

# Development of the Coordination Dimension of Relational Capabilities: Comparison between For-Profit and Non-profit Technology Transfer Partnerships

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**Abstract** - In order to ensure the success of a technology transfer partnership for-profit or non-profit, it is necessary to understand which relational capabilities (RC) to explore. This article analyses which factors can assist in the coordination's development dimension of RC, in cooperation with the development of non-profit and profit-oriented technologies, highlighting their similarities and differences. The method used was multi-case qualitative research, studying two groups (group N and group P), each with 5 entities. The main differences highlighted is the increase of social credibility for the group N and the knowledge dissemination of the partners and the processes improvement for the group P. Within this research, it was possible to deepen the model [1], regarding the inclusion of factors that can help the development of RC Management dimensions. Understanding capabilities development in each alliance is the implication of the study.

**Keywords:** *Relational Capabilities; Technology Transfer; Model; Supply Chain Management; Non-profit Technologies; Profit-oriented Technologies.*

## 1. Introduction

The performance of a partnership is often explained in terms of the extent to which the partners follow an 'integration imperative', to consider that they are part of the same group and act in the name of a common goal, rather than carry out inter-organizational differences and heterogeneous interests [2].

However, as described [3], because of the hesitant and changeable nature of alliances, for them to be successful, it is necessary to access and use external resources, including social. It is essential to know how to develop and use what authors like [4] named Relational Capabilities (RC).

For [5], this capability, also defined as the ability to manage alliances, encompasses a range of organizational structures, processes, and mechanisms, improving the company's ability to get involved and benefit from

partners. To [4], the ability to manage alliances contributes to the success of technology transfer is presented. The authors conceptualise these capabilities as alliance management skills or as a set of organizational routines that allow an organisation to manage exchange processes with external partners.

According to [1], we can divide RC into five dimensions, namely: coordination, cultural, knowledge, technological, and co-adaptation. Specifically, in this research, we will focus on the coordination dimension, which comprises the following components: 'Formalised actions', 'Integration and synergy', and 'Coordination benefits'. We relate this dimension to the ability to make resources efficient, profitable, and productive. It identifies interdependencies, avoids duplication of actions, and produces synergies, using the alliance as an action strategy.

Thus, the aim of this research is to analyse which factors can assist in the coordination's development dimension of RC, in cooperation with the development of non-profit and profit-oriented technologies, highlighting their similarities and differences.

One of the theoretical contributions of this study is to enhance the knowledge about the concepts and types of existing alliances once we intend to make a comparison between non-profit and profit alliances. As most alliance studies treat non-profit alliances as something similar to profit partnerships, this research is necessary to extrapolate this knowledge and enlarge this theoretical view.

Studies in RC generate a better understanding of its five dimensions and how they can influence the success of partnerships, depending on how they are structured and ordered. Typically, studies relating to the term's alliances and RC focus on the outcome of the alliance, not on its process, in which capacities (or dimensions) were needed, developed, and neglected. Thus, it is still difficult to analyse key elements within the dimensions of RC that handle the success or failure of cooperation.

The use that participating in organisations and their peers can make with the knowledge gained in the findings is also a contribution to this research. Better explaining, we can comprehend how RC contributes to the success and/or

failure of those partnerships or similar ones and at distinction realities.

## 2. Literature Review

In this section, we address the theme of alliances and their importance for organisations. Next, we discuss its relational capabilities, which are skills created by organisations to better relate to other organisations, especially in partnerships.

### 2.1 Supply Chain Management

The principal idea of the supply chain has been described as "*something that consists of elements that are linked to each of their two immediate neighbors and which jointly provide a strong but flexible connection*" [6]. Essentially, supply chain refers to a grid or linkage that a company builds with its suppliers for producing and distributing a specific product or service [7]. The complex and global structure of business change the traditional view of a "chain", because a linear and simple manner is no longer a reality given [8].

Supply Chain Management (SCM) is an important aspect of management because coordinates and controls the activities of firm from the downstream to upstream. The foremost goal of SCM is to manage and integrate the control, flow and sourcing of material for this purpose [9]. Supply chain management (SCM) and operational capabilities are crucial to a company's competitive prowess [7].

Thus, the trend in modern supply chain networks is to seek partnerships that improve efficiency. For example, in recent years, but particularly in the last decade, the terms "supply chain cooperation" and "supply chain coordination" have been used increasingly [8].

In the partnership, organizations are involved in joint programs [9]. In a supply chain network, companies have individual (private) goals and objectives that they can achieve by themselves [8].

The relationship of the organization with the stakeholders will suffer if the behavior of the partners will be based on opportunity [9]. Indeed, in current supply chain networks, organizations are considering cooperation and the coordination of their business processes more strategically, as well as searching for more refined and closer relationships with other supply chain network participants [8].

Because of measures of joint performance, dependency and trust, organizations are turned towards long-term relationships. New opportunities are also the approach of supply chain collaboration along with long-term orientation [9].

However, all companies are linked by the integrated nature of the supply chain business in which they participate and thus they operate in the same environment. However, conflicts may arise in this environment. Therefore, companies need to synchronize their activities in order to avoid harmful interactions. This process is called coordination. In other words, coordination within a supply chain is a strategic response to the problems caused by inter-organizational dependencies within the chain. Coordination occurs between two or more firms, where tight control requires a coordination mechanism that synchronizes two or more specific functions [8].

### 2.2 Alliances or partnerships

We create alliances or partnerships between organizations to improve the resources base. They can provide benefits like access to information and market, organizational learning, and provision of capabilities necessary to compete in dynamic markets [10]. Into an alliance are knowledge and technological exchanges, which create value and competitive advantage [11].

The development of alliances with partners at different levels, whether public or private, national or international organizations, allows companies to gain new knowledge and innovate [12]. For [5], alliances are a beneficial way for the company, because of the possibilities they open for the exchange of knowledge, assimilation, and new skills learning, besides access to resources that they would not have without partner support [13].

The partnerships can be for-profit and non-profit technology transfers. For-profit alliances occur because of the need to improve a certain process or improve the companies' innovation performance [13]. It can occur with organizations of different sizes, focuses, embedded technology, and types of innovation [14].

For [15], with innovating and meeting new social and environmental goals companies face challenges, which are usually overcome by establishing alliances with other organizations, allowing mutual access, and integrating the resources and capacities.

The non-profit alliances should solve complex social problems that no single sector has the knowledge and resources to deal with adequately or efficiently, besides generating mutual value for both parts of this partnership [16]. It usually occurs between a Non-Governmental Organization (NGO) and another type of organization, such as a public or a private one. This kind of partnership is called a social alliance and also involves the sharing of resources, knowledge, technology, and capability [17].

The ability to identify opportunities and relationships with relevant resources and know-how is one of the key factors of alliance success [10]. Independently of the type of partnership (for-profit and non-profit technology transfer), they should be correctly got better results, more exchange of resources, and partnership extension. To do that, it is necessary Relational Capabilities which are addressed in the next section.

### 2.3 Relational Capability

Because of the divergence of internal processes or even because of the different degrees of technology use in each organisation, it is necessary, as described by [5], to establish interactive mechanisms that assistance mitigate opportunism risks and improve collaborative performance. Such mechanisms are the Relational Capacities, or as defined by [15], the management capacities of these relationships. [18] defined relational capabilities as an organisation's ability to manage relationships. We also called these Relational Capabilities as skills, mechanisms, dynamic capabilities, social capital, and absorptive capabilities.

Relational capabilities can continuously better an alliance through the management, integration, and learning of relationships. The aim is the competitiveness of alliances. RC can either detect, capture, and reconfigure resources, thus acting as a higher-level capability [19].

The major advantage of RC is the use of the company's critical resources, the production increase, the advance in markets, and the better performance of the company [20]. Relational capabilities also involve the ability to choose correctly the partner [21] and to develop technical and interpersonal skills for the efficient management of the partnership process [22].

Finally, organisations that develop relational capabilities have a competitive advantage over competitors who renounce this ability [23]. RC is still important because the skills developed in cooperation ensure the success and effectiveness of an alliance.

The relational capabilities allow to expand of the company's resource base beyond its borders [24] and improve the integration process between partners, eliminating duplication of resources and effectively using them [25].

According to [4], these 'organizational routines', here called relational capabilities, allow an organization to

manage exchange processes with external partners. For [15], this will facilitate not only the success of new alliances but also the maintenance of existing ones.

A few authors proposed a model to study Relational Capabilities [1], [26], [27], [28], [29], [30]. An analysis of each one of them, [1] which is shown in Figure 1, is the most recent and brings together the knowledge of the others, forming a more robust and complete model to be used. Also, this model comprehends the construct of Relational Capability as something interconnected and interrelated. Because of that, it is the model used in this study. For [1] there are five dimensions of RC (coordination, cultural, knowledge, technological, and co-adaptation). For alliances to succeed, they need to be well implemented, analysed, and constantly reviewed. But in this research, only one was studied: the coordination one.

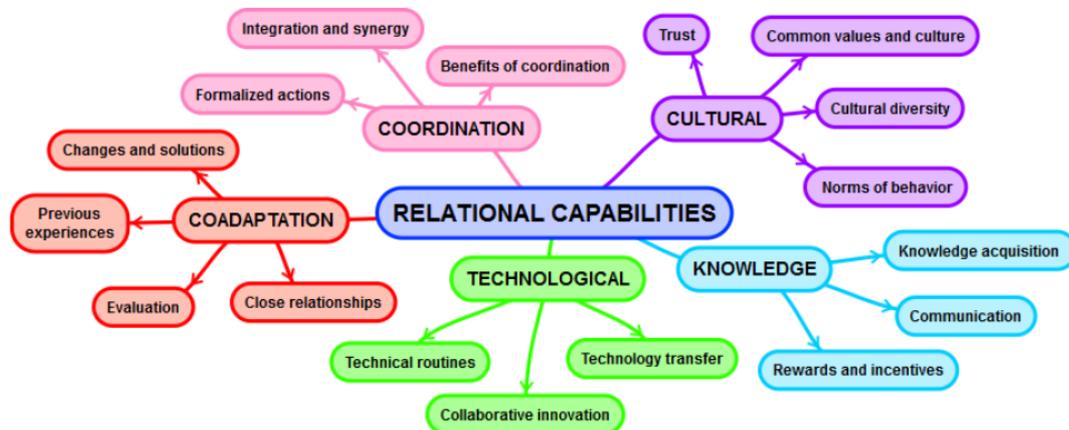


Figure 1. Relational Capability's Model

In [1] model, the coordination dimension is formed by the realization dimension [27], Alliance Portfolio Coordination and Relational Governance Capability [29], and alliance portfolio coordination and inter-organizational coordination [30]. The "coordination dimension relates to the ability to manage the partnership's resources, making them efficient, profitable, and productive. This dimension identifies interdependencies to avoid efforts duplication and produces synergies between the individual alliance. When the organizations belong to a group, there is a reduction of conflict, and the alliance becomes a strategy of action [1].

Three components: formalized actions, integration and synergy, and benefits of coordination [1] form the coordination dimension. The formalized actions observed the general coordination actions, to reduce costs, increased value, and create initiatives among partners. Integration and synergy are the ability to interface between partners and to create synergies in all alliances. Thus, it is possible to identify interdependence between alliances. Benefits of coordination intend the discussions about the most beneficial networks and the perception of gains and benefits from the alliance [31].

Coordination routines aim at allocating resources, assigning tasks, and synchronizing activities [30]. Companies need to develop specific processes, such as integration capability, to transfer resources and skills [24].

The configuration and formalization of the supply processes and responsibilities both influence supply management capability [32].

Once the theoretical knowledge of this article (SCM, Alliances and Relational Capability) has been briefly explained, we move on to methodological procedures and the description of steps for its realization.

### 3. Methodology

We have made this research using a qualitative approach, based on a descriptive aim and on a technical procedure of a multiple case analysis (Merriam, 2009; Stake, 2005; Yin, 2005; Creswell, 2010). There was also replication to compare the data. Theoretical saturation was used (Flick, 2007) to determine the number of cases in the research. Two groups of technology transfer partnerships were studied: for-profit (Group P) and non-profit (Group N), five corporations formed each group. There were cases P1 to P5 (for-profit from 1 to 5) and cases N1 to N5 (non-profit from 1 to 5).

For data collection, an in-depth interview was conducted with employees with notorious knowledge about the partnerships. A semi-structured questionnaire (validated by specialists) has been used as a data collection instrument. Following the interview's transcription, two types of categorizations were formed: by the coordination

dimension and by the explanatory factor, as explained below:

Initially, the excerpts from the interviews were categorised as part of the coordination dimension (from the earlier categorisation). Followed, in which sixteen factors that could assist in the development of RC dimensions were

listed (from the later categorisation). It is important to highlight that, at this moment; we do not adhere to the coordination dimension, but to the construct (Relational Capabilities) as a whole. The sixteen factors are:

**Table 1.** Factors that could assist in the development of the dimensions of relational capacities.

Adaptation to partners	Public recognition of the partner
Control of shared knowledge	Relationship time
Differences in perception between partners	Results for all stakeholders
Dissemination of knowledge created	Results generated in the partnership
Focus on common goals	Search for common solutions
Increased social credibility	Strategic dependence on knowledge
Knowledge of partners	Strengthening partnerships
Process improvement	Transparency of actions

After categorizing the data from earlier and from later, we have made a description of how the explanatory factors were perceived in each of the ten cases. Then, in an agglutinating board, the factors were identified as present or absent in the ten cases studied. Finally, after a theory analysis, the ultimate results were compared. As the methodological procedures have been presented, we present the analysis of the results below.

#### 4. Discussion

This session presented the data description, starting with cases P and following the N group. In order to facilitate understanding of the text and to avoid confusion between components and factors, the three components ('Formalised actions', 'Integration and synergy' and 'Coordination benefits') will be written in **bold** and the sixteen critical factors (Table 2) will be underlined.

In case P1, deeper attention to the human component, with an association between partners, technical routines, previous experiences and communication, and trust was necessary. This led to closer ties, synchrony of actions and decision-making, a lasting relationship with stakeholders, the search for long-term joint solutions, as well as to the creation and knowledge and technology transfer. But five factors were not perceived: 'Adaptation to partners', 'Control of shared knowledge', 'Differences in perception between partners', 'Dissemination of knowledge created', and 'Strategic dependence on knowledge'.

In case P2, they required communication, assertiveness, an association between partners, closer ties, and previous experiences. They also needed collaborative innovations, technical routines and synchrony of actions, and decision making. Here, we did not notice four factors: 'Differences in perception between partners' 'Dissemination of the knowledge created', 'Increased social credibility', and 'Strategic dependence on knowledge'.

In P3, there was a need for technical routines and the creation of policies for partnerships, alignment of interests, and closer ties, as well as the discovery of new alliance opportunities. Partnerships also needed to be evaluated and publicised; therefore, communication between partners was essential. Other perceptions are the importance of knowledge and technology creation and transfer, previous experiences, synchronising actions and decision making, and the dissemination of partnering benefits. We did not

identify three factors: 'Differences in perception between partners', 'Increased social credibility', and 'Strategic dependence on knowledge'.

Likewise, to develop the P4 RCs, it was necessary to create partnerships' policies, knowledge, and technology creation and transfer, as well as previous experiences. Additionally, communication, trust, closer ties, identification of the benefits of partnering, and flexibility proved to fundamental. With these characteristics, it is possible to guarantee the visibility of the organisation, long-term relationships with stakeholders, and long-term social results of the project. We did not identify three factors: 'Control of shared knowledge', 'Dissemination of created knowledge', and 'Strategic dependence on knowledge'.

The last case of for-profit alliances, P5, did not present 5 factors: 'Control of shared knowledge', 'Differences in perception between partners', 'Dissemination of knowledge created', 'Increased social credibility', and 'Public recognition of the partner'. For the other activities, alignment of interests, communication, trust, and identification of benefits in making partnerships was necessary. The association between the partners, the commitment to future results, and the creation and transfer of knowledge and technology were fundamental. Finally, the perception of further results from alliances, previous experiences, the organisation's work dynamics, and flexibility were also mandatory for the development of P5 RCs.

Making the same analysis with non-profit partnerships (Group N), we have noticed that for the development of RC in N1, communication, trust, lack of formalisation, flexibility, and an association between partners were essential. Other necessary actions were the development of technical routines, the perception of long-term social results of the project, and the organisation's credibility identification. But they did not mention five factors: 'Control of shared knowledge', 'Dissemination of knowledge created', 'Knowledge of partners', 'Process improvement', and 'Strategic dependence on knowledge'.

In N2, for the development of RC, an association between partners, synchrony of actions and decision making, the credibility of the organisation, and perception of the social results of the project in the long term were essential. In addition, to the requisition of technical routines, voluntariness, flexibility, and the absence of

formalization were mentioned. However, six factors were not noticed: 'Control of shared knowledge', 'Differences in perception between partners', 'Dissemination of knowledge created', 'Knowledge of partners', 'Process improvement', and 'Strategic dependence on knowledge'.

In N3, we did not notice only 1 factor: 'Differences in perception between partners'. To develop the other activities, the ability to articulate, commitment to future results, synchrony of actions, and decision making were necessary. There were also mandatory actions: formalisation of the partnership, closer ties, communication, and attention to problems. Finally, in this organisation, incentives to coexist and to share situations, accountability to partners, identification of the benefits of making partnerships, and the perception of results from alliances were required.

In N4, mandatory actions for the development of RC were social credibility, communication, trust, flexibility, and alignment of interests. Additionally, participative management, closer ties, technical routines, transparency, identification of benefits, and results in partnering have

been mentioned. However, six factors were not identified: 'Control of shared knowledge', 'Differences in perception between partners', 'Dissemination of knowledge created', 'Knowledge of partners', 'Process improvement', and 'Strategic dependence on knowledge'.

The N5 organisation, last analysed, had the following unidentified activities: 'Increased social credibility', 'Public recognition of the partner', 'Results for all stakeholders', and 'Strategic dependence on knowledge'. For its RC to be developed, attention to problems, communication, synchronisation of actions and decision making, and learning were necessary. In addition, the need for participatory management, creation of technical routines, formalisation of the partnership, and transparency about actions have been reported. It was possible to carry out the partnerships' maintenance and the activities monitoring.

Based on this description, it was possible to elaborate on Table 2. In that, the factors in each of the analysed cases are presented, Y represents the presence (Y = yes) and N (N = no) the absence.

**Table 2.** Presence (Y) or absence (N) of the factors that could assist in the development of the dimensions of relational capacities in each of the analysed cases

Factors	P1	P2	P3	P4	P5	Σ(s)	N1	N2	N3	N4	N5	Σ(s)
Adaptation to partners	N	Y	Y	Y	Y	4	Y	Y	Y	Y	Y	5
Control of shared knowledge	N	Y	Y	N	N	2	N	N	Y	N	Y	2
Differences in perception among partners	N	N	N	Y	N	1	N	N	N	N	Y	1
Dissemination of knowledge created	N	N	Y	N	N	1	Y	N	Y	N	Y	3
Focus on common goals	Y	Y	Y	Y	Y	5	Y	Y	Y	Y	Y	5
Increased social credibility	Y	N	N	Y	N	2	Y	Y	Y	Y	N	4
Knowledge of partners	Y	Y	Y	Y	Y	5	N	N	Y	N	Y	2
Process improvement	Y	Y	Y	Y	Y	5	N	N	Y	N	Y	2
Public recognition of the partner	Y	Y	Y	Y	N	4	Y	Y	Y	Y	N	4
Relationship time	Y	Y	Y	Y	Y	5	Y	Y	Y	Y	Y	5
Results for all stakeholders	Y	Y	Y	Y	Y	5	Y	Y	Y	Y	N	4
Results generated in the partnership	Y	Y	Y	Y	Y	5	Y	Y	Y	Y	Y	5
Search for common solutions	Y	Y	Y	Y	Y	5	Y	Y	Y	Y	Y	5
Strategic dependence on knowledge	N	N	N	N	Y	1	N	N	Y	N	N	1
Strengthening partnerships	Y	Y	Y	Y	Y	5	Y	Y	Y	Y	Y	5
Transparency of actions	Y	Y	Y	Y	Y	5	Y	Y	Y	Y	Y	5

Legend: Y = Yes or presence of the factor in the case; N = No or absence of the factor in the case; P1 to P5 = cases P1 to P5 (for profit from 1 to 5); N1 to N5 = cases N1 to N5 (non-profit from 1 to 5); Σ (s) = sum of yes that the factor had in group P and group N.

It is notable that the factors with less appearance in both groups were: 'Difference in perception between partners', 'Strategic dependence on knowledge' (both factors were present in only one case in each group), 'Control of shared knowledge' (present in only two cases of each group) and 'Dissemination of knowledge created' (present once in Group P and three times in Group N).

By doing formalized actions, the 'Difference in perception between the partners' is reduced, because these actions established the longings and prerogatives of each partnership [38]. With the integration and the synergy produced by the coordination dimension, there was no 'Control of shared knowledge' or 'Strategic dependence on knowledge' [39]. The risk of opportunism also forces firms to spend more transactional efforts on coordination and monitoring. As a result, it allocated fewer resources to knowledge sharing, acquisition, and integration.

In the end, the 'Dissemination of knowledge created' is an uninteresting factor in the coordination dimension of Group P and a little more cited into Group N. By the characteristics of the partnerships (non-profit technology development) the dissemination of knowledge is more relevant, given the importance of generating the integration and synergy between partners [18].

The data obtained in the research indicate that there is not an excessive dependence on the knowledge obtained by the partnership, nor that the cases analysed should restrict the technological knowledge transfer that flows between the partners, as opposed to mentioned by [40].

In addition, the factors that were necessary for both groups indicated the need for partner's adaptation, public recognition, and transparency of actions. Thus, by the increase in the relationship period (relationship time), it was possible to focus on common goals, strengthen

partnerships, and bring results to all involved by seeking common solutions.

The factors seen as necessary by both types of alliances studied are the foundation for successful coordination. For [5], the experience of making alliances is beneficial for organizations' internal initiatives, as they allow the exchange of knowledge, assimilation, and learning. But is fundamental to the success of the alliances that there is an adaptation between partnerships. Thus, the coordination of actions and adaptation that occurs the required for both partners to signal their commitment to the relationship and desire to invest in the relationship for the long term, as mentioned by [41].

Furthermore, the 'Adaptation to partnerships' also guarantees more integration and synergy [42]. Another point that increases integration and synergy is 'Public recognition of the partner' and 'Transparency of actions', since the partners can show the relevance of the alliance and the actions that are being taken and thus increase the bond between the partners, as cited [43].

According to [5], knowledge sharing between partners is essential for innovation performance. Thus, often, the good shared in technology transfers is knowledge. For [44], integrating information from new knowledge or the dissemination of created knowledge helps to improve the alliance. However, as written by [45], the sharing with external partners of rare and valuable knowledge (the source of a company's sustainable competitive advantage) is likely to diminish the rarity potential of the inventions developed by companies. For this reason, the control factor of shared knowledge, often neglected by the interviewees, must be examined. Another interesting factor to be discussed is strategic dependence, which has been mentioned as less necessary for the interviewees of this study. However, according to the same authors mentioned above [44], handles the awareness of the partnership, its risks, and opportunities.

As much as the alliance perpetuates itself, more it is the advantages to the coordination dimension. The time allowed knowing how the partners act and develop formalized action into the development of the alliance, as mentioned by [46]. The 'Relationship time' also get the partners close to acting together with 'Focus on common goals' [43], into the 'Seeking common solutions' [19] and the 'results to all' involved, as mentioned by [46]. All these factors show beneficial to the coordination dimension, because they carry much more synergy to partnership, strengthen it, as exposed by [47].

In addition, pursuing results for all involved parts is essential, so that there is coordination, communication, and trust, which have a positive impact on the success of the alliance [5].

The 'Increase in social credibility' was a perceived factor in the non-profit group. We perceive that to non-profit technology transfer partnerships, this is a crucial factor to the coordination dimension, since it will enhance the integration and the synergy between partners, as cited by [48].

For the cases of non-profit partnerships, it was essential to have among the results the Increase of social credibility. This way, they could further prove and publicize their performance in society. The absence of financial benefits as one aim of social alliances brings the Increase of social

credibility as one of the primary rewards for these partnerships [16], [49], [50]. In addition, social alliances are not always looking for such advanced technological improvements and transformations since their objectives are usually not the same as in the scenario of extreme competition where for-profit alliances are made. For [51], credibility is an essential factor for the effective transfer of knowledge in a partnership.

However, 'Knowledge of Partners' and 'Process Improvement' factors were most necessary for the for-profit group. To profit technology transfer partnerships, formalizations actions can contribute to better recognition of the partners, as exposed by [52]. The 'Process improvement' is an advantage obtained with the integration and synergy of partners, according to [53].

For-profit partnerships, because of to their characteristics, sought to deeper understand their partners, so they could work with the partners that best suited their work. They also intended to use partnerships to improve their internal processes in order to gain competitiveness. These two factors are possibly necessary for for-profit alliances since they need to find new solutions to their internal demands, which are increasingly complex because of the level of competitiveness in the current market [13], [54].

## 5. Conclusion

This study aimed to analyse which factors can assist in the coordination's development dimension of RC, in cooperation with the development of non-profit and profit-oriented technologies, highlighting their similarities and differences. From the interviews carried out, it was possible to identify whether the factors defined by the latter were or were not present in the studied companies.

The four factors not perceived in any of the groups ('Control of shared knowledge', 'Difference in perception between partners', 'Dissemination of knowledge created' and 'Strategic dependence on knowledge') showed that in various partnerships, knowledge is the technology transferred. Thus, it is essential for the generation of innovation. To not depend on the knowledge generated in the partnership and to not excessively control it, may not interfere in the way this alliance will be coordinated (the focus of this study), but it can generate losses regarding the risks and opportunities generated by the partnerships. In addition, according to the studied authors, the control of generated knowledge can be essential to maintain competitive advantage, especially in for-profit partnerships.

The factors equally important in both studied groups (Adaptation to partners, Focus on common objectives, Public recognition of the partner, Relationship time, Results for all stakeholders, Results generated in the partnership, Search for common solutions, Strengthening of partnerships, and Transparency of actions) demonstrated that the more the relationship time between partners increases, the more they adapt to achieve their goals and seek common solutions. That we can strengthen the partnership to generate better results for the involved parts, always maintaining the transparency of actions and seeking the partner's public recognition.

Among the distinctions seen, the need to increase social credibility is greater for social alliances, since its principal aim is not related to obtaining financial gains directly, but to positively affect its beneficiaries. In order to reach more people, it is necessary to establish trust, arising from credibility within the involved organisations. In addition, credibility is essential to achieve alliances' desired goals.

Two factors, the Knowledge of partners and Processes improvement proved to be relevant for the non-profit alliances, but not as much for the for-profit partnerships, which was defined as a distinction. For alliances envisioning profits, knowing the partners is essential to understand what the organisation needs is that the partnership will fulfil. Partnerships offer resources to companies. The better the partners, the better the partner's knowledge, and the better the use of such an alliance. In addition, working together with competitors, suppliers, and/or customers, with for-profit alliances, can benefit existing processes in order to boost learning and knowledge generation.

The theoretical implications of this study include the deepening of [1], regarding the inclusion of factors that can support the development of the RC dimensions. Within each study, with new and different alliances, the knowledge about the constructs and their performance in different partnerships is increased. Thus, by collecting new data, or even trying to transform or improve it, a further step can be taken to explain the model. For the studied alliances, the managerial implications are the perception of which relational capacities are further developed in their alliances and which still need to be improved in order to guarantee the partnership's success and continuity.

Still, on the managerial implications, knowing the relational capabilities of different relationships allows them to be used by other organisations and partnerships so that they can succeed in their relationships.

In future research, it is possible to replicate the analysis of the coordination dimension with other alliances or to further explore other dimensions in the analysed partnerships. It is also possible to investigate the same alliance considering all partner members and to question their perceptions of the development of relational capacities. Finally, among the limitations, the method used (multiple case studies), stands out. Thus, it does not allow for the generalization of results.

## References

- [1] Alves, F. S., Segatto, A. P. and De-Carli, E. (2016) 'Theoretical Framework About Relational Capability on Inter-Organizational Cooperation', *Journal of Industrial Integration and Management*, 01(04), p. 1650012. doi: 10.1142/s2424862216500123.
- [2] Ungureanu P, Bertolotti F, Mattarelli E, Bellesia F. (2020) Collaboration and identity formation in strategic interorganizational partnerships: An exploration of swift identity processes. *Strategic Organization*, 18(1), pp. 171-211.
- [3] Das, T. K. and Teng, B.-S. (1998) 'Between Trust and Control: Developing Confidence in Partner Cooperation in Alliances', *The Academy of Management Review*. Academy of Management, 23(3), pp. 491–512.
- [4] Leischnig, A. and Geigenmüller, A. (2020) 'Examining alliance management capabilities in university-industry collaboration', *Journal of Technology Transfer*. Springer US, 45(1), pp. 9–30.
- [5] Dutta, D. K. and Rousseau, M. B. (2020) 'Alliance experience, industry conditions, and external technology commercialisation', *International Journal of Innovation Management*, 24(1), pp. 1–24.
- [6] Rolf, A.E., Muller, D.B. and Seidel-Lass. L. (2007) 'Supply chains and social network analysis'. *1st International European Forum on Innovation and System Dynamics in Food Networks*. February 15–17, Innsbruck-Igls, Austria.
- [7] Nair, R. C. S. (2022) 'Operations and Supply Chain Optimization: The New Era Model'. *Int. J. Sup. Chain. Mgt.* 11(3), pp. 1-20.
- [8] Elomri, A. (2015). 'Cooperation in Supply Chain Networks: Motives, Outcomes, and Barriers'. *Int. J. Sup. Chain. Mgt.* 4(1), pp. 12-24.
- [9] (artigo 5259-15198-1-PB). Wajdi, M. F., Aminudin, A. and Dibyo, B. (2020) 'Orientation, Organizational Capability, Organizational Coordination and Cooperation as Predictor of Long-term Orientation: Examining the Mediating Role of Supply Chain Management'. *Int. J. Sup. Chain. Mgt.* 9(4), pp. 324-331.
- [10] Leischnig, A. and Geigenmüller, A. (2018) 'When does alliance proactiveness matter to market performance? A comparative case analysis', *Industrial Marketing Management*. Elsevier, 74(September), pp. 79–88.
- [11] Beltrame, G. and Diniz Pereira, B. (2018) 'Transforming cooperation practices into individual routines: an analysis of firms inserted in cooperation networks', *Revista científica Pensamiento y Gestión*, (45), pp. 239-263.
- [12] Islam, N., Gyoshev, S. and Amona, D. (2020) 'External complexities in discontinuous innovation-based R&D projects: Analysis of inter-firm collaborative partnerships that lead to abundance', *Technological Forecasting and Social Change*, 155.
- [13] Choi, J. (2020) 'Mitigating the Challenges of Partner Knowledge Diversity While Enhancing Research & Development (R&D) Alliance Performance: The Role of Alliance Governance Mechanisms', *Journal of Product Innovation Management*, 37(1), pp. 26–47.
- [14] Drewniak, R. and Karaszewski, R. (2020) 'Diffusion of knowledge in strategic alliance: empirical evidence', *International Entrepreneurship and Management Journal*, 16(2), pp. 387–416.
- [15] Inigo, E. A., Ritala, P. and Albareda, L. (2020) 'Networking for sustainability: Alliance capabilities and sustainability-oriented innovation', *Industrial Marketing Management*. Elsevier, 89(April 2019), pp. 550–565.
- [16] Barroso-Méndez, M. J., Galera-Casquet, C. and Valero-Amaro, V. (2014) 'Partnerships Between Businesses and NGOs in the Field of Corporate Social Responsibility: A Model of Success From the Perspective of Relationship Marketing', *Journal of Relationship Marketing*. Routledge, 13(1), pp. 1–27.
- [17] Gillett, A. et al. (2019) 'An Examination of Tensions

- in a Hybrid Collaboration: A Longitudinal Study of an Empty Homes Project', *Journal of Business Ethics*. Springer Netherlands, 157(4), pp. 949–967.
- [18] Behnam, S., Cagliano, R. and Grijalvo, M. (2018) 'How should firms reconcile their open innovation capabilities for incorporating external actors in innovations aimed at sustainable development?', *Journal of Cleaner Production*. Elsevier Ltd, 170, pp. 950–965.
- [19] Kohtamäki, M., Rabetino, R. and Möller, K. (2018) 'Alliance capabilities: A systematic review and future research directions', *Industrial Marketing Management*. Elsevier, 68(October 2017), pp. 188–201.
- [20] Gölgeci, I. et al. (2019) 'A relational view of environmental performance: What role do environmental collaboration and cross-functional alignment play?', *Journal of Business Research*. Elsevier, 96(September 2017), pp. 35–46.
- [21] Donada, C., Nogatchewsky, G. and Pezet, A. (2016) 'Understanding the relational dynamic capability-building process', *Strategic Organization*, 14(2), pp. 93–117.
- [22] Golgeci, I. and Gligor, D. M. (2017) 'The interplay between key marketing and supply chain management capabilities: the role of integrative mechanisms', *Journal of Business and Industrial Marketing*, 32(3), pp. 472–483.
- [23] Lorenzoni, G. and Lipparini, A. (1999) 'The leveraging of interfirm relationships as a distinctive organizational capability: A longitudinal study', *Strategic Management Journal*, 20(4), pp. 317–338.
- [24] Mamédio, D. et al. (2019) 'Strategic alliances and dynamic capabilities: a systematic review', *Journal of Strategy and Management*, 12(1), pp. 83–102.
- [25] Schilke, O. and Lumineau, F. (2018) 'The Double-Edged Effect of Contracts on Alliance Performance', *Journal of Management*, 44(7), pp. 2827–2858.
- [26] Johnsen, R. E. and Ford, D. (2006) 'Interaction capability development of smaller suppliers in relationships with larger customers', *Industrial Marketing Management*, 35(8), pp. 1002–1015.
- [27] Mcgrath, H. (2008) 'Developing a relational capability construct for SME network marketing using cases and evidence from Irish and Finnish SMEs', *Education And Training*, (October).
- [28] Ngugi, I. K., Johnsen, R. E. and Erdélyi, P. (2010) 'Relational capabilities for value co-creation and innovation in SMEs', *Journal of Small Business and Enterprise Development*, 17(2), pp. 260–278.
- [29] Sarkar, M. B., Aulakh, P. S. and Madhok, A. (2009) *Process capabilities and value generation in alliance portfolios*, *Organization Science*.
- [30] Schilke, O. and Goerzen, A. (2010) 'Alliance Management Capability: An Investigation of the Construct and Its Measurement', 36(5), pp. 1192–1219.
- [31] Alves, F. S., Segatto, A. P. and De-Carli, E. (2019) 'Connection points between dimensions of relational capability: Differences among profit and non-profit technologies', *International Journal of Business Innovation and Research*, 19(4), pp. 509–531.
- [32] Lintukangas, K. et al. (2016) 'The drivers of supply management capability', *Benchmarking*, 23(7), pp. 2109–2127.
- [33] Merriam, S. B. (2009). *Qualitative Research: a guide to design and implementation*. San Francisco: Jossey-Bass.
- [34] Stake, R. (2005) Case Studies. In: Denzin, N.; Lincoln, T. *Handbook of Qualitative Research*. London: Sage, p. 108-132.
- [35] Yin, R. K. (2005) *Estudo de Caso: planejamento e métodos*. 3 ed. Porto Alegre: Bookman.
- [36] Creswell, J. W. (2007) *Projeto de pesquisa: métodos qualitativo, quantitativo e misto*. 2 ed. Porto Alegre: Artmed.
- [37] Flick, U. (2007) Triangulation of qualitative and quantitative research. In: *Managing Quality in Qualitative Research*. [s.l.].
- [38] Gjerding, A. N. and Kringelum, L. B. (2018) 'Systemic coordination of organizational roles: The importance of relational capital in port governance', *Research in Transportation Business and Management*. Elsevier, 28(October), pp. 77–84.
- [39] Xia, M., Zhao, K. and Mahoney, J. T. (2012) 'Enhancing value via cooperation: Firms' process benefits from participation in a standard consortium', *Industrial and Corporate Change*, 21(3), pp. 699–729.
- [40] Phene, A. and Tallman, S. (2014) 'Knowledge spillovers and alliance formation', *Journal of Management Studies*, 51(7), pp. 1058–1090.
- [41] Chiang, C. Y. et al. (2018) 'Obtaining collaboration benefits: the role of collaboration-specific investment and absorptive capacity in China', *Operations Management Research*, 11(3–4), pp. 69–82.
- [42] Cabello-Medina, C., Carmona-Lavado, A. and Cuevas-Rodriguez, G. (2020) 'A contingency view of alliance management capabilities for innovation in the biotech industry', *BRQ Business Research Quarterly*, 23(1).
- [43] Rungsithong, R., Meyer, K. E. and Roath, A. S. (2017) 'Relational capabilities in Thai buyer-supplier relationships', *Journal of Business and Industrial Marketing*, 32(8), pp. 1228–1244.
- [44] Guridi, J. A., Pertuze, J. A. and Pfothenauer, S. M. (2020) 'Natural laboratories as policy instruments for technological learning and institutional capacity building: The case of Chile's astronomy cluster', *Research Policy*, 49(2), p. 103899.
- [45] Corral de Zubielqui, G. et al. (2019) 'Knowledge quality, innovation and firm performance: a study of knowledge transfer in SMEs', *Small Business Economics*, 53(1), pp. 145–164.
- [46] Pereira, V. et al. (2021) 'Unravelling processes of alliance capability development: longitudinal processual insights from an emerging country multinational enterprise', *Management Decision*.
- [47] Giraldi, L. et al. (2018) 'Quality Assessment of Business-to-Business (B2B) Relationships between SMEs: A Qualitative Approach Based on the Relational Capability Conception', *Journal of Industrial Integration and Management*, 03(02), p. 1850008.
- [48] Smirnova, M. M. (2020) 'Managing business and

- social network relationships in Russia: The role of relational capabilities, institutional support and dysfunctional competition', *Industrial Marketing Management*. Elsevier, 89(April 2019), pp. 340–354.
- [49] Simpson, D., Lefroy, K. and Tsarenko, Y. (2011) 'Together and Apart: Exploring Structure of the Corporate–NPO Relationship', *Journal of Business Ethics*, 101(2), pp. 297–311.
- [50] Austin, J. E. and Seitanidi, M. M. (2012) 'Collaborative Value Creation: A Review of Partnering Between Nonprofits and Businesses: Part I. Value Creation Spectrum and Collaboration Stages', *Nonprofit and Voluntary Sector Quarterly*, 41(5), pp. 726–758.
- [51] Liu, Y. *et al.* (2017) 'Knowledge transfer in buyer-supplier relationships: The role of transactional and relational governance mechanisms', *Journal of Business Research*, 78, pp. 285–293.
- [52] Lichtenthaler, U. (2016) 'Alliance portfolio capability', *Journal of Strategy and Management*, 9(3), pp. 281–301.
- [53] Pudjiarti, E. S. and Suharnomo, S. (2018) 'Does institutional intervention play a role in small business clustering? An empirical evidence from Semarang, Indonesia', *Quality - Access to Success*, 19(163), pp. 52–59.
- [54] Gilding, M. *et al.* (2020) 'Network failure: Biotechnology firms, clusters and collaborations far from the world superclusters', *Research Policy*, 49(2), p. 103902.