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**COLLABORATIVE STRATEGIES BETWEEN COMPANIES. THE
INFLUENCE OF PRODUCTIVITY AND INNOVATION ON RISING
PERFORMANCES**

(Ph.D. Thesis Summary)

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INTRODUCTION

The collaborative strategies between companies represent the joint activity of two or more companies in order to achieve common goals or to obtain a competitive advantage (Das and Teng, 2000; Dyer and Singh, 1998; Gulati, 1998; Gulati and Singh, 1998; Hitt et al., 2007; Kale et al., 2002; Nicolescu and Popa, 2011). The new competitive conditions call for a shift from suppliers and customers' approach as simple suppliers or customers, to addressing and considering them as operational / tactical partners or strategic partners. On the other hand, competing companies are not anymore in competition with one another. Strong competitors in one industry can be close collaborators in other industries. Competing companies in an industry can collaborate tactically or strategically to carry out a common work within the value chain, and then, for the next activities in the value chain they can compete vigorously. In the same direction, companies need to consider collaborators and complementary organizations from nearby industries and remote industries. Thus, companies need to monitor for the implementation of a collaboration with governmental organizations, universities or research institutes, local governments, etc. whenever is necessary to meet the company's fundamental goals and to gain competitive advantage. All these types of strategic collaborations need to be developed by companies in order to meet the fundamental objectives and to implement the business strategy. In this way, companies fundamentally increase their likelihood of long-term survival on the market, and why not, even gaining competitive advantage.

In March 2017, regulatory authorities approved the collaboration between Volkswagen Truck & Bus (Germany) and Navistar International Corporation (USA). The objective of the collaboration is the joint development on technological components and the realization of the activity of procurement in common. Volkswagen acquired 16.6% of Navistar's shares in exchange for \$ 256 million. Following this action, CEO Andreas Renschler and CFO Matthias Gründler were included in Navistar's board of directors. Collaboration between the two companies resulted in the creation of a new company, Global Truck & Bus Procurement LLC (Volkswagen, 2017). Welcome in the world of strategic collaborations between organizations!

The first question that probably comes to mind when you start to look at this summary and you are a student, teacher or manager of a company is the following: Why should a company collaborate? How will this collaboration add value to my company? Would not it be better if we were to develop internally and get ourselves all the benefits that are discussed in this dissertation? It would be better, of course! But the point is that the internal development is not always possible (especially because of the lack of resources and skills required). On the other

hand, not all the companies have the financial resources to buy another company. In addition, as we will see in the dissertation, the partner company might not be willing to sell its business.

At the company level, there are several strategic options for the growth and development. Company's management can opt for the internal development or even the acquisition of another company. The present study aims to provide a set of concrete methods, techniques and tools for the company's growth, but by participating in strategic collaborations. Of course, organic growth or buying another company is a much more advantageous option than participating into one collaboration. Particularly, because of the benefits that in this case will only belong to one company. In the situation of developing a collaboration, the benefits will be shared between the collaboration partners.

Our dissertation does not discuss the options available for companies in their way for growth and development. Instead, we focus our attention on each collaborative option after the stage that the collaboration was choose as the best option. In other words, in this dissertation we try to find answer to questions such as: When it is appropriate to participate into a joint venture? What about forming a strategic alliance, or participating into a strategic partnership? In this sense, the main objective of our dissertation *is to discuss the main factors which may influence the improvement of firms' productivity and innovation related performances and obtain competitive advantage thorough participating in strategic collaborations*. In this sense, what we do in this work is to encourage the companies to become more proactive, to devote more resources for selecting an appropriate partner, to build a relational mechanism etc., in order to improve their performances.

Overall, this dissertation was elaborated to contribute with new evidence, as much as possible scientifically validated, for the improvement of the theory in the field of strategic management and to be a practical guide for the Romanian companies in their way to grow and develop. In this line of thinking, the managers of Romanian companies may find in this work the answers of related questions such as those above, all related with the field of collaborative strategies.

The motivation for this research

Collaborative strategies are developed to bring mutual benefits for the partners. For example, better turnaround, better profits, more satisfied customers etc. Even so, recent empirical studies found that the collaborative strategies are risky strategies (Das and Teng, 1999; 2001). Many of them fail or do not add the expected value at the point the alliance was set. For instance, Dyer *et al.* (2001) found in a study conducted on a sample of 200 corporations

that almost half of the collaborations fail or do not add the expected value at the point the collaboration was set. Choi et al. (2010) argue that failing rates of 40 to 70% are not uncommon. Similar results were brought by Taylor (2005). In this line of thinking, this dissertation aims to bring new evidence in order to contribute to the raising of the success rate of collaborative strategies.

On the other hand, within the international scientific literature (up to now and at least to our awareness) there is no empirical evidence from the Romanian market. In this sense, this dissertation contributes with rich empirical description and facts, for some dimensions bringing empirical support, for others bringing contradicting evidence, regarding the collaborative agreements the Romanian companies participate in.

Specific objectives for theory

This dissertation aims to refine, advance and expand the theory of strategic collaborations extant within the international literature. In other words, our work is not a new theory, our research strategy is not theory building, but nevertheless aims to contribute to the incremental advance of the existing theory in the field of strategic collaborations. In this line of thinking, the research approach is linear, starting with the revision of the main findings in the alliance literature, continues with the empirical research and analyzing the data and finally discussing the main results obtained. However, our research (especially the qualitative analysis) also contributes with inductive evidence that may constitute the basis for creating a new theory of collaborative strategies for small and medium-sized firms.

Specific objectives for practice

The present study is very important for the Romanian economic market since it is designed to provide support to companies in Romania to achieve strategic competitiveness both on a European and global scale. The general objective for the economic practice is focused on increasing the competitiveness of Romanian companies and more specifically, to increase companies' performance related to productivity (turnover, profits, better market share, etc.) and innovation (new products, new solutions, etc.) by participating in strategic collaborations. Thus, this dissertation aims to offer a set of principles for collaboration and a set of methods, techniques and practical practices for managing company's own collaborations. The principles and methods described in our work are mainly useful to the center of excellence for the professional management of the company's portfolio of strategic collaborations. To a certain extent, the work is also useful at the dyad level for the management of a particular collaboration.

Chapter 1. Substantiation and elaboration of collaborative strategies

Over the past two decades, strategic collaborations between companies has become the new way to grow and develop companies around the world. The competitive environment in which companies need to be active calls for the top management to pay more attention to this specific type of corporate level strategy (David, 2008). Competition is increasingly taking place between strategic alliances and strategic networks, to the detriment of competition between separate companies (Holmberg and Cummings, 2009). At the same time, competition takes place on speed and flexibility and companies often fail to acquire their resources and skills quickly enough to gain competitive advantage (Borza, 2012). Companies around the world have understood that joining the global competition on their own is an old-fashioned strategy and often this type of strategy does not create enough value (Vyas et al., 1995).

In general, we can say that there are several reasons for the development of strategic collaborations between companies (Klijn et al., 2010). It is very rare for two or more companies to collaborate to achieve a single goal of collaboration (Oxley and Sampson, 2004). Usually, at the basis for the development of a strategic collaboration is a main motivation coupled with some secondary objectives (Klijn et al., 2010). In this respect, a company can develop strategic collaborations on the following direction: (1) for innovation / exploration; (2) for exploitation; or (3) both for exploration and exploitation [Hitt et al., 2007; Nielsen and Gudergan, 2012; Rice and Galvin, 2006]. The latter one (exploration and exploitation simultaneously) is known in the literature as organizational ambidexterity.

Our point of view is that in order for organizations to gain sustained competitive advantage, it is necessary both to explore / innovate and to exploit the resources they have. In other words, it is not enough for a company to simply combine resources efficiently and increase productivity, in other words, to focus on improving short-term performance (e.g. maximizing shareholder profits), but it also needs to allocate resources and increase the innovative performance and ensure the long-term survival of the company [Hitt et al., 2007; Nielsen and Gudergan, 2012; Rice and Galvin, 2006; Rothaermel and Deeds, 2004]. In this respect, companies need to develop strategic collaborations to increase organizational efficiency and productivity, as well as innovation, in order to gain organizational ambidexterity (OA).

Overall, the present research outlines the main factors why some companies achieve superior performances related to productivity and innovation than other companies, due to the strategic collaborations in which these companies participate. In this line of thinking, we have

focused our research on investigating these factors in two main types of collaborative strategies: collaborative strategies at the company level and collaborative strategies at the business level.

Therefore, we have collaborative strategies at corporate level, classified depending the *structure of collaboration*:

- Joint ventures;
- Equity strategic alliances;
- Non-equity strategic alliances;
- Strategic partnerships.

At the business level we have classified the collaborative strategies depending the *objective of collaboration*:

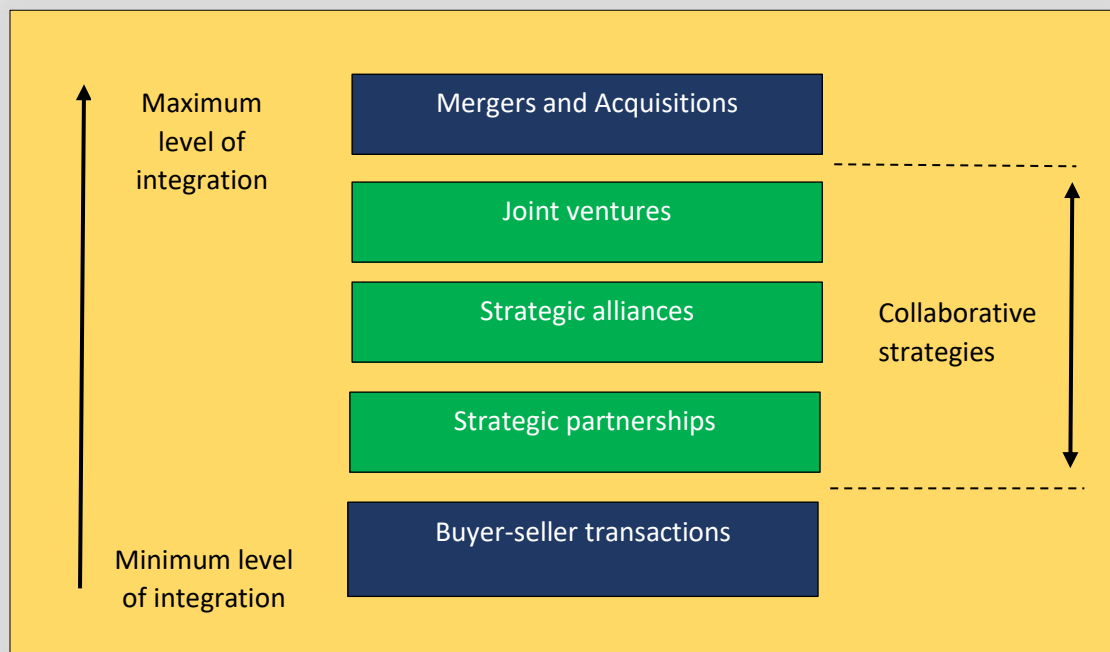
- R&D strategic collaborations;
- Production strategic collaborations;
- Marketing strategic collaborations;
- Logistic strategic collaborations;
- Support activities strategic collaborations.

All these types of collaborative strategies are described in detail into our work and there are discussed all the factors which need to be considered by the companies' management in the moment they want to engage into one new collaboration. The largest part of the first and second chapter are dedicated to try to find answers to questions such as: which situations favors the formation of a strategic partnerships in comparison with a strategic alliance, or which are the better situations for setting a joint venture. Also, in our work, we propose a model for partner selection and for the election of an adequate option for collaboration (at corporate and business level).

Chapter 2. Negotiation and projection of a new collaboration

Inter-organizational negotiation broadly refers to the consideration of interests of partners within one specific collaboration. This stage is very important because the activities developed into the collaboration can lead to the accomplishment or hampering the collaboration's goals. During the negotiation, each partner will use its own negotiating strategies according to the importance devoted to its own goals, compared to the importance given to the interests and objectives of the partner (Das and Kumar, 2011).

Figure 1. Collaborative strategies within the field of inter-organizational relationships



Moreover, in the negotiation and design of a future collaboration it is advisable that the managers to discuss aspects in four principal areas: (1) establishing common objectives - the objectives of the collaboration, (2) selecting an appropriate structure for the collaboration, (3) elaboration of the common strategy, (4) drafting the collaboration's contract. These four main areas (called strategic domains for negotiation) are discussed in detail in the research.

Another important aspect discussed in detail in this chapter is the elaboration of the collaboration's contract. Firstly, in the research we recommend that the managers to keep in mind that the collaboration's agreement needs to be developed later, after the foundations for the future collaboration have been established. In other words, the partners should first set the objectives of the collaboration and draw the joint collaboration strategy and only then they can proceed to design the alliance contract.

Secondly, it is important that they keep in mind that a cooperation's agreement should be viewed from a managerial perspective, beyond its traditional function (judicial function). In this line of thinking, we argue that the legal advisors are not the most suitable part for the development and improvement of cooperation contracts, because their perspective on collaborative contracts is often narrow or erroneous. For example, they tend to consider only safeguard clauses and often perceive a cooperation agreement as simply a document prepared at the beginning of the relationship (de Jong and Woolthuis Klein, 2009).

We argued earlier that most of the second chapter is dedicated to a discussion in detail about the process of selecting a collaboration's structure. We recommend that this strategic decision to be taken together with the future partner and consists of choosing between forming a strategic partnership, forming a strategic alliance or forming a joint venture to achieve the collaboration's goals. In this line of think, the readers may see in Figure 2 the main determinants of corporate level strategic collaborations.

Figure 2. Determinants of corporate level collaborative strategies

Strategic determinant	Joint venture	Strategic alliance	Strategic partnerships	Theoretical references
The generic objective of collaboration		R&D Production Marketing	Production Marketing Logistics Support activities	Teng and Das, 2008 Comino <i>et al.</i> , 2007
The number of objectives	Multiple and important	Few objectives	Only one objective	Oxley and Sampson, 2004 Comino <i>et al.</i> , 2007 Clarke-Hill <i>et al.</i> , 1998
Complexity of collaboration	High	Medium	Low	Oxley and Sampson, 2004 Comino <i>et al.</i> , 2007
Interdependency	High	High or medium	Low	Kuittinen <i>et al.</i> , 2009 Gulati and Singh, 1998
Coordination costs	High	High or medium	Low	Gulati and Singh, 1998
Output adjudication	Low	Medium	High	Gulati and Singh, 1998
Trust	Does not influence	Low or medium	High	Gulati and Singh, 1998 Kuittinen <i>et al.</i> , 2009
Previous relationships	New partners or unsatisfactory relationships	New partners or unsatisfactory relationships	Positive and satisfactory relationships	Zollo <i>et al.</i> , 2002 Teng and Das, 2008 Rahman and Korn, 2010
Partner alliance experience	No experience	Medium	Lot of experience	Teng and Das, 2008
The result of collaboration is a new product or technology	✓	✓	It is not indicated	Majocchi <i>et al.</i> , 2013 Gulati and Singh, 1998 Teng and Das, 2008
Partner resources	Table 2.2.			Das and Teng, 2000 Hoetker and Mellewig, 2009
Vertical collaborations	✓	✓	✓	Rindfleisch, 2000
Horizontal collaborations			✓	Comino <i>et al.</i> , 2007 Rindfleisch, 2000

Chapter 3. Implementation of collaborative strategies

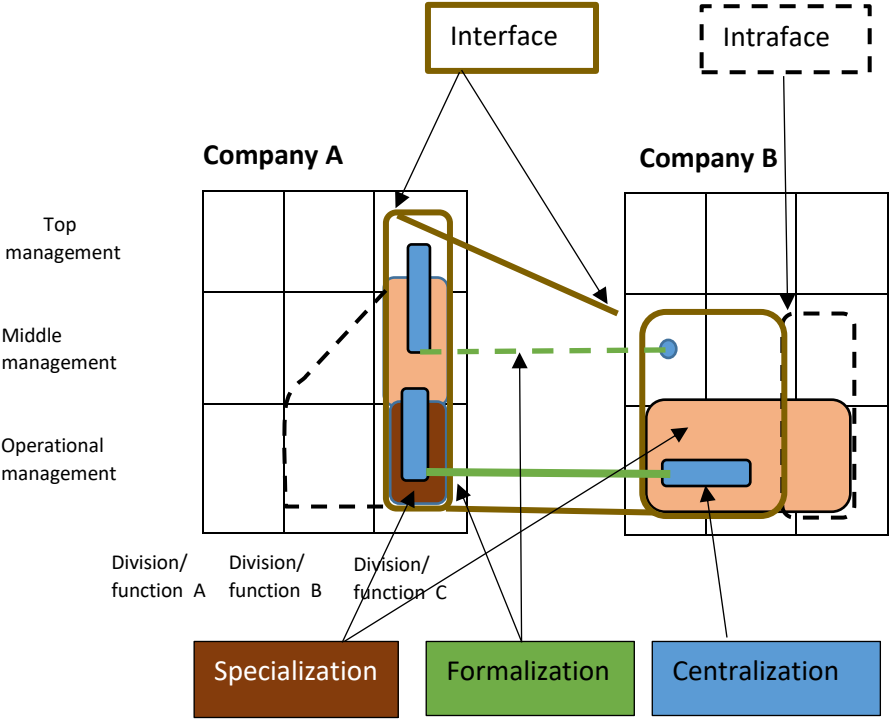
Top management develops collaborative strategies and sets the legal parameters for implementing the strategy, but the day-to-day operations, the interactions between people and between teams of engineers, sales, workers are the factors that actually determine the success of the collaboration (Nielsen, 2010). In the assumption of Taylor (2005), Kauser and Shawn (2004), Kirby and Kaizer (2003) how the strategy is implemented and how the partner companies manage the relationship over time are more important factors than the structure chosen to meet the objectives of the collaboration. In other words, according to these researchers, the operational factors are more important than the initial/planning ones.

In this context, the implementation of collaborative strategies and relationship management tend to become important topics also for the top management of companies. In other words, it is not appropriate to delegate the full responsibility for implementing the collaborative strategies to the alliance managers. According to Werner Hoffmann (2005) the top management through the collaboration policy is required to monitor the operationalization of all the strategic collaborations of the company. In this dissertation, we try to take a step forward in solving specific problems regarding the implementation of strategic collaborations from the perspective of top management of companies and the implications of top management decisions on relationship management and how the strategy is implemented.

In general, the implementation of collaborative strategies takes place through configuring and setting the implementation mechanism. There are three specific types of mechanisms that the partnering companies have to consider in order to implement the common collaborative strategy: (1) the legal, (2) the formal non-legal and (3) the relational. The legal mechanism refers to designing and elaborating the alliance contract that will specify the legal conditions under which the future activities will be performed. The formal non-legal consists of using formalized tools and procedures to manage the relationship. At this level, the main point is to create an independent collaboration's organizational structure. The relational mechanism mainly refers to managing the relationship through trust, mutual understanding and through building effective social relationships between the people who work in the collaboration (Albers et al., 2016; Bouncken et al., 2016; Hoetker și Mellewigt, 2009; Krishnan et al., 2015). Within the dissertation, we discuss in detail each specific mechanism for implementation and we present how effectively the work is organized within each structure for collaboration. For instance, according to Albers et al. (2016) the collaboration's organizational structure can be

designed through considering five parameters: (1) the interface, (2) the intraface, (3) the specialization, (4) the specialization, and (5) the centralization. (Figure 3).

Figure 3. Design of collaboration’s organizational structure



The final part of chapter three is devoted to a discussion regarding some aspects about how a company should behave into one collaboration in order to (1) the collaboration’s objectives be accomplished and (2) the partnering companies take advantage of each other valuable resources and competences and identify the new business opportunities within the environment. Within this dissertation, we recommend that the companies should behave in one collaboration on the following direction: on the one hand, the company want to get access to partner resources, plus to learn from him and on the same time, it needs to protect its resources and core competences. Each aspect is discussed in detail on the dissertation.

Chapter 4. Evaluation of collaborative strategies

Evaluating a company's collaboration strategies, in contrast to evaluating a company's fundamental strategy, involves two independent, but integrated levels of analysis (the collaboration level and the company level) and two topics/elements for evaluation (evaluating a collaborative strategy and evaluating the entire portfolio of strategic collaborations). Firstly,

the collaborative strategy should be evaluated by the collaboration management. The evaluation will consist mainly in evaluating the extent to which the collaboration has achieved its objectives. In the second stage, the collaborative strategy should be evaluated by the company's management in the parent company. The main point of interest is to evaluate the contribution of collaboration to the growth and development of the company. The management should assess whether the parent company performances related to productivity and innovation, resulting from the collaboration, have increased or decreased following the implementation of the strategy. It is important also to assess whether the collaboration is aligned with the company's future plans or with other corporate-level strategies. Then, in stage three, the company's top management will evaluate the entire portfolio of collaborations at the corporate level and at the strategic business unit level. The top management should determine whether the company's strategic collaborations (overall) add value to the company and whether the management of portfolio is done in an efficient and effective manner.

We conclude the theoretical part through discussing important aspects about the evaluation of the portfolio of collaborations. In particular, we deepen our discussion on the portfolio's management to highlight the need for companies to create a specialized function for the professional management of strategic collaborations of a company. Also, in this chapter an increased attention is paid to discussing the strategic alternatives that the company has at hand after evaluating its strategic collaborations.

Chapter 5. Empirical qualitative analysis regarding the collaborative strategies of Romanian companies

In chapter five we present the results of a qualitative analysis of data provided by ten medium and above average companies in Cluj County. In our study, have participated only top managers with an important background and experience in company's management. The average age of respondents is 46.8 years. The youngest manager is 38 years old and the oldest 59. With regard to the managerial experience, in our research group, the average managerial experience is 15.9 years. The least experienced manager has ten years of managerial experience and the most experienced manager has been in management positions for 23 years. In this line of thinking, after having conducted interviews with eight CEOs, a technical director and an economic director, we have obtained partial support for the theory proposed in the first part of the dissertation. The summary results of the qualitative study can be seen in Figure 4.

Figure 4. Results of qualitative analysis

Variables	Support the theory	Contradict the theory	Advance the theory
Portfolio management	Yes (20% of companies but only at business unit level)	Yes (80% of companies)	No
Company proactivity	Yes (40% of companies)	Yes (60% of companies)	No
Responsibility for company's strategic collaborations	Yes (60% of companies)	Yes (40% of companies)	No
Motivation for participating in strategic collaborations	Yes (100% of companies)	No	No
Partner selection	Yes (30% of companies)	Yes (70% of companies)	Yes
Negotiation and projection of a new collaboration	Yes (100 % of companies)	Yes	Yes
Corporate level collaborative strategy selection	Yes	No	Yes
Collaboration contracts	Yes (50% of companies)	Yes (50 % of companies)	Yes
Configuration of the implementation mechanism	Yes (100% of companies)	Yes	No
Protection from the opportunistic behavior	Yes (100% of companies protect themselves from the opportunistic behavior)	No	Yes
Encouraging the entrepreneurial orientation	Yes (50% of companies)	Yes (50% of companies)	Yes
Learning from the partners	Yes (100% of companies)	No	No

Evaluation of collaborative strategies	Yes (100% of companies, but not in a professional manner)	Yes (0% of companies evaluate the entire portfolio of collaborations)	No
Ending the collaboration	Yes (100% of companies)	No	Yes
Partner acquisition	Yes (10% of companies)	No	No
Continuing the collaboration	Yes (100% of companies)	No	No

Chapter 6. Empirical quantitative analysis regarding the collaborative strategies of Romanian companies

In this chapter we present the results of a statistical analysis of the data provided by 46 of the most important Romanian companies. For example, Banca Transilvania, Eximtur, Friesland Câmpina, Elsaco Electronic, NTT Data, Saint-Gobain, Viessmann, Emerson etc. Of the 46 companies, 23 are subsidiaries of important multinational companies in Romania and 23 are national companies. 30 senior management executives (20 of whom are CEOs), 10 middle managers, 5 operational managers, and a specialist marketing participated in our study.

Overall, we have obtained empirical support for all the variables proposed by us, variables that can influence the enhancement of performances related to productivity and innovation. To explain why some companies have more collaborations that meet their goals compared to other companies, we have obtained only two significant correlation coefficients. The results of the correlation analysis can be seen in Figure 5.

Within the dissertation, we have also conducted a multilinear regression analysis to see to what extent the set of independent variables proposed by us can explain why some companies get better performances than others through the strategic collaborations in which they participate. We have appealed to the hierarchical regression to eliminate the influence of some third variables that can also influence the performance of companies. For two of the three performance measurement models, empirical support was obtained. For example, for the model that measures the innovative performances, 39.5% of this type of performance variation is due to the independent variables that we have included in the model. (Figure 6).

All three regression models and detailed statistical analyzes, as well as other statistical analyzes (e.g. ANOVA tests and t Student tests to identify certain differences between the companies that have participated in our study) can be consulted in the PhD thesis.

Figure 5. Results of correlations analysis

Determinants of superior performances	Portfolio Performance (PpP)	Partial Portfolio Productivity related Performances (PPP)	Portfolio Innovation related Performances (PIP)
Company proactivity	,089	,560**	,573**
Specific managerial practices	,175	,386**	,241
Top management support	,184	,585**	,539**
Partner selection	,344*	,521**	,383**
Formal non-legal mechanism	,053	,318*	,348*
Relational mechanism	,252	,652**	,539**
Protection from the opportunistic behavior	,200	,450**	,331**
Monitorization and evaluation of collaborative strategies	,277*	,473**	,309*

*. Correlation is significant at the 0.05 level (1-tailed).

**. Correlation is significant at the 0.01 level (1-tailed).

Figure 6. Multilinear regression (Portfolio Innovation related Performances)

Dependent Variable: Portfolio Innovation related Performances

Independent Variable	Model 1 t Coefficient B	Model 2 t Coefficient B
(Constant)	6,105	-2,953
Company size	1,311	,069
Internationality	1,747	1,809
Industry	-,025	-,946
Collaboration contracts	,364	2,470***
Company proactivity		,392
Managerial practices		-,063
Formal non-legal mechanism		,127
Relational mechanism		,241
Protection from the opportunistic behavior		,186
Monitorization of evolution and controlling the strategic collaborations		-,176
R ²	,210*	,605***

*p< 0,10; **p<0,05; ***p<0,01

Chapter 7. Final conclusions and personal contributions

The main objective of this dissertation was to introduce a model for the professional management of the strategic collaborations of a company in order to increase its performances related to productivity and innovation and thus achieve organizational ambidexterity. We have intended to provide for each stage of the collaboration lifecycle the tools and solutions needed to achieve strategic competitiveness.

Special attention was devoted to creating a new typology that better reflects the reality encountered within the economic practice and selecting an adequate option for collaboration. In this sense, strategic collaborations have been classified into two main categories: (1) collaborative strategies at the corporate level and (2) strategic collaborations at the business unit level. For each of the two groups, the criteria (with empirical support) that were the most important for the selection of a suitable strategic option were described in detail. Also, the selection process was described in detail.

At the end of the theoretical part, we have deepened and expanded our discussion for the entire portfolio of strategic collaborations of a company. In this regard, we said that a particularly important aspect is the appointment of an executive responsible for managing the company's strategic collaborations and formulating the global policy for collaboration. We were also saying that through the global collaboration policy the executive management of companies should monitor all the strategic collaborations of the company from all the strategic business divisions and units. In this respect, all aspects discussed by us in greater detail within the present dissertation represent **principles for collaboration**, formulated to be useful to the center of excellence responsible for managing the strategic collaborations of the focal company.

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