



Master's degree in management

“Purchasing with Shell: a framework for renewed contracting and procurement practices in the context of startups engagements.”

Prof. Maria Jell-Ojobor

Supervisor

Prof. Pietro De Giovanni

Co-Supervisor

Antonino Mistretta

Candidate

Student Number: 735411

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Abstract

The research aims to explore the critical factors that impact the contractual relationships between multinational corporations and startups and to enrich the literature that connects the concepts of Contract Management and Supplier Development through a case study with Shell. Shell invests through its corporate venture capital fund in startups and then engages in buyer-supplier contracts. To address this gap, the research will conduct interviews with professionals from Shell and other multinational companies to identify the critical aspects that lead to contractual implementation difficulties and then employ a polar cases study to analyze two portfolio companies within Shell. The critical clauses are related to long contracting phases over intellectual property protection, data privacy, and liabilities management. The research finds that generalizable contractual difficulties exist and points out possible solutions. It does also shed light on the possibility to delve into this niche of the literature and makes an original work of exploration in that direction.

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1. Introduction

In the race of competition, innovation is the ultimate game changer. And multinational corporations know that well, that's why they are fiercely vying for partnerships with the most innovative startups in the market. These partnerships offer a chance to tap into the latest and greatest technological advancements, giving them the upper hand in the marketplace. “Examples such as Facebook or Tesla Motors have shaped the anticipation that it will be startups, not established corporations, who come up with the “next big thing” to create uncontested marketspace and disrupt entire industries” (Weiblen et al., 2015, p.67).

Startups bring a fresh perspective and agility, while established corporations offer financial stability and a proven track record. But as with any partnership, it's not always smooth sailing. In fact, “many past efforts of capitalizing on the complementarities between both worlds have not lived up to their expectations and were quietly abandoned. The gap between the corporate and startup ways of working poses real challenges to getting both sides together” (Weiblen et al., 2015, p.67). But what are the critical factors that can make or break this collaboration?

To understand that, this research is going to employ a case study together with the multinational company Shell, that will specifically explore how contractual engagements play a role in the relationship between big corporations and startups.

Shell, one of the leading companies in the energy sector, owns a vast portfolio of suppliers that operate in many fields, mainly oil and gas. But due to the pressing need of going through a clean energy transition, it started expanding in clean energy industries.

To do that, Shell set up a \$1.4 billion corporate venture capital fund (called “Shell Ventures”) that focuses on investments on renewable and nature-based energy solutions, e-mobility and emission management.

After taking a minority stake and sitting in the board of these ventures, Shell helps develop and deploy new technologies with the aim of then integrating them in a strategic relationship with the Shell businesses, through the creation of *procurement contracts*.

Shell Ventures noticed that the inherent differences of both partners not only benefit them, but also results in a variety of challenges, typical of this kind of collaborations (Minshall et al., 2010), and particularly in the contracting process. In fact, Shell managers apply (in line with industry best practices) contractual terms such as clauses and commercial terms in the same way as they do for large accounts and global suppliers. The phenomenon the company witnessed is that start-ups repeatedly could not sign onto many of those “standard” clauses in Shell contracts that other established suppliers could. This phenomenon has been detected already in the literature, as “young ventures commonly do not possess great experience or accumulated history” (Sutton, 2000), and they are faced with risks they cannot take, and therefore the signing and implementation of contracts does not happen or becomes very tedious.

The implementation problem stems from the inherent differences between the two partners that are not balanced in this collaboration (Alvarez et al., 2001). Specifically,

while big corporations benefit from a very structured and hierarchical organization, with clear and proven processes in place (Blomqvist et al., 2005) and financial solidity, startups instead benefit from a more fluid and responsive internal structure (Hogenhius, 2017). Big companies are more careful than with standard suppliers and less prone to “exploit” their power position, something that they could do more with standard suppliers instead, rightly because they want to be seen as a positive entity that nurtures them and wants to “integrate” them.

The research addresses this gap by conducting an exploration on the contractual implementation difficulties between big corporation and startups, assessing if it would be possible to find a common thread that is repeatedly presented and generalizable. To do so, it will set up initial interviews with professionals from both within Shell and other multinational companies, to narrow down the scope of the research to the most critical aspects that bring such contractual difficulties. After this phase and after having detected the presence of three most relevant clauses, a polar case study will be employed, selecting two portfolio companies within Shell (a “successful one that doesn’t suffer from such difficulties, and one that does) that will be analyzed through a broader set of interviews.

The critical clauses regard long contracting phases over intellectual property (IP) protection, and in particular on whether the startup or the company should retain the new IP rights stemming from the contract, but also data privacy and liabilities management.

This thesis will contribute to the literature by exploring ways of analyzing and discovering the source of contractual implementation difficulties and linking the analysis of these particular clauses to *Contract Management* and *Supplier Development*, that are the two variables that interact in this case. *Contract Management* is the independent variable and refers to all the processes that enable contracts to be fulfilled, while *Supplier Development* is the dependent variable and

refers to the process for which companies ensure the development of potential suppliers in a relational standpoint, so that they can fulfill their short-term and long-term needs. The research will offer different points of view regarding how to engage for the contractual terms of startups opposed to standard suppliers, as startups are usually engaged with as suppliers because of the main goal of *integrating* them in many businesses of the company. Researching the implementational difficulties between big companies and startups allows to fill the gap and find solutions to implement collaboration, finding conditions that better meet both parties' needs, especially in the expectation of current and future collaborations.

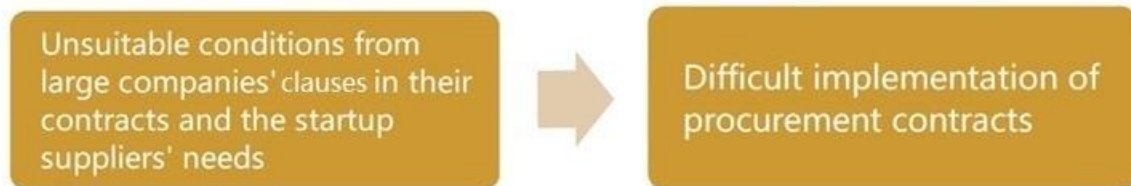
The research is relevant from a practical standpoint because it provides evidence not only for Shell but for virtually any of the big corporations that aim to improve contract implementation with startups as suppliers on which contractual position are best to start with when interacting with startups. It gives evidence of best practices when it comes to, for example, the protection of the intellectual property of the startups as well as the brand of the corporation, how to engage in joint development of new technologies without debate on the ownership of the technology, or for example how to best cover the risk of the contract by a fair allocation of the liabilities in case of breach of the contract or failure of the project.

The research aims to contribute at creating a debate on a new framework of contractual positions, starting from existing literature, that could be widely used and that could transform contractual barriers into winning solutions.

The research gives answer to the following problem statement: *What changes should Shell undertake in their Contracting and Procurement (C&P) clauses in order to remove the causes of contractual implementation difficulties when dealing with startups suppliers?*

The following figure summarizes the practical problem and conceptual model underlying the research:

- Practical problem:



- Conceptual model:



Fig. (1) Conceptual Model

In order to answer the problem statement, the following *research question* have been drafted:

- 1) What are the most recurring contractual implementation difficulties between large multinational companies and startup suppliers?
- 2) How can different contract management clauses between a large corporation and a startup in a procurement contract lead to the increase in contractual implementation difficulties?
- 3) What caused the implementational difficulties of procurement agreements between startups and Shell?
- 4) How can big corporations redefine contract management clauses so that they can decrease the contractual implementation difficulties?

2. Methodology

2.1 Research Strategy & Design Sources

The research used several methodologies to explore the main aspects of how to successfully manage contractual engagements between startup suppliers and big companies. The topic researched, although receiving an increasing attention in the literature, is still new and therefore the process of data collection proved to be challenging. That is why for this research an exploratory research design has been chosen. Exploratory research is a type of research design aimed at gaining a preliminary understanding of a phenomenon, problem or situation. The primary goal of exploratory research is to explore and understand a new or complex problem, and to identify new perspectives and generate ideas for future research.

One of the key references in the field of exploratory research is the paper "Exploratory Research in the Social Sciences" by Berg (2004). In this paper, Berg notes that exploratory research is particularly useful when the research question is complex or unclear, when the research process is new, or when there is limited prior research on the topic. He also notes that exploratory research can be used to generate new ideas, test hypotheses, and identify areas for further investigation.

This type of research is indeed often used when the researcher is unsure about the nature of the problem, the existing literature is limited, and the objective is to gain a deeper understanding of the problem.

The exploratory research involves qualitative methods, and this research in particular makes use of methods such as observation, (polar) case studies, and semi-structured interviews. These methods are used to gather data from various sources, including experts and relevant stakeholders, in order to gain a comprehensive understanding of the problem. This method is particularly useful for the scopes of this research as the flexible nature of exploratory research allows the researcher to change the direction

of the research as new insights emerge, as it did, and to gather a wide range of information and identify relationships and patterns in the data.

Another key reference in the field of exploratory research is the paper "The Marketing Research Process" by Kotler (2002). In this paper, Kotler notes that exploratory research is often used to help formulate hypotheses and to test assumptions. For example, if a researcher is studying consumer behavior in a specific market, exploratory research might be used to gather information about consumer attitudes and behaviors, to identify trends and patterns in consumer behavior, and to gain insights into the motivations and needs of consumers.

In addition to its flexibility, exploratory research is also beneficial because it can provide a deeper and more nuanced understanding of the problem, as it allows the researcher to gather a wide range of information from various sources. This type of research is particularly useful when dealing with complex and multifaceted problems, as it allows the researcher to gain a comprehensive understanding of the problem and to identify relationships and patterns in the data.

The research made use of primary data based mainly on semi structured interviews, observations and analysis of purchasing contracts, as well as secondary data like internal documents, industry reports such as the ones produced by consultancy companies like BCG or McKinsey.

2.1.1 Polar cases

For the sake of this research, two companies in the Shell Ventures portfolio have been identified and chosen as an example of polar cases. Polar cases refer to the use of extreme or unusual cases in qualitative research to provide insight into the boundaries and conditions under which the phenomenon occurs.

In qualitative research, polar cases are often used to help establish the validity and generalizability of a theoretical framework by providing a test of its limits. "Case research has consistently been one of the most powerful research methods in

operations management, particularly in the development of new theory” (Voss, 2022). In fact in this case by examining both cases in detail, the researcher can gain a deeper understanding of the underlying mechanisms that lead to successful or unsuccessful implementation, and can test the limits of their theoretical framework. “The use of polar extreme-types has also been suggested where cases have sharply contrasting characteristics [...] and leading companies have been used for the usefulness of the results for benchmarking purposes” (Barratt, 2011).

Yin notes in the paper "The Case Study as a Research Method" (2003) that the use of polar cases is particularly useful in qualitative research, as it provides a rich and detailed understanding of the phenomenon being studied. He also notes that the use of multiple cases allows the researcher to explore the relationships between cases, to identify common themes and patterns, and to test the generalizability of their findings.

In particular it is a multiple case study, where the term polar cases refers to two specimen startup suppliers that have both been proposed with the same standardized Shell contract, but that had two opposite responses. This methodology proves to be useful because in contrasting these two cases, it highlights and suggests some of the possible reasons why some clauses do not work, not only for the problematic company of the polar case, but by extension also for many others for which the aforementioned company is representative.

The first case that is going to be analyzed regards a Software as a Service (SaaS) company, *Company 1*, that developed a software architecture (and together with it, the hardware to make it work) that tracks and gives real-time energy consumption insights, enabling customers to analyze and adjust energy consumption within the smart home ecosystems. This company is going to represent the case that has most of the contractual implementation difficulties, as it was the object of long and difficult negotiations where all the three key clauses that will be identified in this research have been questioned.

Company 2 is also a software company that provides monitoring services based on a quantification solution that give continuous, wide area monitoring of hazardous and greenhouse gases (GHG) emissions across entire working sites, with reporting, alerts and follow up expert interpretation of key events. The companies could be considered comparable for what it concerns the business, but *Company 2* differs from *Company 1* by the fact that it was able to go through negotiations without difficulties and could sign onto the clauses almost seamlessly.

2.2 Data gathering and sources

Data Gathering could be divided into two different phases. An initial phase took place during the first weeks, in which the research was mainly conducted within Shell, interviews were conducted with Supply Chain Managers (responsible for drafting the contracts) and Implementation Managers (responsible for applying the contracts) inside the company in order to have an initial assessment of the problem, gain evidence of the difficulties and discuss whether these could be generalized and extended to other large companies, as well as gathering documental data, including the reports and the contracts themselves, and drafting the interview protocol. After the first weeks, the final phase took place where interviews were expanded and extended not only with Shell employees but also with managers from other big companies, both from the same industry as well as from different industries. At the same time, industry reports were analyzed and data from the polar cases was gathered through observation of contracting meetings with the ventures.

2.2.1 Interviews

Introductory interviews were conducted in the initial phase with Shell employees, in order to understand the main processes and problems behind drafting procurement contracts with the ventures. Three main kinds of internal roles were involved both during this and also the next phase:

- 1) Venture Principals: the professionals responsible for shaping the strategy and to identify investment opportunities. They are the ones that usually choose the ventures and shape their value proposition for the company
- 2) Supply Chain Managers: the most important role for this research. They are usually specialists in contracting and procurement, and hold the responsibility to go through the negotiations and of drafting and signing the actual contract
- 3) Implementation Managers: responsible for following up the actual performance of the contract.

All these actors play a role in identifying the frictions between a big corporation and a startup.

The first part of the research started with assessing which are the most significant implementational difficulties stemming from the contract clauses proposed by large companies to new venture suppliers, and treating them in scale of priority. In particular, a set of questions included in the “General questions” section of Appendix 1 was given to all the Shell employees involved in this research (Interviewee 1 to 5) and to all the Shell competitors’ employees involved (Interviewee 10 to 12). This sample was deemed diverse enough to give a good understanding of the most significant clauses that would be studied later on in the research. This part was crucial to identify the clauses that would have been analyzed later on in the research and consequently to draft the questions of the other sections of the interview protocol. This is because, although a certain degree of negotiation is inherent in any contractual interaction, it is necessary to identify a pattern of more frequent difficulties, which can be generalized, and which characterizes not only Shell but also other multinational companies.

The initial phase was of the utmost importance for the creation of the interview protocol (Appendix 1) as well as for the selection of the polar cases. The protocol included questions that went to cover the main contractual frictions that were detected within the first interviews, but it also included more flexible open-ended

questions that aimed at detecting other key frictions that could be overlooked by the more specific questions or suggesting new solutions.

In the final phase, around 12 semi structured interviews were conducted with both Shell Supply Chain Managers and other big companies' supply chain managers. The other companies included three other major multinational energy companies (Shell's Competitor 1,2 and 3) directly competing and therefore similar to Shell, as well as four key companies from other industries. In particular, two companies are global leaders in manufacturing of personal computers and development of software (Personal Computers Leader 1 and 2); one company is a world leader in aerospace defense but also manufacturing of civilian aircrafts (Aerospace Defense 1) and the last one is a leading company in E-commerce (E-Commerce Leader).

Name	Role	Company
Interviewee 1	Supply Chain Manager	Shell
Interviewee 2	Supply Chain Manager	Shell
Interviewee 3	Implementation Manager	Shell
Interviewee 4	Implementation Manager	Shell
Interviewee 5	Supply Chain Manager	Shell
Interviewee 6	Supply Chain Manager	Personal Computers Leader 1
Interviewee 7	Supply Chain Manager	E-commerce leader
Interviewee 8	Supply Chain Manager	Personal Computers Leader 2
Interviewee 9	Venture Principal	Aerospace Defense 1
Interviewee 10	Supply Chain Manager	Shell's Competitor 1
Interviewee 11	Implementation Manager	Shell's Competitor 2
Interviewee 12	Supply Chain Manager	Shell's Competitor 3

Table (1). Interviews overview

2.2.2 Negotiation Guide and Internal Data

The contracts authoring system from Shell was firstly analyzed: it is a cutting-edge tool designed to streamline the contract creation process. The system is designed to compile contracts automatically based on certain inputs provided by the counterparty, such as information about the company, such as its size, industry, and country of origin, or information about the scope of the contract, such as the presence of software or hardware and the risk hazards involved.

This system is connected to another powerful tool called the Negotiation Guide, which was analyzed as part of the research to understand Shell's standard positions for all contract clauses. This information was crucial in understanding the reasoning behind Shell's standard positions and helped researchers to assimilate the rationales that are common to all large companies.

The research results showed that these rationales are indeed shared by other large companies, and that the contracts authoring system and the Negotiation Guide are powerful tools that allow companies like Shell to streamline the contract creation process and ensure that their standard positions are consistently maintained.

This research provides valuable insights into the use of technology in the contract creation process, and the role that standard positions play in ensuring that contracts are consistent and efficient. The contracts authoring system and the Negotiation Guide are examples of the type of innovative tools that can help companies to achieve their objectives more effectively.

The research also highlights the importance of having a clear understanding of the rationales behind standard positions, and the role that technology can play in facilitating the contract creation process. It also highlights the need for companies to stay up-to-date with the latest developments in technology and to adopt innovative tools and practices that can help them achieve their goals more efficiently.

2.2.3 Contracts

Actual contracts that had already been signed between Shell and some of the ventures were analyzed as well. These contracts were the main source of information regarding deals that had particular difficulties and that had to go through reiterated contracting meetings. In particular, the two contracts with the two polar companies have been analyzed and compared, as well as other two contracts from other companies that had a slightly different wording on some clauses. These also showed the differences in terms of wording for some of the clauses specifically when they had been changed in later stages of the negotiations. Object of analysis were also contracts from other departments of Shell, namely the units that had to deal with Super Early-stage startups: three of these contracts were studied in order to see if common positions on some of the clauses could be drawn.

2.2.4 Observations

Three negotiation meetings have been attended between Shell and some of the venture suppliers, and among others, also with the two companies that had been chosen as polar cases for the research. The meetings took place in the presence of at least one supply chain manager and one implementation manager from Shell, while on the other side usually the CEOs of the startups attended, and once (during the meeting with *Company 1*) also the presence of legal specialists was recorded from both sides, as the negotiations had stalled on a very scrupulous analysis of the contractual formulations.

2.2.5 Industry Reports and External Data

An extensive review of industry reports took place. The analysis of industry reports from consultancy companies that explain specifically the collaboration between large established companies and startups did provide valuable insights, as they contain current practices and projections on future trends for this ever-growing kind of collaboration. In particular, a study named “When the honeymoon ends” by BCG

demonstrated the richness of studies for other aspects of such interactions but not for those within the scope of this research.

2.3 Data Validity

Validity is a crucial aspect of research that refers to the accuracy and truthfulness of research results. It assesses whether a research study is measuring what it intends to measure and whether the results accurately reflect the reality of the phenomenon being studied. There are several types of validity, including construct validity and content validity (Mehrens & Lehmann, 1973)

Construct validity refers to the extent to which a research instrument, such as a survey or questionnaire, measures the concept it is supposed to measure (Campbell & Fiske, 1959). In other words, it refers to the accuracy of the measurement tool used in the study. In this case, the validity is given by the relatively large sample of interviewees and by the questions that have been posed.

Content validity refers to the extent to which a research instrument covers all aspects of a concept or phenomenon (Norris & Lamm, 1976). It assesses whether the research tool captures all relevant aspects of the concept being studied. This has been increased by the fact that many questions, especially the ones from the first section, have been purposefully written in order to be more open-ended, so that if there were some more relevant facets that the other questions could leave out, they could be captured. Of course the research cannot capture many other aspects of the phenomenon, such as the non-contractual aspects of the interactions or the phase in which the negotiation starts to take place (pre or post investment for example), because that would be out of the scope of the research, although relevant for it.

Validity is important because it ensures that research results are accurate and trustworthy. This is increased by the fact that there is a relatively large pool of respondents. The importance of the study relies more on the fact that it can shed light

on the facets of a problem that hasn't been studied deeply yet, so the validity in this case has an accent, more than to the accuracy of the results and the solutions to the problem, on the coherence and trustworthiness of the fact that the study does highlight a relevant problem.

2.4 Data Analysis

The data coding has been built in order to reflect at best the most relevant topics that emerged from the literature in the areas of the conceptual model, as well as trying to remain as open as possible and capturing the patterns that emerged through the analysis of the data gathered from the various sources.

The guiding concepts of the analysis correspond to "Contract Management" (Concept Code **CM**) and "Supplier Development" (Concept code **SD**). The establishment of these two main codes allowed to choose the subcodes deemed most inherent. For "Contract Management" were chosen the subcodes: "Clauses" (sub-code **CM-CL**) that explains the content and characteristics of the contract clauses, that make up for a significant part of the research; "Negotiations" (sub-code **CM-NEG**) that explains the dynamics during the negotiations between the corporation and the startup suppliers; "Design" (sub-code **CM-DES**) that describe the actual contract design, for example in terms of length or readability.

For "Supplier Development" were chosen the subcodes: "Integration" (sub-code **SD-INT**) that describes the importance of the willingness and/or the capability of the two companies to create synergies in their respective businesses; "Trust" (sub-code **SD-TRU**) that explains the importance of this relational aspect in this research, especially as a "soft" method to solve contract implementation difficulties; and "Communication" (sub-code **SD-COMM**) that describes the importance of the frequency and modalities of the interactions between the companies for the success of the contract implementation.

Finally, the subcodes were connected to 23 unique codes, grouped like 4 codes per each sub-code, the contents of which go into more details and explain with more relevance the subcodes. The resulting scheme can be found in the Appendix 3.

3 Theoretical Framework

3.1 Contract Management

Contract management has been defined as “the process which ensures that all parties to a contract fully understand their respective obligations enabling these to be fulfilled as efficiently and effectively as possible to provide even better value for money” (Lowe, 2007). This research investigates the proposition that “the improvement of procurement performance can be accomplished through the development of suppliers if contract management is properly handled” (Rasheli, 2016). In this regard, buyers have a responsibility to ensure the effective management of procurement contracts is in place in order to guarantee that the agreed-upon deliverables will be met, despite the “difficulties and challenges that are presented in procurement contract management” (Oluka & Basheka, 2014; Rasheli, 2016).

As suggested by Transaction Cost Economics (TCE; Williamson, 1975) theory, contract management reflects the costs and efforts required to manage the formal contract between the firm and its suppliers (Zhao, 2016). Transaction Cost Economics theory in particular posits that companies “look for alternative forms of governance (e.g. firms, markets, or some form of relational contracting) and gather information, assign and enforce property rights [...] in order to make their own make-or-buy decision in favour of the least costly of the governance forms” (Pessali, 2006, p.45).

This is as true as ever since TCE, nudged by the shift in perspective of the last twenty years (Cáñez et al., 2000, p.3), evolved. In fact, while at the time of its inception TCE focused on answering the make-or-buy question uniquely from a cost perspective (Levy and Sarnat, 1976; Bassett, 1991; Poppo *et al*, 1995), the aforementioned

developments allowed to tackle the problem in a more strategic viewpoint, and started to include other factors, including contract management (Jennings, 1997, p.86).

Interestingly enough, the domain of Corporate Venture Capital and specifically how it is studied in this paper is at the forefront of the development of such a theory and represent a very peculiar form of make-or-buy decision to minimize the transaction costs, as the corporation who invested can either decide to strengthen its relationship with the venture and create a solid long term buyer-supplier relationship (buy), as well as decide to increase the investment and acquire the startup (make).

In this concern, Shell themselves do a make-or-buy analysis through a Kraljic Matrix that they created, and that leverages the possible buyer-supplier scenarios (Glöckner et al., 2005, p.6).

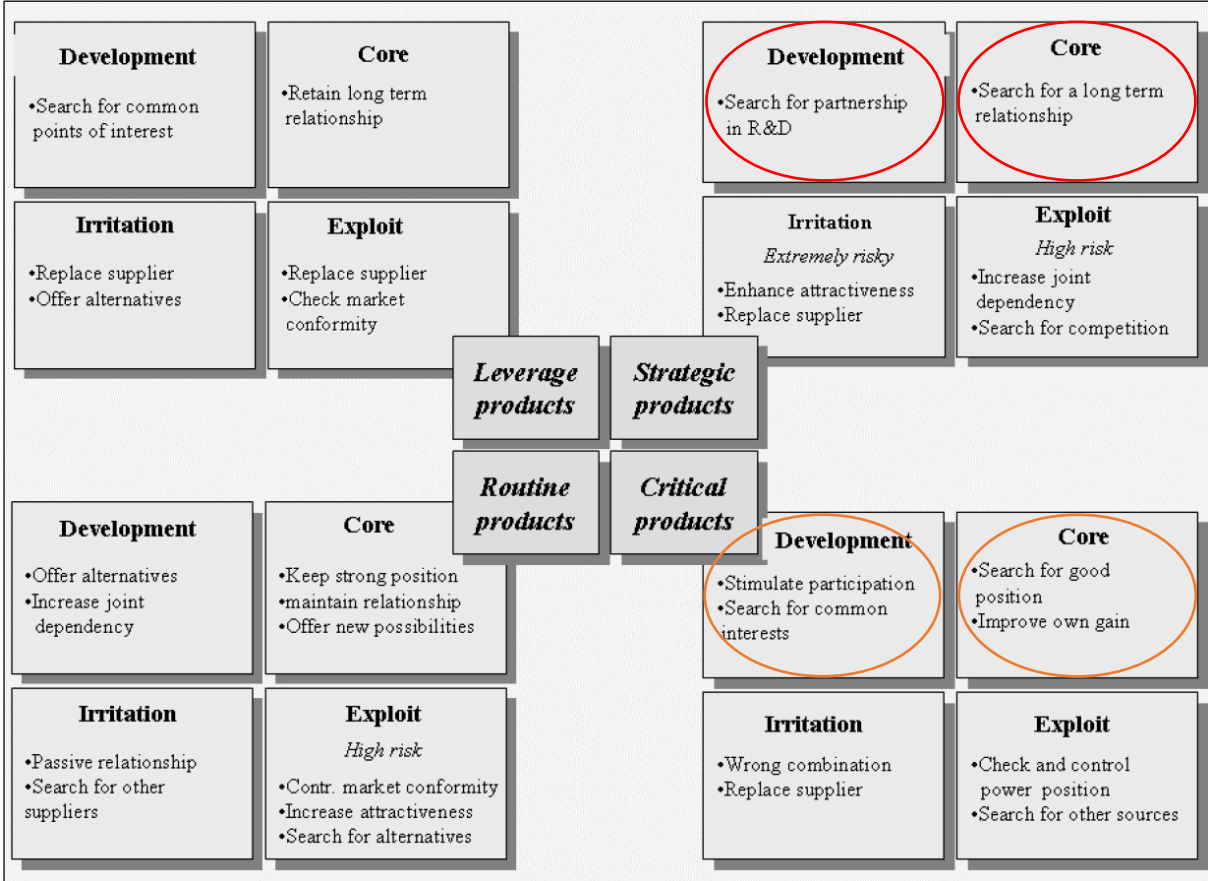


Fig. (2). Use of Kraljic Matrix at Shell BV [Pieters 2004]

In the case of this Kraljic Matrix, the positioning of the startups in Shell's business is highlighted by the orange and red circles: while they all share a good degree of risk/complexity, some of them have more financial impact than others.

TCE provides an effective framework for managing procurement contracts and other important contract management mechanisms (Rasheli, 2016). It suggests that organizations that experience greater contract management difficulties in terms of the costs associated with managing contracts with engaged suppliers are less likely to achieve the desired procurement outcomes. These difficulties can be assessed in terms of the efforts and costs spent in managing formal contracts with engaged suppliers. (Williamson, 1993; Zhao et al., 2018). Therefore, this explains why treating "contract management" as an independent variable (see 3.3) The contract management literature is linked to another area of the literature, known as *Supplier Development* literature.

3.2 Supplier Development

Supplier development can be defined as a process of enhancing the capabilities of suppliers to meet the specific requirements of a buyer in terms of quality, delivery, cost, and innovation. According to Krause and Handfield (2003), supplier development involves a collaborative approach between the buyer and the supplier, aimed at improving the supplier's performance and competitiveness.

And most of all, for the sake of this research "supplier Development is one of the supplier management practices that is thought to perform successfully in the presence of adequate *contract management*" (Narasimhan et al., 2008).

The actual available empirical-based literature has little evidence in the corporate venturing sector, not covering the specificities of dealing with startups and focusing mostly on different aspects than the contractual ones, since it focuses on a strategic viewpoint (see Dushnitsky et al., 2005), that specifically means studying whether or not

a big company should engage with a startup for procurement and when to do it (Hogenhuis et al., 2017; Oke et al., 2013).

Based on this limited empirical evidence, and as “there is comparatively little work on the challenges encountered when one of the partners is a very young company with limited commercial track record” (Mankins, 1995), this study fills in the gap by looking at the role of supplier development in improving the performance of procurement contracts with the ventures.

Even if little seems to have been said about how to do this integration in an *implementational and contractual viewpoint*, taking into account all the contractual frictions that recurrently appear when a big corporation deals with a startup to integrate it in its supply chain as a supplier, we have recently seen a great effort in building up literature and contributions to the study of the contractual facets of the collaboration between startups and big corporations. For example, Kurpjuweit et al. (2021) did an extensive work on reviewing part of the literature and then delved into the topic of the peculiar startup supplier selection, adopting “a multiple case study design in order to extend the sparse research in the emerging field of new venture suppliers and contribute to the supplier selection literature” (Kurpjuweit et al., 2021) or Zaremba, Bode, and Wagner (2017) that “developed the concept of **new venture partnering capability**, which captures a buying firm’s effectiveness in leveraging the potential of new venture suppliers”. These frameworks are helpful in identifying key aspects and friction to take into consideration before the actual contract signing, and shed some light on the possible frictions that could stem from it.

In this matter, a very significant paper that studies this phenomenon is “Development of practitioner guidelines for partnerships between start-ups and large firms” (Minshall et al., 2007) that poses the ground for reflections on how the procurement literature specifically focusing on the startups is evolving and will evolve in the future.

3.3 Interaction of the variables

“It is generally known that the use of contract management practices reduces transaction costs, specifically in relation to information and the negotiation and monitoring of contracts” (Rasheli, 2016).

The research investigates the “contract management difficulties” in the context of contracting and procurement as a generic term to define every stalemate that the procurement team of both companies face and resulting from a diverge on key issues like the agreement on the scope of the contract, the different positions that the companies have on key topics like Intellectual Property Rights (IP Rights) ownership (stemming from the performance of the contract) or liabilities, and every other hiccup that come on the post-investment phase when negotiating a procurement contract.

The variable "contract management" is the independent variable. It refers to the ability of the buyer (the big corporation) to effectively navigate and manage any difficulties or challenges that may arise in the contract negotiation and execution process with a startup supplier and to ensuring that those potential suppliers can actually meet their short and long-term requirements. Studying and acting on this variable offers an answer to the first research question: what are the possible reasons of contractual implementation difficulties between large multinational companies and startup suppliers?

The contractual implementation difficulties can indeed be influenced by the company’s choices in regard to their contract management policies. Moreover, the independent variable has a direct impact on the dependent variable of Supplier Development. The research proves that different contract management choices lead to more or less significant changes in contract implementation difficulties. As an example, what is included in specific clauses of the contract that address the unique challenges of working with a startup, such as intellectual property rights, affect the amount of negotiations with the startup. Therefore, the company can actually help mitigate the risks of working with a startup supplier. This answers to the question: how can different contract management terms between a large corporation and a startup in a

procurement contract lead to the increase in contractual implementation difficulties? Effective choices on the contract management variable can in fact lead to successful supplier development and improved performance in procurement contracts.

4 Findings

4.1 Current situation assessment

The first part of the research was aimed at assessing the main contractual implementation difficulties and the related clauses through the answers to *Section 1* of the interview protocol.

Despite the fact that the employees involved from both Shell and the competitor companies had different roles and areas of expertise, the answers on where the main difficulties were stemming from were reasonably uniformed and converging. When describing the contractual implementation difficulties during the contracting negotiation (*Question 1* of *Section 1*) the respondents all reported that they involved mainly two aspects: the first regards long and multiple sessions on the interpretation of some clauses, due to the fact that they were hard to comprehend or had been misunderstood by the executives of the startups; while the second regards actual pushbacks on the contractual content of some of those clauses with the request of better conditions for the startup.

This part of the research continued investigating which clauses bring most of the contractual implementation difficulties. Particularly representative is the answer of *Interviewee 1*, a Shell Supply Chain Manager expert and responsible for portfolio companies in the “emission management” field (companies that work on either tracking or intervention management inside the refineries), to *Question 2* of *Section 1*:
“The main frictions always recur within the same clauses, mainly Intellectual Property Rights clauses, as the ventures are jealous of their “secret sauce” which is basically their

reason of existence; “Liabilities Management”, that basically means how much they are liable when there is a breach in the contract for negligence or similar problems; and “Data Privacy”, which means all the clauses that enforce them to have or acquire the infrastructure necessary to protect the Data that corporations share with them, for instance due to the come into force of the GDPR regulations. Honestly, I don’t know if Shell should change its contractual standards to meet these needs, but what I notice is that many actors in the industry have similar positions and similar problems. I think that a unified framework could and should be developed and that it would benefit both corporations and startups.”

The responses, although given by interviewees that were in contact with different kinds of startups in different fields, showed a strong convergence to five different most recurring items that were always mentioned: intellectual property clauses, liabilities clauses, data privacy clauses, insurance clauses, payment terms clauses. Respondents were later on also asked to rate in order of importance which clauses among these were most impactful on the contractual implementation difficulties (Question 3 of Section 1). A broader representation of the answers to this question can be found in Appendix 2.

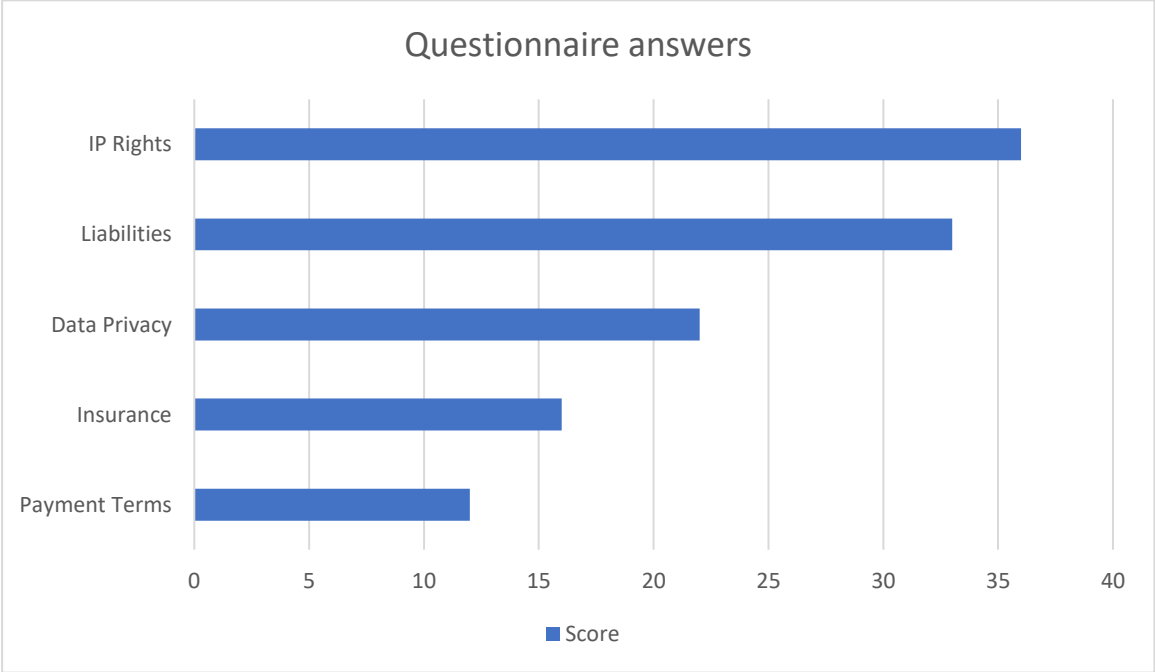


Fig. (3) Answers to questionnaire

This was useful to build the rest of the interview protocol and in particular to shape the questions about the three main contractual clauses and then to choose the other interviewees within Shell that had knowledge of the two companies chosen for the polar cases.

4.2 Intellectual Property Rights

The questions on what it concerns Intellectual Property Rights and how to treat them presented a clear dichotomy: although almost all the interviewees agreed that it is of the utmost importance for a big company that has procurement contracts in place with startup suppliers to have a clear description of how the intellectual property rights stemming from the contract should be treated, and that that position should be favorable for the supplier otherwise the contract could be aborted, at the same time the opinions on how to make this possible were different and could be split into two interpretations.

The first position, that reflected the position of the majority of the interviewees, states that the new Intellectual Property Rights stemming from the contract should vest exclusively within the startup and that the corporation should not claim it.

A significant passage from *Interviewee 10* explains the rationale behind why most multinationals should converge into thinking that the Intellectual Property Rights should be given to the startups:

“If you are engaging with a startup because you want to start commercial agreements with them, you should avoid giving the impression that you are trying to do “Mergers & Acquisitions (M&A)” on the cheap.

You should communicate as clearly as possible that you have no interest in any Intellectual Property whatsoever. But the same logic applies with other commercial tools, like the so called right of first refusal or similar ones, because, again, you give the

impression that you substantially want to own the company/technology, while formally you only own a minority stake.”

This is the position that was taken when contracting with *Company 2*, the successful case. There were no particular negotiations with *Company 2* on this point and the company landed the signing of the contract with no difficulties.

A minority of respondents expressed an opposite opinion, substantially arguing that it is right, in the context of a procurement contract (even with a startup) to expressly request that any intellectual property rights deriving from the contract should be given to the buyer, so the corporation, as a part of the performance of the supplier. According to this opinion, in fact, the company pays a fair price for a service and should get hold of the rights stemming from it. This was the case with *Company 1*, where the managers proposed the clause and received a pushback from the startup. According to *Interviewee 2*, that managed the negotiations directly, the startup declared that they could not sign onto the clause because that would contaminate their own intellectual property and expose them to the risk of losing their competitive advantage.

A common theme and relative discussion that was detected from the answers to the questions on this topic regards the way intellectual property rights should therefore be treated, and more specifically it fueled a debate on whether or not the use of the tool of non-disclosure agreement would be appropriate and could partly solve the issue. Non-disclosure agreement (NDA) in this case refers to a clause that outlines the confidential material, knowledge, or information that the parties are allowed to share with one another but are forbidden to share to third parties. For example, on this matter *Interviewee 11* stated:

“Usually we solve the issue by helping the ventures signing a non-disclosure agreement. This can help protecting both ourselves and them. When we ask them to sign an NDA, it shows that we take the protection of our confidential information seriously and we expect the same level of commitment from them. This can be

particularly useful when we are working on joint projects or exploring potential business deals.”

This opinion was shared by half of the respondents. Another half of the respondents were of a different opinion, that could be summarized by what *Interviewee 12* said:

“We can’t sign an NDA beforehand. That looks like the most obvious solution, but if you think about it that would limit us to do business with any even remotely related products anymore. Or at least that would make us vulnerable: we work with many similar companies on similar products! We would be exposed to the risk of being accused of having used their information and consequently of not having complied with the agreement. Then we would have to prove that we already had the information and that we did not take it from them!”

4.3 Liabilities Management

The Liabilities Management clauses refer to the cases in which the contract is breached by the ventures because of negligence or similar motives and cause an economic or material damage to their counterparty. It specifically describes the case in which a breach of the contract takes place, and its formulation is very important on deciding what makes a breach of the contract and what not. Finally, it could welcome a section that specifically describes what are the cases for which, at the contrary, a compensation for the damages is not foreseen or is explicitly excluded. This clause was regarded as the second most important because of the frequency with which the ventures would push back, asking for more protection in the case these circumstances should occur. As reported by all the interviewees, the ventures may ask their counterparties to put a *cap* on the amount of damages they should reimburse. Asking for a cap means that the ventures, being unexperienced and financially unstable entities, are conscious that signing an *unlimited* liability clause that makes them liable for the entire value of the damages that could be inflicted would expose them to an

almost certain situation of default, and therefore ask to limit the amount of damages to reimburse for quantities that are usually not crucial for big multinationals but could be decisive for the ventures themselves.

Investigating on this matter, evidence shows again that there is not an optimized or univocal position and that big companies struggle to find a point of balance. It could be also said that essentially companies could be grouped in two groups, one that applies the cap and one that does not. For the latter group, *Supply Chain Manager 5* from an aerospace multinational company states:

“There are many things to consider when contracting a liability cap. For example, the experience of the leadership team. Did they work with a big company before? What stage of investment are they in? In general I would say we are quite strict, we put insurance and risk management structures in place for these things. It’s always best to have a founder that understands this kind of risks. After all, if we incur in a very high risk, why should we be taking this liability ourselves by limiting theirs?”

Supply Chain Manager 3 from a major energy company instead states:

“Liability clauses for ventures are rarely unlimited. They would not accept them at all. And moreover, if the amount of the damages was so big to make them go bankrupt, how could that be of our interest? They would not be able to fulfill the contract anyways. Instead, the objective is to discuss what financial capabilities and insurances the startups have and agree on a maximal amount of the cap. If they can’t make an insurance for 5 million euros, for example, let them make it for 3 million and put a cap. We are willing to take the risk”.

4.4 Data privacy

The Data privacy domain is the last theme that interviewees indicated as a major difficulty. Data privacy here is defined as both the provisions that regulate the information on the valuable brand that the big corporations represent and that the

ventures might use for commercial scopes, as well as all the information related to products and people and its infrastructure that has to be managed and stored in performance of the scopes of the contract. This is especially important as new privacy regulations like the GDPR is coming into force in the last years.

The discussion here yielded coherent and unambiguous points of view by the polar cases. It is represented by the quotation below.

Interviewee 1 from Shell states: "As an equity investor and later as a commercial partner, information you disclose is very limited. Of course, it depends on the nature of the contract, but it is more the info that flows the startup to you, especially for investment purposes. In general, it's important to separate the commercial with equity investment. Commercially speaking, the startup needs to prove they have the capabilities to uphold the legal requirements for privacy law and for the commercial terms. Lower requirements on this side are therefore not to be used, and most of the times it is not even needed."

5 Discussion

5.1 Intellectual Property Rights

In sum, the findings suggest that there is an overall agreement on the fact that Intellectual Property Rights are the clauses that attract the most difficulties from the ventures; as one of the interviewees stated: *"it is the everyday struggle"*.

Indeed, although all the big companies agree on the fact that most of the rights should be given to the venture, the sample proves that there is not a clear and unified opinion on how to do that, and there is not yet an optimal position that could work to minimize these frictions in most of the cases. In fact, "by reviewing the state-of-the-art literature on the roles in interfirm collaboration [...] trust, intellectual property and contracts are seldom discussed simultaneously" (Blomqvist et al., 2005).

One of the key issues with intellectual property rights in procurement contracts is the perceived conflict between the interests of the big company and the startup, and the fact that the startup can't cover all the costs of protecting such IP. "The protection of intellectual property is still rather expensive nowadays. The costs include mainly the designing and implementation of a management strategy... which can be very discouraging and problematic for startups" (Baran, 2018).

While the big company may want to retain the rights to any intellectual property that arises from the contract, the startup may want to retain these rights for themselves. "This conflict does actually lead to difficulties in negotiating and finalizing the contract, which can in turn lead to a breakdown in the relationship between the two parties" (Kurpjuweit, 2021). In fact "large firms tend to use their own tools and decision criteria to determine how they strategically manage IP, while small businesses tend not to use a formal strategy" (Cho, Kirkewoog & Tugrul, 2018).

Two respondents (*Interviewee 9 and 10*) advocated the concept of "trust", as coded in this research, for overcoming this difficulty: they affirmed that since both the corporation and the startup inevitably come in contact with the other's IP, and there is no way of assuring that the IP would not be used especially considering that each of them have multiple contacts with companies similar to their counterparty's, then a mutual non-contractual agreement on trusting each other is helpful and it does also encourage a "supplier development" perspective. However, other respondents were not of the same opinion. A survey by Hughes and Maeda (2003) on this matter found their respondents to be ambivalent as well about the concept of a spirit of mutual trust; moreover, they held that authoritative contract management would still improve performance.

Despite this conflict, the research suggests that when companies adopt clauses that give the startup the right to retain the intellectual property rights arising from the contract, there are fewer difficulties in the negotiation and finalization of the contract. This is because the startup is able to feel more secure in the knowledge that their

intellectual property is protected, and the corporation can feel more confident in the startup's commitment to the project.

Another area of discussion that emerged from the study was the role of non-disclosure agreements (NDAs) in addressing the issue of intellectual property rights in procurement contracts. Some of the interviewees felt that NDAs could be a useful tool in protecting both the big company and the startup by setting out the confidential information that each party is able to share with the other. This can help to build trust between the two parties and ensure that the confidential information is protected.

However, other interviewees were of the opinion that NDAs could limit the ability of the startup to do business with other companies or expose them to the risk of being accused of using confidential information that was not disclosed under the NDA. This last theory is more consistent with what has been stated before by some interviewees when talking about trust, and it is also backed up by other studies and in particular an experiment done on students by Marcus, 1999 that found out that “based on confidentiality agreements signed with one professor, students were in some cases unable to complete assignments given by another professor due to the overlap in the assignment vis-a-vis the confidential information” (Marcus, 1999). These concerns highlight the need for a nuanced approach to the use of NDAs in procurement contracts, which looked like a trivial matter at first but then it proved itself actually crucial because one of the most important and used tools for this kind of clauses, and the importance of considering all the potential consequences before entering into such an agreement.

5.2 Liabilities Management

The theme of liabilities management clauses proved to be a contentious issue as two distinct schools of thought arose. The disagreement centers around the assessment and perception of the risk of a startup failing to fulfill their promises. The big corporations want to be fully protected in the event of a startup's failure, as this could

disrupt their operations. In their view, this is a matter of trust and commitment, and they believe that by asking for adequate liabilities protection, the startups will be more motivated to fulfill their contracts.

However, the startups argue that it is unreasonable to ask for such a high level of liabilities coverage, especially if they are unable to meet these obligations. This creates a conflict between the interests of both parties. This opinion is withheld by some of the interviewees that do agree on putting a cap in the liability, and in particular *Interviewee 10* who states that *“the contract is usually a document that is necessary but yet that at the same time should be used as little as possible. In general we tend to solve issues, even when they are not even too trivial, through communication rather than contractual action. We understand them and try to make the life easy for them, and mentioning the menace of clause usage should really be the last resort”*. There is evidence in the literature of authors agreeing with this school of thought: *“To facilitate successful projects, contracts after being signed should be “left in the drawer” (Latham, 1994).*

Despite the differences in opinions, all participants appeared to agree on one key point: any cap on liabilities should not cover damages that result from a violation of legal provisions. Many of the participants emphasized that damages from legal requirements must not be waived and should not be counted towards the assessing of the *plateau* of the cap, even if the startups request it.

In fact, the role of the legal framework in the liabilities management process is crucial. The legal system provides a basis for determining the extent of the liabilities that a startup must bear in the event of a failure to fulfill their promises. This provides the necessary protection for both the startup and the big corporation.

The author Rowan in the book *“Remedies for breach of contract: a comparative analysis”* (2012) states that *“the purpose of the law in contracts is not to punish deficiencies in performance, but to ensure the legality of the actions taken through the contract in that particular country”*.

For example, if a startup fails to fulfill its contractual obligations, the big corporation may have a right to seek compensation for the damages incurred. However, if the startup breaches the law, it is likely that they will be subject to legal penalties, which will significantly impact their financial situation. In this case, the liabilities cap may not provide adequate protection for the big corporation.

It is important to note that the liabilities management process is not only about protecting the interests of the big corporation. It is also about ensuring that the startup has the financial resources to fulfill their promises. If a startup is asked to bear an excessive amount of liabilities, it may discourage them from taking on new projects, and limit their ability to grow and develop.

Therefore, finding a balance between the interests of both parties is essential for the success of the liabilities management process. This can be achieved through a careful analysis of the risks involved, the financial capacity of the startup, and the legal framework. The parties must also consider the specific characteristics of the project and the nature of the contract.

In conclusion, the theme of liabilities management clauses is a complex and controversial issue that requires a careful and nuanced approach. The interests of both the big corporations and the startups must be considered, as well as the legal framework, to find a balance that ensures the success of the project. Only by taking all these factors into account can a mutually beneficial solution be found, one that protects the interests of both parties and promotes the growth and development of the startup.

5.3. Data Privacy

All the respondents tend to agree that the ventures need to be comfortable in processing and protecting the data, and stepping down from this perspective does not seem like an option anyways. In fact, the interviews showed that anything that comes

into force from the law has to be followed, especially in terms of how data is treated, and it would be considered as a fraud to do any kind of agreement between two parties to elude such enforcements.

Not only, but data states clearly that it is a matter of trust and commitment as well: if a startup is not able to withhold with such requirements, it means that it is not ready to embark in a contractual agreement with a bigger company at all. For what it concerns the use of brand logos and such things, the matter is more controversial. In fact, it is not rare that startups are very keen to utilize such corporation data to achieve brand/marketing advantages, as working with such companies is renowned for being helpful in such contexts. That being said, in terms of how this contractual implementation difficulty can be lightened or overcome, not much is concluded from the interviews: in fact, most of the interviewees take this as a fact and accept that it is a clause that should be accepted as a whole without much room for debate. In fact, the only thing that seems can be done to attenuate such risk is to minimize the amount of information that the partners share with one another. In this way, the risk and burden of holding such information is minimized as well. Of course, sometimes this can't really be done easily as the interaction presupposes an exchange of information that is mandatory.

6 Conclusions

1. Conceptual and theoretical contribution

The research contributes to the development of a theory that can describe the under-explored field of contractual interactions between big corporations and ventures when creating procurement contract. It provides a seminal work of literature reviewing of existing research on the topic, that proved to be not exhaustive as the existing material covers studies on the motivations and goals of corporate venturing, as well as examining the challenges of corporate-venture interactions but only on a generic

sense. It then starts to explore whether or not a common thread could be found in this specific niche of contract management and supplier development. In fact, the study aimed to be generic enough in order to be generalizable and to shed light on the possibility to explore new theory that could be further researched in the future. It starts to question if a general framework for the corporate-startup exists and how such a framework could look like, building on broader theories and mainly on Transaction Cost Economics theory, that is able to describe how the independent variable “contract management” can influence the dependent variable “supplier development”. The study suggests that transactional costs related to lengthy negotiations regarding these clauses can actually be lowered by increasing the awareness on the nature of such frictions, and through the research it starts to understand if there are contractual clauses that more than other have a role in this and if they can be addressed. Comparative studies like this one indeed shed a light on the fact that patterns concerning the content of such clauses do exist. It is therefore deemed appropriate to state that this research could build upon the existing and developing literature that “investigates the interaction effect of contract management difficulty on the link between supplier development and procurement performance” (Rasheli, 2016).

2. Limitations

Although being a work that studies a topic that is of increasing interest but not yet studied enough, it suffers of all the constraints that such a situation entails. For example, the scope of the study is quite limited, as it focuses on the specific example of Shell Ventures’ portfolio companies. The comparisons with other big corporation is included, in order to understand if such concepts are shared with others and if they can be generalized, but just few of them were selected for the interviews, also considering the limited number of contacts the researcher had hold of. Surely wider researchers will have to be done that include not only more corporations, but also should include the startups’ point of view, that can be seen as specular to the one of

the corporations and that for time and resources constraints here could not be interrogated.

On the methodology side, the research did not consider other factors that could impact the success of partnerships between established corporations and startups and that are not strictly contractual, even if they impact the contractual negotiations as well. This is particularly true and important because during the interviews themes like trust, defined mainly as the tacit and non-written agreement on the course of action for some specific clauses was not taken into account as it was considered out of scope for the research although it was quite present as a theme. Moreover, the case study is not big enough to be a good representative of the general population. This limits the generalizability of the findings and conclusions.

Another curious feature is that the study takes initially for granted the inherent differences in their way of working between corporates and startups, but it may not take into account the fact that there can be startups that have a very structured and hierarchical organization and many resources. This was particularly evident when interviews showed that there were startups with structured contracting and law teams. A completely different flow of work with those was noticed. This was a particular case that underlined the possibility to make studies that could complement this one through the study of “soft” features that could still be useful.

3. Future research

The findings from this work highlight the need for further research in a number of areas related to the contracting process in ventures. The lack of a unified literature on these topics presents opportunities for new research to fill the gaps and create a more comprehensive and integrated framework.

One potential direction for future research could be to explore the role of different industry sectors and make specific assumptions for each. This would enable a more nuanced understanding of the contracting process and its challenges, as the

characteristics and demands of each sector are unique. Additionally, an examination of the role of "soft" measures such as trust and communication in the contracting process would be valuable. These intangible elements can play a critical role in the success or failure of the contract, and a better understanding of their influence would be informative for both practitioners and researchers alike.

Another area for investigation is the impact of legal and regulatory frameworks on the contracting process. Different countries have different regulations in place that can influence the contracting process, particularly with regards to themes such as Data Privacy and Intellectual Property Rights. Comparing and contrasting these frameworks could shed light on best practices and highlight areas where improvements can be made.

Finally, the role of intermediaries such as venture capitalists and business accelerators in the contracting process could also be the subject of further investigation. These entities play a key role in providing information and support to ventures, and their impact on the contracting process was noted several times during the research. By investigating the role of intermediaries in more detail, we could gain a better understanding of how they facilitate the contracting process and identify any potential areas for improvement.

In conclusion, the results of this work serve to highlight the broad range of opportunities for future research in the area of venture contracting. By addressing the gaps in the existing literature and exploring new avenues for investigation, it would be possible to create a more comprehensive framework for understanding the complexities of the contracting process with ventures.

7 Literature

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Appendix 1

The protocol attached includes the questions, generic and specific about key topics, that will be submitted to all the interviewees.

Section 1 - General questions

- (1) Can you describe the main contractual implementation difficulties that you see when, after an investment, the startup suppliers and the big companies start the contracting negotiation?
- (2) Which are the specific clauses that you think have the biggest impact on these difficulties during the negotiations?

- (3) In an order from 1 to 5, how would you rate the importance of the first 5 clauses that came in your mind?
- (4) Which practices would you suggest to anyone for overcoming recurring contractual implementation difficulties?

Section 2 - Intellectual property Rights

- (1) Can you describe how does your company set their position on the intellectual property rights that stem from the performance of the scope of the purchasing contract?
- (2) What do you think is the most common position startups have towards the intellectual property rights that stem from the performance of the scope of the purchasing contract?
- (3) In case of frictions, which do you think is an ideal solution for balancing between the companies' and startups'?
- (4) Do you use other commercial levers when dealing with the venture (For example, licensing the IP, rights of first refusal on new products they might develop, etc) that involve IP?

Section 3 - Liabilities management

- (1) Can you describe how does your company set their position on the liabilities that might occur in case of negligence or breach of the contract?
- (2) In your opinion, could the possible liabilities be seen as a major threat by the startup and therefore a bottleneck in the contracting process, and why?
- (3) Have you ever considered the possibility to put a cap on the liabilities the startup should bear? What would you include in this cap, and what wouldn't you?

(4) Are there any best practices that seem to work well on this topic in your engagements? If yes, could you give some specific examples?

Section 4 - Data Privacy

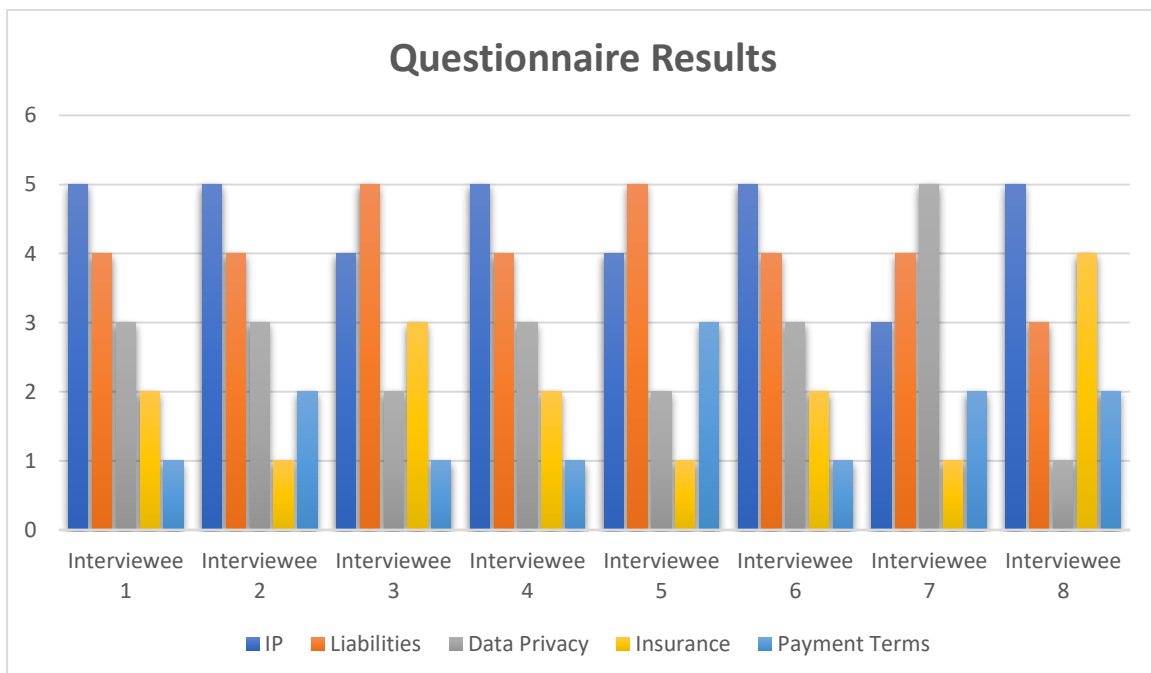
(1) Can you describe how does your company set their position on the Data privacy provisions in purchasing contracts with the ventures?

(2) Do you think generally startups have an interest in company data that might lead to conflicting positions in the contract?

(3) How do you get assurance that when talking about Data privacy legal requirements, both ends are able to uphold such requirements?

(4) What do you think would be best practices regarding brand management and the showcase of the contractual relationship between the corporate and the startup that could foster collaboration?

Appendix 2. Questionnaire Results



Appendix 3. Coding Scheme

Concept (Code)	Sub-concept (Sub-code)	Content
Contract Management (CM)	Clauses (CM-CL)	Adherence of the clauses to industry standards
		Perceived fairness of company's positions
		Clarity of the language of the clauses proposed
		Level of specificity of the clauses
	Negotiations (CM-NEG)	Time allocated for negotiations by the parties
		Roles of the professionals joining the negotiation meetings
		Degree to which the supplier can propose new wording
		Room for negotiating better conditions
	Design (CM-DES)	Length of the contract
		Adherence of the contract to standardized drafts
Overall readability of the contract		

Concept (Code)	Sub-concept (Sub-code)	Content
Supplier Development (SD)	Integration (SD-INT)	Synergy between the parties' businesses
		Willingness of the company to integrate the supplier in its business
		Characteristics of the supplier's competitors in the market
		Willingness to cooperate
	Trust (SD-TRU)	Confidence that counterparty will successfully perform the scope of the contract
		Trust that neither party wants to do predatory acts against the other
		General transparency
		Possibility to resolve controversies in an extra-contractual manner
	Communication (SD-COMM)	Recurrence of meetings
		Care showed of the other party's interests
		Number and rank of people joining the meetings
		Availability for information sharing

Thesis Summary

1. Introduction

In the race of competition, innovation is the ultimate game changer. And multinational corporations know that well, that's why they are fiercely vying for partnerships with the most innovative startups in the market. These partnerships offer a chance to tap into the latest and greatest technological advancements, giving them the upper hand in the marketplace.

This research is going to employ a case study together with the multinational company Shell, that will specifically explore how *contractual engagements* play a role in this sense in the relationship between big corporations and startups.

Shell, one of the leading companies in the energy sector, owns a vast portfolio of suppliers that operate in many fields, mainly oil and gas. But due to the pressing need of going through a clean energy transition, it started expanding in clean energy industries.

To do that, Shell set up a \$1.4 billion corporate venture capital fund (called "Shell Ventures") that focuses on investments on renewable and nature-based energy solutions, e-mobility and emission management.

After taking a minority stake and sitting in the board of these ventures, Shell helps develop and deploy new technologies with the aim of then integrating them in a strategic relationship with the Shell businesses, through the creation of *procurement contracts*.

Shell Ventures noticed that the inherent differences between the partners result in a variety of challenges, typical of this kind of collaborations and particularly in the contracting process.

In fact, Shell managers apply (in line with industry best practices) contractual terms such as clauses and commercial terms in the same way as they do for large accounts and global suppliers. The phenomenon the company witnessed is that start-ups

repeatedly could not sign onto many of those “standard” clauses in Shell contracts that other established suppliers could.

The research addresses this gap by conducting an exploration on the contractual implementation difficulties between big corporation and startups, assessing if it would be possible to find a common thread that is repeatedly presented and generalizable.

The research gives answer to the following problem statement: *What changes should Shell undertake in their Contracting and Procurement (C&P) clauses in order to remove the causes of contractual implementation difficulties when dealing with startups suppliers?*

The following figure summarizes the practical problem and conceptual model underlying the research:

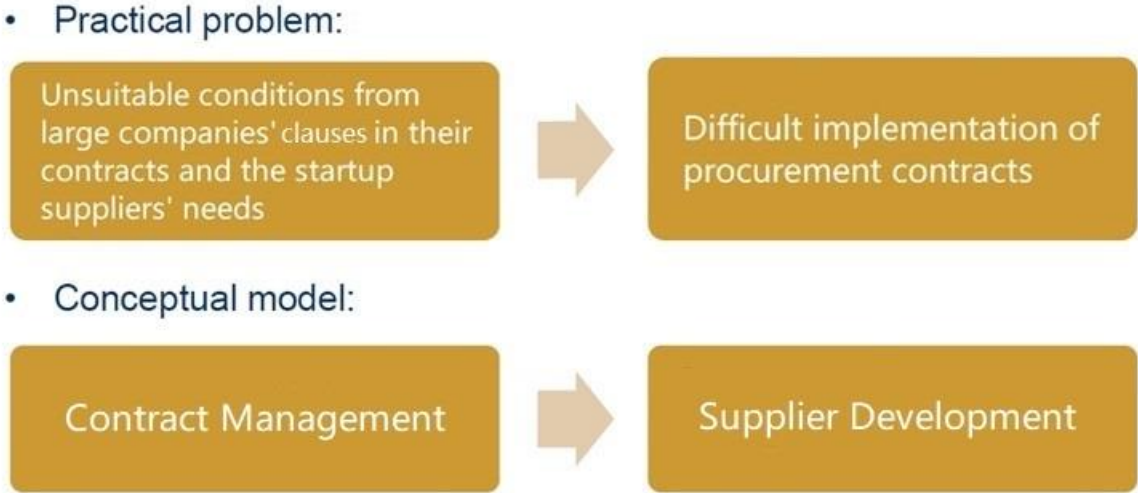


Fig. (1) Conceptual Model

In order to answer the problem statement, the following *research question* have been drafted:

- 5) What are the most recurring contractual implementation difficulties between large multinational companies and startup suppliers?

- 6) How can different contract management clauses between a large corporation and a startup in a procurement contract lead to the increase in contractual implementation difficulties?
- 7) What caused the implementational difficulties of procurement agreements between startups and Shell?
- 8) How can big corporations redefine contract management clauses so that they can decrease the contractual implementation difficulties?

2. Methodology

2.1 Research Strategy & Design Sources

The research used several methodologies to explore the main aspects of how to successfully manage contractual engagements between startup suppliers and big companies. The topic researched, although receiving an increasing attention in the literature, is still new and therefore the process of data collection proved to be challenging. That is why for this research an exploratory research design has been chosen. Exploratory research is a type of research design aimed at gaining a preliminary understanding of a phenomenon, problem or situation. The primary goal of exploratory research is to explore and understand a new or complex problem, and to identify new perspectives and generate ideas for future research.

The exploratory research involves qualitative methods, and this research in particular makes use of methods such as observation, (polar) case studies, and semi-structured interviews. These methods are used to gather data from various sources, including experts and relevant stakeholders, in order to gain a comprehensive understanding of the problem. This method is particularly useful for the scopes of this research as the flexible nature of exploratory research allows the researcher to change the direction of the research as new insights emerge, as it did, and to gather a wide range of information and identify relationships and patterns in the data.

The research made use of primary data based mainly on semi structured interviews, observations and analysis of purchasing contracts, as well as secondary data like internal documents, industry reports such as the ones produced by consultancy companies like BCG or McKinsey.

2.1.1 Polar cases

For the sake of this research, two companies in the Shell Ventures portfolio have been identified and chosen as an example of polar cases. Polar cases refer to the use of extreme or unusual cases in qualitative research to provide insight into the boundaries and conditions under which the phenomenon occurs.

In qualitative research, polar cases are often used to help establish the validity and generalizability of a theoretical framework by providing a test of its limits. In fact, in this case by examining both cases in detail, the researcher can gain a deeper understanding of the underlying mechanisms that lead to successful or unsuccessful implementation and can test the limits of their theoretical framework.

The first case that is going to be analyzed regards a Software as a Service (SaaS) company, *Company 1*, that developed a software architecture (and together with it, the hardware to make it work) that tracks and gives real-time energy consumption insights, enabling customers to analyze and adjust energy consumption within the smart home ecosystems. This company is going to represent the case that has most of the contractual implementation difficulties, as it was the object of long and difficult negotiations where all the three key clauses that will be identified in this research have been questioned.

Company 2 is also a software company that provides monitoring services based on a quantification solution that give continuous, wide area monitoring of hazardous and greenhouse gases (GHG) emissions across entire working sites, with reporting, alerts and follow up expert interpretation of key events. The companies could be considered comparable for what it concerns the business, but *Company 2* differs from *Company 1*

by the fact that it was able to go through negotiations without difficulties and could sign onto the clauses almost seamlessly.

2.2 Data gathering and sources

Data Gathering could be divided into two different phases. An initial phase took place during the first weeks, in which the research was mainly conducted within Shell, interviews were conducted with Supply Chain Managers (responsible for drafting the contracts) and Implementation Managers (responsible for applying the contracts) inside the company in order to have an initial assessment of the problem, gain evidence of the difficulties and discuss whether these could be generalized and extended to other large companies, as well as gathering documental data, including the reports and the contracts themselves, and drafting the interview protocol. After the first weeks, the final phase took place where interviews were expanded and extended not only with Shell employees but also with managers from other big companies, both from the same industry as well as from different industries. At the same time, industry reports were analysed and data from the polar cases was gathered through observation of contracting meetings with the ventures.

2.2.1 Interviews

Introductory interviews were conducted in the initial phase with Shell employees, in order to understand the main processes and problems behind drafting procurement contracts with the ventures. Three main kinds of internal roles were involved both during this and also the next phase: Venture Principals, the professionals responsible for shaping the strategy and to identify investment opportunities; Supply Chain Managers, specialists in contracting and procurement that hold the responsibility to go through the negotiations and of drafting and signing the actual contract; Implementation Managers, responsible for following up the actual performance of the contract. All these actors play a role in identifying the frictions between a big corporation and a startup.

The first part of the research started with assessing which are the most significant implementational difficulties stemming from the contract clauses proposed by large companies to new venture suppliers, and treating them in scale of priority.

This phase was of the utmost importance for the creation of the interview protocol, as well as for the selection of the polar cases. The protocol included questions that went to cover the main contractual frictions that were detected within the first interviews, but it also included more flexible open-ended questions that aimed at detecting other key frictions that could be overlooked by the more specific questions.

In the final phase, around twelve semi structured interviews were conducted with both Shell Supply Chain Managers and other big companies' supply chain managers. The other companies included three other major multinational energy companies directly competing and therefore like Shell, as well as four key companies from other industries.

2.2.2 Negotiation Guide and Internal Data

The contracts authoring system from Shell was firstly analyzed: it is a cutting-edge tool designed to streamline the contract creation process. The system is designed to compile contracts automatically based on certain inputs provided by the counterparty, such as information about the company, such as its size, industry, and country of origin, or information about the scope of the contract.

This system is connected to another powerful tool called the Negotiation Guide, which was analyzed as part of the research to understand Shell's standard positions for all contract clauses. This information was crucial in understanding the reasoning behind Shell's standard positions.

2.2.3 Contracts

Actual contracts that had already been signed between Shell and some of the ventures were analyzed as well. These contracts were the main source of information regarding deals that had difficulties and that had to go through reiterated contracting meetings.

2.2.4 Observations

Three negotiation meetings have been attended between Shell and some of the venture suppliers, and among others, also with the two companies that had been chosen as polar cases for the research. The meetings took place in the presence of at least one supply chain manager and one implementation manager from Shell, while on the other side usually the CEOs of the startups attended, and once also the presence of legal specialists was recorded from both sides, as the negotiations had stalled on a very scrupulous analysis of the contractual formulations.

2.2.5 Industry Reports and External Data

An extensive review of industry reports took place. The analysis of industry reports from consultancy companies that explain specifically the collaboration between large established companies and startups did provide valuable insights, as they contain current practices and projections on future trends for this ever-growing kind of collaboration.

2.3 Data Analysis

A data coding system has been built in order to reflect at best the most relevant topics that emerged from the literature in the areas of the conceptual model, as well as trying to remain as open as possible and capturing the patterns that emerged through the analysis of the data gathered from the various sources.

The guiding concepts of the analysis correspond to “Contract Management” (Concept Code **CM**) and “Supplier Development” (Concept code **SD**). The establishment of these two main codes allowed to choose the subcodes deemed most inherent. All the data gathered has been analysed in virtue of this scheme.

3 Theoretical Framework

The research draws from the general Transaction Cost Economics (TCE; Williamson, 1975) theory, which studies how different governance structures organize transactions to minimize *transaction costs*, which are the costs of running the economic system of firms. From this theory two subsequent concepts from the literature are extrapolated,

Contract Management and Supplier Development, and they become respectively the independent and dependent variables of the research.

Interestingly enough, the domain of Corporate Venture Capital is at the forefront of the development of such a theory and represent a very peculiar form of make-or-buy decision to minimize the transaction costs, as the corporation who invested can either decide to strengthen its relationship with the venture and create a solid long term buyer-supplier relationship (buy), as well as decide to increase the investment and acquire the startup (make).

3.1 Contract Management

Contract management has been defined as “the process which ensures that all parties to a contract fully understand their respective obligations enabling these to be fulfilled as efficiently and effectively as possible to provide even better value for money” (Lowe, 2007). This research investigates the proposition that “the improvement of procurement performance can be accomplished through the development of suppliers if contract management is properly handled” (Rasheli, 2016). In this regard, buyers have a responsibility to ensure the effective management of procurement contracts is in place in order to guarantee that the agreed-upon deliverables will be met, despite the “difficulties and challenges that are presented in procurement contract management” (Oluka & Basheka, 2014; Rasheli, 2016).

The variable "contract management" is the independent variable. It refers to the ability of the buyer (the big corporation) to effectively navigate and manage any difficulties or challenges that may arise in the contract negotiation and execution process with a startup supplier and to ensuring that those potential suppliers can actually meet their short and long-term requirements. Studying and acting on this variable offers an answer to the first research question: what are the possible reasons of contractual implementation difficulties between large multinational companies and startup suppliers?

3.2 Supplier Development

Supplier development can be defined as a process of enhancing the capabilities of suppliers to meet the specific requirements of a buyer in terms of quality, delivery, cost, and innovation. According to Krause and Handfield (2003), supplier development involves a collaborative approach between the buyer and the supplier, aimed at improving the supplier's performance and competitiveness.

And most of all, for the sake of this research “supplier development is one of the supplier management practices that is thought to perform successfully in the presence of adequate *contract management*” (Narasimhan et al., 2008). The dependent variable is indeed directly impacted by the independent variable of Contract Management. Effective choices on the contract management variable can in fact lead to successful supplier development and improved performance in procurement contracts.

4 Findings

4.1 Current situation assessment

The first part of the research was aimed at assessing the main contractual implementation difficulties and the related clauses.

Even though the employees involved had different roles and areas of expertise, the answers on where the main difficulties were stemming from were reasonably uniformed and converging. The respondents all reported that they difficulties involved mainly two aspects: the first regards long and multiple sessions on the interpretation of some clauses, due to the fact that they were hard to comprehend or had been misunderstood by the executives of the startups; while the second regards actual pushbacks on the contractual content of some of those clauses with the request of better conditions for the startup.

The responses showed a strong convergence to five different most recurring items that were always mentioned: intellectual property clauses, liabilities clauses, data privacy

clauses, insurance clauses, payment terms clauses. This was useful to build the rest of the interview protocol and in particular to shape the questions about the three main contractual clauses and then to choose the other interviewees within Shell that had knowledge of the two companies chosen for the polar cases.

4.2 Intellectual Property Rights

The questions on what it concerns Intellectual Property Rights and how to treat them presented a clear dichotomy: although almost all the interviewees agreed that it is of the utmost importance for a big company that has procurement contracts in place with startup suppliers to have a clear description of how the intellectual property rights stemming from the contract should be treated, and that that position should be favorable for the supplier otherwise the contract could be aborted, at the same time the opinions on how to make this possible were different and could be split into two interpretations.

The first position, that reflected the position of the majority of the interviewees, states that the new Intellectual Property Rights stemming from the contract should vest exclusively within the startup and that the corporation should not claim it. A minority of respondents expressed an opposite opinion, substantially arguing that it is right, in the context of a procurement contract (even with a startup) to expressly request that any intellectual property rights deriving from the contract should be given to the buyer, so the corporation, as a part of the performance of the supplier. A common theme and relative discussion that was detected from the answers to the questions on this topic regards the way intellectual property rights should therefore be treated, and more specifically it fueled a debate on whether or not the use of the tool of non-disclosure agreement would be appropriate and could partly solve the issue. Non-disclosure agreement (NDA) in this case refers to a clause that outlines the confidential material, knowledge, or information that the parties are allowed to share with one another but are forbidden to share to third parties.

4.3 Liabilities Management

The Liabilities Management clauses refer to the cases in which the contract is breached by the ventures because of negligence or similar motives and cause an economic or material damage to their counterparty. It specifically describes the case in which a breach of the contract takes place, and its formulation is very important on deciding what makes a breach of the contract and what not. Finally, it could welcome a section that specifically describes what are the cases for which, at the contrary, a compensation for the damages is not foreseen or is explicitly excluded. This clause was regarded as the second most important because of the frequency with which the ventures would push back, asking for more protection in the case these circumstances should occur. As reported by all the interviewees, the ventures may ask their counterparties to put a *cap* on the amount of damages they should reimburse. Investigating on this matter, evidence shows again that there is not an optimized or univocal position and that big companies struggle to find a point of balance.

4.4 Data privacy

The Data privacy domain is the last theme that interviewees indicated as a major difficulty. Data privacy here is defined as both the provisions that regulate the information on the valuable brand that the big corporations represent and that the ventures might use for commercial scopes, as well as all the information related to products and people and its infrastructure that has to be managed and stored in performance of the scopes of the contract. This is especially important as new privacy regulations like the GDPR is coming into force in the last years.

The discussion here yielded coherent and unambiguous points of view by the polar cases.

5 Discussion

5.1 Intellectual Property Rights

In sum, the findings suggest that there is an overall agreement on the fact that Intellectual Property Rights are the clauses that attract the most difficulties from the ventures; as one of the interviewees stated: *“it is the everyday struggle”*.

Indeed, although all the big companies agree on the fact that most of the rights should be given to the venture, the sample proves that there is not a clear and unified opinion on how to do that, and there is not yet an optimal position that could work to minimize these frictions in most of the cases.

One of the key issues with intellectual property rights in procurement contracts is the perceived conflict between the interests of the big company and the startup, and the fact that the startup can't cover all the costs of protecting such IP. While the big company may want to retain the rights to any intellectual property that arises from the contract, the startup may want to retain these rights for themselves. Some respondents advocated the concept of “trust”, as coded in this research, for overcoming this difficulty: they affirmed that since both the corporation and the startup inevitably come in contact with the other's IP, and there is no way of assuring that the IP would not be used especially considering that each of them have multiple contacts with companies similar to their counterparty's, then a mutual non-contractual agreement on trusting each other is helpful and it does also encourage a “supplier development” perspective. Despite this conflict, the research suggests that when companies adopt clauses that give the startup the right to retain the intellectual property rights arising from the contract, there are fewer difficulties in the negotiation and finalization of the contract. This is because the startup can feel more secure in the knowledge that their intellectual property is protected, and the corporation can feel more confident in the startup's commitment to the project.

5.2 Liabilities Management

The theme of liabilities management clauses proved to be a contentious issue as two distinct schools of thought arose. The disagreement centers around the assessment and perception of the risk of a startup failing to fulfill their promises. The big

corporations want to be fully protected in the event of a startup's failure, as this could disrupt their operations, while the startups argue that it is unreasonable to ask for such a high level of liabilities coverage, especially if they are unable to meet these obligations. This creates a conflict between the interests of both parties. Despite the differences in opinions, all participants appeared to agree on one key point: any cap on liabilities should not cover damages that result from a violation of legal provisions. Many of the participants emphasized that damages from legal requirements must not be waived and should not be counted towards the assessing of the *plateau* of the cap, even if the startups request it.

In fact, the role of the legal framework in the liabilities management process is crucial. The legal system provides a basis for determining the extent of the liabilities that a startup must bear in the event of a failure to fulfill their promises. This provides the necessary protection for both the startup and the big corporation.

It is important to note that the liabilities management process is not only about protecting the interests of the big corporation. It is also about ensuring that the startup has the financial resources to fulfill their promises. If a startup is asked to bear an excessive amount of liabilities, it may discourage them from taking on new projects, and limit their ability to grow and develop. Therefore, finding a balance between the interests of both parties is essential for the success of the liabilities management process.

5.3 Data Privacy

All the respondents tend to agree that the ventures need to be comfortable in processing and protecting the data, and stepping down from this perspective does not seem like an option anyways. In fact, the interviews showed that anything that comes into force from the law has to be followed, especially in terms of how data is treated, and it would be considered as a fraud to do any kind of agreement between two parties to elude such enforcements.

Not only, but data states clearly that it is a matter of trust and commitment as well: if a startup is not able to withhold with such requirements, it means that it is not ready to embark in a contractual agreement with a bigger company at all. The only thing that seems can be done to attenuate such risk is to minimize the amount of information that the partners share with one another. In this way, the risk and burden of holding such information is minimized as well. Of course, sometimes this can't really be done easily as the interaction presupposes an exchange of information that is mandatory.

6 Conclusions

6.1 Conceptual and theoretical contribution

The research contributes to the development of a theory that can describe the under-explored field of contractual interactions between big corporations and ventures when creating procurement contract. It provides a seminal work of literature reviewing of existing research on the topic, that proved to be not exhaustive as the existing material covers studies on the motivations and goals of corporate venturing, as well as examining the challenges of corporate-venture interactions but only on a generic sense. It then starts to explore whether or not a common thread could be found in this specific niche of contract management and supplier development. In fact, the study aimed to be generic enough in order to be generalizable and to shed light on the possibility to explore new theory that could be further researched in the future. It starts to question if a general framework for the corporate-startup exists and how such a framework could look like, building on broader theories and mainly on Transaction Cost Economics theory, that is able to describe how the independent variable "contract management" can influence the dependent variable "supplier development". The study suggests that transactional costs related to lengthy negotiations regarding these clauses can actually be lowered by increasing the awareness on the nature of such frictions, and through the research it starts to understand if there are contractual clauses that more than other have a role in this and if they can be addressed.

6.2 Limitations

Although being a work that studies a topic that is of increasing interest but not yet studied enough, it suffers of all the constraints that such a situation entails. For example, the scope of the study is quite limited, as it focuses on the specific example of Shell Ventures' portfolio companies. The comparisons with other big corporation is included, in order to understand if such concepts are shared with others and if they can be generalized, but just few of them were selected for the interviews, also considering the limited number of contacts the researcher had hold of. Surely wider researchers will have to be done that include not only more corporations, but also should include the startups' point of view. On the methodology side, the research did not consider other factors that could impact the success of partnerships between established corporations and startups and that are not strictly contractual, even if they impact the contractual negotiations as well. This is particularly true and important because during the interviews themes like trust, defined mainly as the tacit and non-written agreement on the course of action for some specific clauses was not taken into account as it was considered out of scope for the research although it was quite present as a theme. Moreover, the case study is not big enough to be a good representative of the general population. This limits the generalizability of the findings and conclusions.

Another curious feature is that the study takes initially for granted the inherent differences in their way of working between corporates and startups, but it may not take into account the fact that there can be startups that have a very structured and hierarchical organization and many resources.

4. Future research

The findings from this work highlight the need for further research in a number of areas related to the contracting process in ventures. The lack of a unified literature on these

topics presents opportunities for new research to fill the gaps and create a more comprehensive and integrated framework.

One potential direction for future research could be to explore the role of different industry sectors and make specific assumptions for each. This would enable a more nuanced understanding of the contracting process and its challenges, as the characteristics and demands of each sector are unique. Additionally, an examination of the role of "soft" measures such as trust and communication in the contracting process would be valuable. These intangible elements can play a critical role in the success or failure of the contract, and a better understanding of their influence would be informative.

Another area for investigation is the impact of legal and regulatory frameworks on the contracting process. Different countries have different regulations in place that can influence the contracting process, particularly with regards to themes such as Data Privacy and Intellectual Property Rights. Comparing and contrasting these frameworks could shed light on best practices and highlight areas where improvements can be made.

Finally, the role of intermediaries such as venture capitalists and business accelerators in the contracting process could also be the subject of further investigation. These entities play a key role in providing information and support to ventures, and their impact on the contracting process was noted several times during the research. By investigating the role of intermediaries in more detail, we could gain a better understanding of how they facilitate the contracting process and identify any potential areas for improvement.

In conclusion, the results of this work serve to highlight the broad range of opportunities for future research in the area of venture contracting. By addressing the gaps in the existing literature and exploring new avenues for investigation, it would be possible to create a more comprehensive framework for understanding the complexities of the contracting process with ventures.