on the possibility of incubatees' consolidating relationships not only from their complementary knowledge, but also from their supplementary knowledge, it should be remembered that supplementary assets and common knowledge may pose a handicap. When members of a team possess similar knowledge, they run the risk of technological depletion and a lower probability of significant advances (Fleming 2001). More specifically, with regard to the university environment, when team members have similar backgrounds and are in the same department, their performance as a team may be attenuated by a tendency to seek solutions using a discipline-specific framework (Henderson 1995).

Secondly, in order to foster shared values and collective social capital, incubator managers should encourage and support the feeling and sense of identity among incubatees, through joint activities, spaces designed for interactions, or by proposing common goals. When incubatees share standards of conduct and values (i.e., being an academic entrepreneur), the mutual understanding, empathy and, ultimately, the confidence that allows interaction and knowledge exchange, will prove easier.

5.2 Limitations and Further Research

Some limitations should be mentioned. The results cannot easily be generalised since they focus on UBIs. Moreover, the sample size is small (although it is justified by the small number of UBIs in Spain and the Netherlands), despite which the study does represent a large percentage of cases. Future studies might analyse the case of incubators with other characteristics, such as a greater diversity of incubatee profile, greater previous business experience, or incubators devoted to a common industry (culture, high-technology, etc.). It may be worth contrasting the model in other types of incubator so as to analyse whether the exchange of knowledge occurs in any incubation context between knowledge-intensive companies. Should this be the case, the main question would be whether resources (particularly, supplementary resources) prove determinant to the exchange, and whether our findings are manifested in the same terms.

Moreover, we only consider the point of view of one part of the dyad. Thus, it would be interesting to collect data from both sides in order to obtain an overall view of the relationship and to compare different perceptions. In addition, we cannot overlook the fact that each relationship must be seen and analysed not as an exogenous phenomenon, but within the context in which it emerges. Future

studies might also consider contextual factors and other relationships that influence the dyad.

Our study analyses one moment in time in the relationships, although it is important to remember that relationships are dynamic, such that the factors which trigger said relationship might evolve over time. For instance, initial empathy may disappear after years of relationships and knowledge asymmetry is unlikely to last for ever. Hence, the dynamics of incubatees' relationships need to be studied: What happens when incubatees leave the UBI? How long do the relationships built in the UBI last? Do incubatees maintain shared values or empathy once outside?

As for the characteristics of the relationship between incubatees, only factors that encourage it have been studied. However, it would be interesting to explore which factors or occurrences lead to relationship failure. In particular, cases in which attempts have been made to exchange knowledge and which have ultimately failed to succeed also merit inquiry, as do cases in which exchange was achieved, but where the consequences may have proved negative for one of the parties involved. Therefore, the influence of failed experiences on how entrepreneurs build new relationships (the use of contracts or the preference for short-term relationships) should be investigated. Additionally, it may be of interest to study "critical moments" in order to gauge the triggering factors which lead to the breakdown of the relationship.

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