



What impacts the phenomenon Corp-Ups?

A Master's Thesis submitted for the degree of "Master of Business Administration"

> supervised by Prof. Dr. Peter Keinz

Michael Pichler, bakk. soc. rer. oec.

00606985

Vienna, 29.06.2020



Affidavit

I, MICHAEL PICHLER, BAKK. SOC. RER. OEC., hereby declare

- 1. that I am the sole author of the present Master's Thesis, "WHAT IMPACTS THE PHENOMENON CORP-UPS?", 66 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
- 2. that I have not prior to this date submitted the topic of this Master's Thesis or parts of it in any form for assessment as an examination paper, either in Austria or abroad.

Vienna, 29.06.2020

later)

Signature

Abstract

The main objective of this master thesis is to take a closer look at the success variants of the collaboration vehicle between corporates and startups – Corp-Up and search for new not yet considered patterns and elements, which influence the successful Corp-Up settings. The search for statistical effects and causal connections from the data is formulated as a result in different statements. Furthermore, the master thesis takes a closer look at the basic motivation for cooperation between corporates and start-ups and reflect the phenomenon Corp-Up in context of innovation with the existing literature and recent studies.

Table of contents

Abstr	ractI
Table	e of contentsII
List o	f figuresIV
List o	f tablesIV
1 Intr	oduction1
1.1	Problem formulation2
1.2	Objective of the Master Thesis2
1.3	Structure of the Master Thesis
2	Method4
3	Collaboration and Innovation5
3.1	Startup-corporate engagement vehicles7
3.2	Definition of Corp-Up, startup and corporate8
3.3	Economic relevance of Corp-Ups9
3.4	The phenomenon Corp-Up12
3.5	Why do many cooperation's fail?14
4	Results17
4.1	Does the willingness to collaborate (again) with a startup depend on the tried form of Corp-up?18
4.2	Do the following concerns deter corporates to start a collaboration with startup?
4.3	Do the given fulfilled/implemented factors within the organization impact the perception on the success of the Corp-Up activities?20
4.4	Does the strategic importance of innovation in the company impact the frequency of collaboration with specific innovation partners?21
4.5	Does the strategic importance of innovation in the company impact the usage of different collaboration vehicles with startups?24
4.6	Does the experience in dealing with startups impact the strategic importance of innovation in the company?
4.7	Does the number of employees have an influence on the strategic importance of Innovation in a company?
4.8	Does the number of employees of the company impact the frequency of collaboration with different types of innovation partners?
4.9	Does the direct responsibility for innovation within the company impact the frequency of collaboration with different types of innovation partners?
4.10	Does the direct responsibility for innovation within the company impact the tried forms of Corp-Ups?
4.11	Does the share of total revenue impacted by startup collaboration effect the strategic importance of innovation in the company?
4.12	Does the number of team members (within the startup) impact the strategic importance of collaboration with a corporate?
4.13	Do the given factors in place at the corporate impact the willingness to collaborate again?40
4.14	Does the stage of the startup impact the strategic importance of collaboration?

4.15	Do the objectives of the startup impact the strategic importance of the collaboration with the corporate?
4.16	Do the following factors in place at the corporate impact the perception on the success of the Corp- Up activities?
4.17	Does the strategic importance of collaboration impact the number of corporates approached regarding Corp-Up in the past 12 months?
4.18	Does the current stage of the startup impact the number of approached Corp-Ups in the past 12 months?
4.19	Do the years in business impact the importance of collaboration between corporates and startups? 51
5	Interpretation and Discussion
5.1	Innovation-related
5.2	Success-related
Bibliog	graphy

List of figures

6
10
11
14
16

List of tables

TABLE 1: DESCRIPTIVE STATISTICS AND ANOVA - DOES THE WILLINGNESS TO COLLABORATE AGAIN WITH A STARTUP DEPEND ON THE
TRIED FORM OF CORP-UP?
TABLE 2: DESCRIPTIVE STATISTICS AND ANOVA - DO THE FOLLOWING CONCERNS TAKEN DETER CORPORATES TO START A
COLLABORATION WITH STARTUP?
TABLE 3: DESCRIPTIVE STATISTICS AND ANOVA - DO THE GIVEN FULFILLED/IMPLEMENTED FACTORS WITHIN THE ORGANIZATION
IMPACT THE PERCEPTION ON THE SUCCESS OF THE CORP-UP ACTIVITIES?
TABLE 4: DESCRIPTIVE STATISTICS AND ANOVA - DOES THE STRATEGIC IMPORTANCE OF INNOVATION IN THE COMPANY IMPACT THE
FREQUENCY OF COLLABORATION WITH SPECIFIC INNOVATION PARTNERS?
TABLE 5: POST-HOC TEST - LSD - DOES THE STRATEGIC IMPORTANCE OF INNOVATION IN THE COMPANY IMPACT THE FREQUENCY OF
COLLABORATION WITH SPECIFIC INNOVATION PARTNERS?
TABLE 6: DESCRIPTIVE STATISTICS AND ANOVA - DOES THE STRATEGIC IMPORTANCE OF INNOVATION IN THE COMPANY IMPACT THE
USAGE OF DIFFERENT COLLABORATION VEHICLES WITH STARTUPS?
TABLE 7: POST-HOC TEST - DOES THE STRATEGIC IMPORTANCE OF INNOVATION IN THE COMPANY IMPACT THE USAGE OF DIFFERENT
COLLABORATION VEHICLES WITH STARTUPS?
TABLE 8 : DESCRIPTIVE STATISTICS AND ANOVA - DOES THE EXPERIENCE IN DEALING WITH STARTUPS IMPACT THE STRATEGIC
IMPORTANCE OF INNOVATION IN THE COMPANY?
TABLE 9: POST-HOC TEST – LSD - DOES THE EXPERIENCE IN DEALING WITH STARTUPS IMPACT THE STRATEGIC IMPORTANCE OF
INNOVATION IN THE COMPANY?
TABLE 10: DESCRIPTIVE STATISTICS - DOES THE NUMBER OF EMPLOYEES HAVE AN INFLUENCE ON THE STRATEGIC IMPORTANCE OF
INNOVATION IN A COMPANY?
TABLE 11: DESCRIPTIVE STATISTICS - DOES THE NUMBER OF EMPLOYEES OF THE COMPANY IMPACT THE FREQUENCY OF
COLLABORATION WITH DIFFERENT TYPES OF INNOVATION PARTNERS?
TABLE 13: POST-HOC TEST - LSD - DOES THE NUMBER OF EMPLOYEES OF THE COMPANY IMPACT THE FREQUENCY OF
COLLABORATION WITH DIFFERENT TYPES OF INNOVATION PARTNERS?
TABLE 14: DESCRIPTIVE STATISTICS - DOES THE DIRECT RESPONSIBILITY FOR INNOVATION WITHIN THE COMPANY IMPACT THE
FREQUENCY OF COLLABORATION WITH DIFFERENT TYPES OF INNOVATION PARTNERS?
TABLE 15: LINEAR REGRESSION - DOES THE DIRECT RESPONSIBILITY FOR INNOVATION WITHIN THE COMPANY IMPACT THE FREQUENCY
OF COLLABORATION WITH DIFFERENT TYPES OF INNOVATION PARTNERS?
TABLE 16: LINEAR REGRESSION – COEFFICIENT - DOES THE DIRECT RESPONSIBILITY FOR INNOVATION WITHIN THE COMPANY IMPACT
THE FREQUENCY OF COLLABORATION WITH DIFFERENT TYPES OF INNOVATION PARTNERS?
TABLE 17: DESCRIPTIVE STATISTICS AND ANOVA - DOES THE DIRECT RESPONSIBILITY FOR INNOVATION WITHIN THE COMPANY IMPACT
THE TRIED FORMS OF CORP-UPS?
TABLE 18: LINEAR REGRESSION - DOES THE DIRECT RESPONSIBILITY FOR INNOVATION WITHIN THE COMPANY IMPACT THE TRIED FORMS
OF CORP-UPS?
TABLE 19: LINEAR REGRESSION – COEFFICIENT - DOES THE DIRECT RESPONSIBILITY FOR INNOVATION WITHIN THE COMPANY IMPACT
THE TRIED FORMS OF CORP-UPS?
TABLE 20: DESCRIPTIVE STATISTICS AND ANOVA - DOES THE SHARE OF TOTAL REVENUE IMPACTED BY STARTUP COLLABORATION
EFFECT THE STRATEGIC IMPORTANCE OF INNOVATION IN THE COMPANY?
TABLE 21: POST-HOC TEST- LSD - DOES THE SHARE OF TOTAL REVENUE IMPACTED BY STARTUP COLLABORATION EFFECT THE STRATEGIC
IMPORTANCE OF INNOVATION IN THE COMPANY?
TABLE 22: DESCRIPTIVE STATISTICS AND ANOVA - DOES THE NUMBER OF TEAM MEMBERS (WITHIN THE STARTUP) IMPACT THE
STRATEGIC IMPORTANCE OF COLLABORATION WITH A CORPORATE?
TABLE 23: DESCRIPTIVE STATISTICS AND ANOVA - DO THE GIVEN FACTORS IN PLACE AT THE CORPORATE IMPACT THE WILLINGNESS TO
COLLABORATE AGAIN?
TABLE 24: LINEAR REGRESSION - DO THE GIVEN FACTORS IN PLACE AT THE CORPORATE IMPACT THE WILLINGNESS TO COLLABORATE
AGAIN?

TABLE 25: LINEAR REGRESSION – COEFFICIENT - DO THE GIVEN FACTORS IN PLACE AT THE CORPORATE IMPACT THE WILLINGNESS TO
COLLABORATE AGAIN?
TABLE 26: DESCRIPTIVE STATISTICS AND ANOVA - DOES THE STAGE OF THE STARTUP IMPACT THE STRATEGIC IMPORTANCE OF
COLLABORATION?
TABLE 27: DESCRIPTIVE STATISTICS AND ANOVA - DO THE OBJECTIVES OF THE STARTUP IMPACT THE STRATEGIC IMPORTANCE OF THE COLLABORATION WITH THE CORPORATE?
TABLE 28: LINEAR REGRESSION - DO THE OBJECTIVES OF THE STARTUP IMPACT THE STRATEGIC IMPORTANCE OF THE COLLABORATION WITH THE CORPORATE?
TABLE 29: LINEAR REGRESSION – COEFFICIENT - DO THE OBJECTIVES OF THE STARTUP IMPACT THE STRATEGIC IMPORTANCE OF THE COLLABORATION WITH THE CORPORATE?
TABLE 30: DESCRIPTIVE STATISTICS AND ANOVA - DO THE FOLLOWING FACTORS IN PLACE AT THE CORPORATE IMPACT THE PERCEPTION ON THE SUCCESS OF THE CORP-UP ACTIVITIES? 46
TABLE 31: LINEAR REGRESSION - DO THE FOLLOWING FACTORS IN PLACE AT THE CORPORATE IMPACT THE PERCEPTION ON THE SUCCESS OF THE CORP-UP ACTIVITIES?
TABLE 32: LINEAR REGRESSION – COEFFICIENT - DO THE FOLLOWING FACTORS INN PLACE AT THE CORPORATE IMPACT THE PERCEPTION ON THE SUCCESS OF THE CORP-UP ACTIVITIES?
TABLE 33: DESCRIPTIVE STATISTICS AND ANOVA - DOES THE STRATEGIC IMPORTANCE OF COLLABORATION IMPACT THE NUMBER OF CORPORATES APPROACHED REGARDING CORP-UP INT PAST 12 MONTHS? 49
TABLE 34: POST-HOC-TEST - LSD - DOES THE STRATEGIC IMPORTANCE OF COLLABORATION IMPACT THE NUMBER OF CORPORATES APPROACHED REGARDING CORP-UP INT PAST 12 MONTHS? 49
TABLE 35: DESCRIPTIVE STATISTICS AND ANOVA - DOES THE CURRENT STAGE OF THE STARUP IMPACT THE NUMBER OF APPROACHED CORP-UPS IN THE PAST 12 MONTHS? 50

It is exciting to observe how the topic of cooperation between Corporates and startup has developed in recent years. There are various forms of cooperation, depending on several reasons including the purpose and commitment of both sides. The right collaboration vehicle is one that optimizes on quantity, quality and cost, while taking into account the objectives of both startup and corporate. (Match Maker Ventures, 2019) Corp-Ups have turned out to be a promising and successful collaboration variant.

The phenomenon Corp-Up aligns with a general trend towards an increasing willingness to cooperate on both sides corporates and start-ups. From a start-up perspective, the reasons to cooperate are often related to the access to resources for example investments for product development, growth, to specific markets, etc. The forms of cooperation vary strongly depending on the desired outcome. It somehow seems almost natural for start-ups to reach out to cooperation partners.

From the corporate's perspective startups increase the pressure on established companies and highlight their weaknesses in terms of rapid adaptability and innovative strength. Startups take advantage of every opportunity to massively accelerate the developments described with disruptive technologies and business models. Cooperation from a corporate's and startup's perspective usually means strengthening or improving one's position in the market and competitive environment. For corporates, this can mean that they can gain access to new ways of working, ideas, products, technologies or business models.

Additionally, I would like to address the mentioned trend towards more willingness to cooperate and connect the topic of innovation with the phenomenon of Corp-ups. The willingness to cooperate, especially from a corporate's perspective, is strongly linked to the openness of the company and its capability to innovate

1.1 Problem formulation

• **Problem:** Whether, and to what extent not yet considered patterns and elements can be identified, that influence successful Corp-Up settings?

The problem was formulated with the intention to take a closer look on the collaboration vehicle Corp-Up and their successful settings. Through explorative research, detailed in further part of the thesis, I aim to search for statistical effects and causal connections from the data, that could impact the Corp-Up setting.

Furthermore, the master thesis takes a closer look at the basic motivation for cooperation between corporates and start-ups and reflect the phenomenon Corp-Up and innovation with the existing literature and recent studies.

1.2 Objective of the Master Thesis

Basing on the problem identified and indicated above, I formulated specific objectives I will use in the research process of my master thesis:

- Objective 1: to identify, analyze and formulate statistical effects and causal connections from different factors and patters within the data.
- Objective 2: outline the basic motivation for cooperation between corporates and start-ups and reflect the phenomenon Corp-Up

In connection with objective 1, a wide variety of factors and assumptions are to be combined and tested for influence and interrelationships. In particular, parameters such as company size, experience with collaboration and the importance of innovation will be examined. Subsequently, the results will be presented in a clear and concise form. Objective 2 is based on the basic consideration that cooperation precedes a certain motivation and that this motivation is related to economic interests. The Phenomenon Corp-Up is therefore relevant from both an economic and a scientific point of view. The scientific perspective is particularly relevant in the context of innovation.

1.3 Structure of the Master Thesis

The thesis is structured in two parts, in the first part I take a closer look on the phenomenon of the collaboration vehicle Corp-Up. It seems that every corporate is eager to collaborate with Start-Ups but why are just a few successful? I want to outline why the specific type of collaboration Corp-Up is economic and scientific important. Furthermore, I want to outline the connection between the phenomenon Corp-Up and innovation. The second part of the thesis deals with the analysis of the data set collected and provided by Match Maker Ventures and the interpretation of the results. In particular new not yet considered patterns and elements, which may impact the successful Corp-Up settings.

Chapter 1: includes a brief overview why the topic Corp-Up is relevant for both sides corporates and startups. The problems and objectives to be addressed are given and explained. Furthermore, the structure of the Master Thesis is outlined.

Chapter 2: explains the procedure and methodology, both the literature review and the exploratory approach to combining the data and evaluation with the IBM SPSS Analysis Tool using mean value comparisons, analysis of variance and regression.

Chapter 3: comprises the literature review and is intended to build a bridge between the existing articles and studies on the comparatively young topic of Corp-Ups and innovation. I want to outline the scientific and economic relevance of the topic.

Chapter 4: The following chapter outlines the research results of the data analysis with SPSS. The Analysis is based on the data set collected from a proprietary survey with 340 corporates and 203 startups, representing over 70 countries.

Chapter 5: includes the presentation and summary of the results of the data analysis for further interpretation and discussion.

2 Method

The thesis was designed to approach the stated problem and objectives. The research process is based on the subject matter literature review with the intention to have the most recent literature and studies reviewed and analyzed.

The definition of Corp-Up as used in the thesis, is a term created by Match-Maker Ventures in their 2016 report to describe specific forms of engagement between a startup and a corporate. Due to the fact that Corp-Ups are relatively new phenomenon in entrepreneurship I also included analysis of relevant reports and surveys.

The core of my research was conducted in the form of explorative SPSS evaluation, where mean value comparisons (single factor variance analyses) and linear regressions were performed. The Analysis of Variance (ANOVA) was used to test whether the means of several independent groups/samples defined by independent variables differ from each other. The post-hoc tests were conducted for pairwise mean value comparisons to provide information on which mean values differ significantly from each other or by group-wise comparisons to determine which group mean values are not significantly different.

The quantitative data comes from a proprietary survey from 340 corporates and 203 startups, representing over 70 countries provided by Match Maker Ventures. The results are clearly presented and discussed in the chapter results, interpretation and discussion, taking into account the current state of knowledge on the topic.

3 Collaboration and Innovation

Regarding the specific collaboration vehicle Corp-Up there is only few literature available because the term Corp-Up is relatively new and similar forms of collaboration are simply differently named. The topic of collaboration between start-ups and corporates is covered by a wide range of different publications. In connection with the motivation for cooperation, innovation is a recurring factor on the corporate side, even more the openness or willingness to get these innovative powers from outside partners.

"It's a strange thought, but the solution to your business's innovation problem may be walking around in the head of someone who applies theatrical makeup for a living." This statement comes from the Harvard Business Review article "Sometimes the Best Ideas Come from Outside Your Industry" by by Marion Poetz, Nikolaus Franke and Martin Schreier (NOVEMBER 21, 2014)

Now it's important to point out that the topic of innovation is not the main focus of the thesis but cannot be left unconsidered in connection with Corp-ups and generally the cooperation between startups and corporates. As well as the question how the knowledge, recourses from outside gets into the company and there is no single best method for doing this. Numerous useful approaches – each with different attributes and benefits – are on offer in the global marketplace¹ for new ideas, products, and technologies. Satish Nambisan and Mohanbir Sawheny call it the "Innovation Bazaar" in their Harvard Business Review (June 2017) article "A buyer's guide to the Innovation Bazaar". Corp-ups could be one of the possible outcomes of this "innovation bazaar".

A definition of the origin of innovation is provided by Schilling, M. 2017: "innovation is the practical implementation of an idea into a new device or process ". The author elaborates on the source of innovation given in the figure below and outlines the importance of the linkages between them. Networks of innovators that leverage knowledge and other resources toward a collective purpose.

¹ A buyer's guide to the Innovation Bazaar, Satish Nambisan and Mohanbir Sawheny, Harvard Business Review, June 2017





Source: Strategic Management of Technological Innovation - Schilling, M. 2017

Schilling outlines the innovation process with the generation of new ideas as a starting point and points out that creativity as the ability to produce novel and useful work. I would argue that these remarks are an introduction to the importance of cooperation. Since corporates often find it difficult to create new ideas. Schilling explains that novel work must be a different from work that has been previously produced and surprising in that it is not simply the next logical step in a series of known solutions.

Now the creation of ideas is one thing, the implementation is another challenge, and this is where corporates with their resources should be at an advantage, but it is not quite that way. Where is the novel work within companies coming from? The most obvious source of firm innovation is the company's own research and development efforts. Schillings distinguishes between research (basic and applied) and development by firms.

- Basic research: targeted at increasing scientific knowledge for its own sake. It may or may not have any long-term commercial application
- Applied research: targeted at increasing knowledge for a specific application or need
- Development: activities that apply knowledge to produce useful devices, materials or process

Another way is the company's linkage with customers, suppliers, competitors to form alliances, even though critics charge that firms using external sources of technological innovation rather than investing in original research. But empirical evidence suggests that external sources of information are more likely to be complements to rather than substitutes for in-house research and development. (Schilling, M. 2017)

Therefore, collaboration with external partners is an additional possibility in this context and not as a substitution of the own innovation efforts.

3.1 Startup-corporate engagement vehicles

The following table shows different possible variants of collaboration between startups and corporates, here I would like to point out that many blends have emerged by now (more than 20 sub vehicles) but it is good overview:

Startup-corporate	engagement vehicles:
-------------------	----------------------

	Events	Incubator	Accelerator
Definition	Corporate organizing/	An incubator is a unit	Accelerators are usually
	hosting events for	helping early stage	fixed-term (3-6
	startups	startups to develop	months) cohort-based
		their product/ service	programs of anything
			between 4-10 startups
			managed by corporate
			or 3rd party
Used	Corporate wants to	Corporate has access	Corporate wants to
when	strengthen its external	capabilities and wants achieve both (a)	
	and internal perception	to provide an "idea	awareness and (b)

	of being innovative by	playground" to external	startup access – key		
	engaging with the	partners with the hope	focus rather to get		
	startup community	to innovate	started as significant		
		investment is require			
	Corp-Up	Investment	Acquisition		
Definition	Corporate and start- up	A financial (minority)	A Corporate acquiring		
	collaborate on business	investment by a	the majority stake in a		
	terms, i.e. buyer-supplier	corporate either	startup (50+%)		
	relationship	directly via the balance			
		sheet or via a dedicated			
		fund into a startup			
Used	Corporate wants to	Corporate wants to	A startup possesses a		
when	benefit from start- ups'	hedge its own business	critical assets or know-		
	innovation power and	and wants to engage as	how either to (a)		
	wants to quickly create	a financial investor; can	strengthen an existing		
business impact		become a strategic	line of business or (b)		
leveraging the existing		investment, when	enter a new line of		
	assets	either acquisition or	business		
		Corp-Up anticipated			

Source: study: "The age of collaboration II", Match Maker Ventures, 2019

3.2 Definition of Corp-Up, startup and corporate

The following definitions for Corp-Up, startup and corporate are the most common variants and are also consistent with the definition of the terms in the analyzed data set.

Corp-Up² is a term created by Match-Maker Ventures in their 2016 report to describe a specific form of engagement between a startup and a corporate. Corp-Up is defined as any commercial relationship focused on creating business impact by combining the assets of the involved parties. (Match Maker Ventures, 2019)

In line with the definition of the EU Startup monitor, a **startup³** is in this Master Thesis defined by three characteristics

- Younger than 10 years,
- Featuring(highly)innovative technologies and/ or business models,
- Striving for a significant customer and/ or sales growth

A **Corporate** in the context of this Master Thesis is defined as a large company or group of companies acting as a single entity.

3.3 Economic relevance of Corp-Ups

From an economic point of view, the figures show that the importance of cooperation is constantly increasing. In the survey from Match Maker Ventures (2019), corporates attribute 12% of their revenue to collaboration with startups, 19% predicted in three years. In terms of startups, the picture shows an even greater impact, startups attributing 41% of their revenue to collaboration with corporates, predicted 55% in three years, more than half of their revenue. Corp-Ups play a central role as 98% of the surveyed startups have already tried a Corp-Up setting and 70% of the collaborations from a corporate point of view are Corp-ups.

Corporates using Corp-Up achieve significantly higher revenues from startup collaboration than those not using Corp-Up (14% vs. 8% today and 20% vs. 15% in three years). Likewise, a significantly higher level of satisfaction (43% vs. 6% consider their activities "very" or "extremely successful"). Corp-Up should be the vehicle of choice when it comes to developing new and improving existing products and services as those are by far the most common objectives connected to Corp-Up. On the contrary Corp-Up is not the preferred vehicle when it comes to the softer objectives like PR and branding or corporate social responsibility. (Match Maker Ventures, 2019)

³ The definition of startup is used as well in the study of Match Maker Venture and is therefore consistent with the data analysis given in following chapters.

In a study "Cooperation between mid-sized companies and start-ups" conducted by Deloitte (2017), the relevance of cooperation also becomes clear. 46% of the surveyed startups consider cooperation to be "highly relevant" to their core business, 23% "rather relevant", the remaining 31% are divided between "neutral" and "irrelevant". 72% of the surveyed corporates rate the cooperation as "highly relevant" or "rather relevant" to the core business, 21% say "neutral" and only 7% "rather irrelevant". The survey covered 14 medium-sized companies and 13 start-ups.





Source: study "Cooperation between SMEs and start-ups" conducted by Deloitte (2017)

A further survey of 63 mid-sizes companies and 37 startups shows the important role of economic relevance in relation to the objectives of the cooperation. The top three cooperation objectives of start-ups include financial objectives in 1st place with 24%, customer-oriented objectives in 2nd place with 22% and innovation-oriented objectives in 3rd place with 17%. From the point of view of medium-sized companies, the focus is on customer-oriented objectives with 18%, innovation-oriented and strategic objectives with 16% each and financial objectives in 4th place with 13%.



Figure 3: Cooperation objectives

Source: study "Cooperation between mid-sized companies and start-ups" conducted by Deloitte (2017)

It was mentioned in the previous text, innovation is a highly relevant topic in research, among all objectives, innovation plays a major role within Corp-Ups and one could argue that strengthening innovation is one top motivation for collaboration. But how transform strong innovation into economic profit. In the study: "The age of collaboration II" from Match Maker Ventures in 2019 it is outlined that 72% of surveyed corporates consider Innovation a top or top-3 priority. The numbers suggest that there is a huge economic relevance and both corporates and startups are able to translate innovation into profits. In addition, the study shows that Corp-Ups have emerged as the most used and least stopped engagement vehicle. The innovation capacity, defined as the ability to produce innovations, is an important factor in securing and building competitive advantages. This innovative ability is characterized by the Innovation potential and climate. Innovation potential can be leveraged only through successful innovation processes.

Internal (push factors)	External (pull factors)			
Cost pressure through R&D (mix	• competitive pressure,			
cost recovery, technological				
dynamics, time advantage)				
Risk reduction	Overcoming trade barriers,			
 internal increase in performance 	 Access to resources, 			
Rationalization	• Exploitation of favorable production			
	conditions (wages, infrastructure,			
Allocation problems	 local/global know-how), 			
 capacity bottlenecks and 	 Incentive through state investment 			
	grants,			
 organizational changes 	Globalization/standardization			
	(access to new markets,			
	international presence, cost			
	reduction potential) and			

3.4 The phenomenon Corp-Up

The Corp-Up phenomenon is strongly associated with the willingness of corporates to collaborate with the outside. In other words, the idea of openness⁴ is that a single organization cannot innovate in isolation. It has to engage with different types of partners to acquire ideas and resources from the external environment to stay abreast of competition.

4 Chesbrough, 2003a; Laursen and Salter, 2006a

Often the development departments in corporates operate in very confined environments, in other words, there is little or no permeability within the company, so synergy effects cannot be exploited. In this view, external actors can leverage a firm's investment in internal R&D through expanding opportunities of combinations of previously disconnected silos of knowledge and capabilities (Fleming, 2001; Hargadon and Sutton, 1997; Schumpeter, 1942).

However, the phenomenon Corp-Up is not equally pronounced in all industries. The readiness and willingness to collaborate among the companies increases strongly due to business realties because:

- Established players run the risk of missing out and being disrupted by new players and/ or from other industries. (consulting and mobility)
- Established players almost seem paralyzed by the complexity and the sheer number of opportunities. (retail, media, engineering & construction and partly financial services, IT, telecommunications)
- The entire organization is much more receptive of outside innovation and subsequent expectations are high. (utilities, automotive & manufacturing and partly financial services, telecommunications, IT)

There are several factors that fuel the Corp-Up phenomenon and their successful implementation. One aspect is the increased number of promising startups that know why to engage and what to look for. There is a wider choice for corporates. Allowing for high quality or high intensity engagements is often painful for corporates. It is fairly easy to conduct a startup fair, a hackathon or even to invest into startups. However, it gets significantly more uncomfortable when the new customer engagement strategy relies on the technology of a startup, or when the entire customer base is exposed to a white-labelled product of a startup under the name of a large corporate.

Cost per engagement refers to the fully loaded cost of engaging with one startup in the respective vehicle. Yearly overhead costs are allocated based on the number of startup engagements. These numbers can be understood as a good proxy based on our combined

experience and our qualitative interviews. Key cost drivers are usually the internal FTE costs, costs to external parties to support search, valuation, etc. as well as costs related to the startups itself (PoC costs or investment/ acquisition). Not to forget the numerous marketing related costs.

Corporates wanting to maximize the outcome of their collaboration activities should always ask the question of the main objective: Why to collaborate? The objective should be articulated in a value proposition to the startup community to ensure the right kind of startups are attracted with the right intention in mind. (Match Maker Ventures, 2019)

Figure 4: Startup-corporate collaboration matrix



Startup-corporate collaboration matrix

Source: study: "The age of collaboration II", Match Maker Ventures, 2019

3.5 Why do many cooperation's fail?

The first step for both cooperation partners corporates and startups is to find the right match and form of collaboration. It is sometimes difficult for established companies to identify, approach and then select suitable start-ups. Positioning themselves as a company

and interesting cooperation partner and marketing their own range of start-ups can also be a challenge. On the other hand, it is equally difficult for start-ups to find suitable companies in the first step and to identify a suitable contact person with the appropriate authority and responsibility in the second step, who can ultimately help a cooperation to succeed.

There is no doubt that the aim is to overcome the existing cultural and structural differences between the two forms of organization. Achieving mutual understanding is therefore an important prerequisite and at the same time one of the greatest challenges. Often the necessary knowledge of how the other side works is simply lacking. At a certain point it is about the added value of the collaboration. Collaboration often fail because a common mission and goals are missing, and startups criticize the lack of commitment on the part of corporates.

One of the reasons why Corp-ups fail is the internal processes and expectations regarding opportunities and risks on the corporate side and the matter of coping with the laws of large companies without losing speed or flexibility. Start-ups are generally considered to be flexible and innovative, but not very goal-oriented, hierarchically structured and/or with clear responsibilities. In the case of start-ups, cooperation is initiated and carried out by the founders themselves. The situation is different for large companies that have not yet gained experience with innovation cooperation or have not defined responsibilities with regard to cooperation. This situation can delay important decisions that may require approval by top management and can jeopardize the success of the project.

The following areas of tension can be identified:

- Clear objectives and responsibilities vs. flexibility
- Access to knowledge vs. trust
 Lack of trust among the cooperation partners, the absence of clear rules, contracts, strategies and responsibilities
- unwanted knowledge drain
- Relationship of dependence,
- inefficient compromise solutions

The reasons for the failure of cooperation are seen by both sides as partly similar and partly different. A lack of commitment on the part of the cooperation partner accounts for 20 percent of the nominations of medium-sized companies and 18 percent of start-ups. The incompatibility of corporate culture is also seen similarly (medium-sized companies: 12 %; start-ups: 13 %). Different emphases arise with regard to the advantages of cooperation: This is seen by 16 percent of the mid-sized companies and 5% of start-ups as a problem. However, conflicts of interest between the parties (SMEs: 18 %; start-ups: 21 %), contradictory target relationships (SMEs: 14 %; start-ups: 21 %) and lack of resources (SMEs: 6 %; start-ups: 11 %) are more strongly emphasized by the start-ups.

Figure 5: reasons why collaboration fail



4 Results

The following chapter outlines the research results of the data analysis with the analysis tool IBM SPSS. The Analysis is based on the data set collected from a proprietary survey with 340 corporates and 203 startups, representing over 70 countries. The questions and answers provided from Match Maker Ventures were transferred into IBM SPSS and coded accordingly for further analysis.

To identify patterns, correlations and statistically significance I chose an explorative approach. In a first step I screened the questions regarding parameters, factors and content, for example size of the corporate/startups or how important is the factor innovation is for the corporate/startup. In a second step, the questions and corresponding answers were combined. For example: Would you work together with a startup (again) and which Corp-Up variant has already been tried out (both from a corporate's perspective). The underlying idea in this example is to find in an explorative way whether the tried Corp-up variant has an influence on whether you want to work with a start-up again.

An essential aspect for a meaningful comparison is the structure of the data, for example the answer to the question whether a corporate would cooperate with a start-up again was given with yes/no. When asked about the form of cooperation, the respondents were able to select one or more variants, so I treated each variant as a separate data set.

In the following results, the process is consistent- two questions from the data set are combined and the content is checked for dependencies. The mean values are compared to see if there are any trends and a single factor variance analysis is performed to see if there are statistically significant values. If a significance can be determined, the individual factors are tested for their influence by means of a simple regression.

4.1 Does the willingness to collaborate (again) with a startup depend on the tried form of Corp-up?

The following analysis will consider whether the willingness to work together (again) is related to the Corp-up option tried. A single factor ANOVA was performed to compare mean values and standard deviation from descriptive statistics. The underlying data are derived from the answers of the question: Which form of Corp-Up have you tried? with the values shown in the table as dependent variables and the answers to the question: Would you collaborate with a startup again/ Would you ever collaborate with a startup? as factor.

Comparing the mean values und standard deviation in table 1 there is no significance that there is a particular form of collaboration (within a Corp-Up collaboration) that would influence the willingness to cooperate again. Even considering the Buyer-supplier-relationship which means the corporate procures from a startup (M = 0,41, SD = 0,49) with the highest values and the Reverse API agreement which means the corporate exposes their assets on standardized terms to startups shows the lowest values (M = 0,17, SD = 0,38).

Table 1: descriptive statistics and ANOVA - Does the willingness to collaborate again with (
startup depend on the tried form of Corp-up?

Which form of Corp-Up have you tried?	n	mean	standard	F	Sig.
		value	deviation		
Referral model: You refer a startup's service/product to your customers	257	,2101	,40819	1,104	,294
Reselling model: You leverage your power to resell startup's service/ product	257	,3191	,46702	,331	,566
Buyer-supplier relationship: You procure from a startup	257	,4086	,49253	,002	,969
Reverse API agreement: You expose your assets on standardized terms to startups	257	,1712	,37742	,030	,864

Joint product development: You jointly					
develop a new service/product with a	257	,3852	,48760	,005	,946
startup					

 Table 1:
 dependent variable: Which form of Corp-Up have you tried?

 factor:
 Would you collaborate with a startup again?

What the table does not show is the outcome of the answers to the question: Would you collaborate with a startup again? The answer yes was given by 252 corporates out of 257, only 5 corporates would not collaborate again with startups. That leads to the conclusion that from a corporate's perspective regardless the form of collaboration (or even no collaboration at all before) corporates would Corp-up with startups again.

4.2 Do the following concerns deter corporates to start a collaboration with startup?

As already mentioned in the previous chapters, there are factors that speak against cooperation between corporates and start-ups. In this analysis I want to find out if and which of the concerns (table 2) have an influence on whether a corporate and startup will Corp-Up again or even Corp-up for the first time.

Comparing the mean values und standard deviation in table 2 below we notice the lowest values with the concern to harm the company's reputation (M = 0,06, SD = 0,24) and the highest (M = 0,37, SD = 0,48) with uncertainties regarding the processes and the outcome of the collaboration. Among the given concerns against the collaboration with a startup the harming the company's reputation is showing a statistically significance with F(1,254) = 10,23, p < ,002.

Table 2: descriptive statistics and ANOVA - Do the following concerns taken deter corporates to start a collaboration with startup?

Overall what are the main concerns	n	mean	standard	F	Sig.
speaking against Corp-Up?		value	deviation		
Harm the company's reputation	256	,0625	,24254	10,232	,002
Unclear ROI	256	,2852	,45237	,328	,567
Rejection of external solutions from					
employees (i.e. "not invested here"	256	,1563	,36380	,940	,333
syndrome)					
Uncertainties regarding the processes	256	3672	18298	023	878
and the outcome of the collaboration	230	,5072	,40230	,025	,070
Company's readiness to enter the	256	2500	13386	067	795
market the startup is in	230	,2300	,-3380	,007	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

Table 2:

dependent variable: Overall what are the main concerns speaking against Corp-Up?

factor: Would you collaborate with a startup again/Would you ever collaborate with a startup?

Given the outcome it may lead to the conclusion that among all the concerns in table 2 to harm the company's reputation is the most important one regarding collaboration with a startup from the corporate's perspective.

4.3 Do the given fulfilled/implemented factors within the organization impact the perception on the success of the Corp-Up activities?

The intention of the question and analysis is, if certain factors such as dedicated budget and resources (table 3) are put in place or implemented in the organization, the cooperation with a startup is more successful and is therefore perceived as such. Furthermore, are there factors that stands statistically out.

Comparing the mean values und standard deviation in table 3 below we see that there are no big differences between the factors (lowest values with well-defined scaling process (M = 2,48, SD = 1,04) and the highest (M = 2,94, SD = 1,11) well defined validation process in the descriptive statistics. There is no impact of the fulfilled/implemented factors on the perception of the success of the Corp-Up activities. The numbers show no statistically significant values.

Table 3: descriptive statistics and ANOVA - Do the given fulfilled/implemented factors within the organization impact the perception on the success of the Corp-Up activities?

In your organization to what extent are	n	mean	standard	F	Sig.
the following factors fulfilled/		value	deviation		
implemented?					
Aligned objectives on why to Corp-Up	146	2,8904	1,01113	,201	,937
Dedicated resources and budget	145	2,8000	1,16428	1,166	,329
Well defined scouting process	145	2,8414	1,17660	,240	,915
Well defined validation process	145	2,9448	1,11043	,516	,724
Well defined onboarding process	145	2,8483	1,15669	1,212	,308
Well defined scaling process	152	2,4803	1,04197	1,497	,206

Table 3:

dependent variable: In your organization to what extent are the following factors fulfilled/ implemented? factor: Overall, do you consider your Corp-Up activities a success?

4.4 Does the strategic importance of innovation in the company impact the frequency of collaboration with specific innovation partners?

The basic assumption behind the question is if the importance of innovation within the company is high, it is more likely that the company collaborates with innovation partners such as start-ups for example (table 4). Furthermore, if so, does the importance of innovation influence the choice and frequency of collaboration with a certain innovation partner.

Comparing the mean values und standard deviation in table 4 below the range in the mean values is between (M = 2,79) with research institutes and (M = 3,82) with suppliers. Among the different types of innovation partners startups and customers show statistically significant values with startups (F = 11,71, p < ,001) and customers (F = 11,71, p < ,001). We notice that research institutes with p < ,062 are slightly above ,05 but may also have an impact.

Table 4: descriptive statistics and ANOVA - Does the strategic importance of innovation in the company impact the frequency of collaboration with specific innovation partners?

How frequently	How strategically	n	mean	standard	F	Sig.
do you	important is		value	deviation		
collaborate with	innovation for your					
the following	company?					
types of partners						
to innovate?						
Startups	I don't know	2	3,0000	2,82843		
	Below top 5 priorities	174	3,5690	0,82122		
	Among top 5 priorities	79	3 <i>,</i> 0253	0,96043		
	Among top 3 priorities	17	2,6471	0,78591		
	Top priority	92	3,8152	1,05798		
	Total	364	3,4670	,97997	11,712	,001
Universities	I don't know	2	2,0000	1,41421		
	Below top 5 priorities	176	3,0114	0,91956		
	Among top 5 priorities	78	2,9103	0,77604		
	Among top 3 priorities	18	2,7778	1,06027		
	Top priority	92	3,1522	1,16671		
	Total	366	3,0082	,97218	1,502	,201
Research	I don't know	2	2,0000	1,41421		
Institutes	Below top 5 priorities	173	2,7977	0,96424		
moticutes	Among top 5 priorities	79	2,6835	0,89935		
	Among top 3 priorities	18	2,3333	0,97014		
	Top priority	91	2,9780	1,15449		
	Total	363	2,7906	1,01111	2,262	,062
Innovation	I don't know	2	3,5000	0,70711		
consultants/	Below top 5 priorities	176	3,1705	0,97654		
	Among top 5 priorities	77	3,1169	0,85800		
service providers	Among top 3 priorities	18	2,7778	0,64676	1	
	Top priority	93	3,3548	1,08993	1	
	Total	366	3,1885	,97361	1,662	,158
Suppliers	I don't know	2	4,0000	1,41421		
	Below top 5 priorities	176	3,8352	0,97460]	

	Among top 5 priorities	80	3,8000	0,97305		
	Among top 3 priorities	18	3,7778	0,94281		
	Top priority	94	3,8191	0,89157		
	Total	370	3,8216	,94886	,046	,996
Customers	I don't know	2	3,5000	0,70711		
	Below top 5 priorities	174	3,8506	0,97990		
	Among top 5 priorities	79	3,4557	1,05972		
	Among top 3 priorities	18	3,5000	1,24853		
	Top priority	93	4,0000	1,04257		
	Total	366	3,7842	1,04153	3,612	,007

Table 4:

dependent variable: How frequently do you collaborate with the following types of partners to innovate? factor: How strategically important is innovation for your company?

In the extract of following post-hoc test (table 5) we see statistically significant values with the dependent variables of startups and customers. Pair-wise comparisons were conducted, and we see the strategic importance of innovation in both groups' startups and customers. For startups we notice the importance of innovation in the top 3 priorities, for customers in the top 5 priorities.

Table 5: post-hoc test - LSD - Does the strategic importance of innovation in the company impact the frequency of collaboration with specific innovation partners?

	(I) Q33 How	(J) Q33 How			
	strategically	strategically	Mean		
	important is	important is	value		
Dependent	innovation for	innovation for	difference	Standard	
variable	your company?	your company?	(I-J)	error	Sig.
Startups	Top priority	I don't know	,81522	,66243	,219
		Below top 5	,24625*	,11947	,040
		priorities			
		Among top 5	,78990*	,14216	,000
		priorities			
		Among top 3	1,16816*	,24467	,000
		priorities			

Customers	Top priority	I don't know	,50000	,73392	,496
		Below top 5	,14943	,13191	,258
		priorities			
		Among top 5	,54430*	,15713	,001
		priorities			
		Among top 3	,50000	,26444	,059
		priorities			

*The mean difference is significant in level 0.05.

4.5 Does the strategic importance of innovation in the company impact the usage of different collaboration vehicles with startups?

The analysis takes a closer look at whether the strategic importance of innovation has a statistically significant impact on the choice of the collaboration vehicle with startups.

If we take a close look on the outcome of the ANOVA (table 6) we notice that among the different types of collaboration vehicles the corporate own accelerator and the startup incubator/ tech lab show statistically significant values with (F = 3,13 p < ,026) and customers (F = 3,31, p < ,020). We see that Investment in form of a corporate venture capital fund with p < ,061 js slightly above ,05 but may also have an impact.

Table 6: descriptive statistics and ANOVA - Does the strategic importance of innovation in the company impact the usage of different collaboration vehicles with startups?

Have you	How strategically	n	mean	standard	F	Sig.
used/Are you	important is		value	deviation		
using the	innovation for your					
following vehicles	company?					
to collaborate						
with startups?						
Acquisition	Below top 5 priorities	164	2,1159	0,99322		
(Acquire/integrate a	Among top 5 priorities	75	2,0667	0,96329		
startup)	Among top 3 priorities	16	2,0000	1,31656		
	Top priority	80	2,2750	1,01850		

	Total	335	2,1373	1,00847	,742	,528
Investment (Set up a	Below top 5 priorities	166	2,1386	1,06689		
corporate venture	Among top 5 priorities	74	2,0946	0,96754		
capital fund)	Among top 3 priorities	16	1,6250	1,08781		
	Top priority	82	2,3537	1,03485		
	Total	338	2,1568	1,04596	2,483	,061
Investment Corp-Up	Below top 5 priorities	166	2,6325	0,87589		
(Partner with/	Among top 5 priorities	75	2,4533	0,91966		
procure from startups)	Among top 3 priorities	16	2,2500	1,12546		
startapsy	Top priority	84	2,7143	0,89942		
	Total	341	2,5953	,90773	1,974	,118
Launch own	Below top 5 priorities	164	2,0061	1,02423		
corporate	Among top 5 priorities	75	1,8400	1,02720		
accelerator	Among top 3 priorities	16	1,8750	1,20416		
	Top priority	83	2,3253	1,09443		
	Total	338	2,0414	1,06107	3,131	,026
Sponsor/participate	Below top 5 priorities	163	2,1595	1,07109		
in a third-party	Among top 5 priorities	75	2,2133	1,09413		
accelerator	Among top 3 priorities	15	1,7333	1,03280		
	Top priority	81	2,2346	1,05204		
	Total	334	2,1707	1,07003	,977	,404
Launch a startup	Below top 5 priorities	165	1,9515	0,99882		
incubator/ tech lab	Among top 5 priorities	75	1,8400	1,05318		
	Among top 3 priorities	16	1,8125	1,16726		
	Top priority	82	2,3049	1,02667		
	Total	338	2,0059	1,03641	3,319	,020
Host/organise	Below top 5 priorities	165	2,3273	0,97633		
startup events	Among top 5 priorities	74	2,2973	0,93237		
	Among top 3 priorities	16	2,3125	1,13835		
	Top priority	80	2,5250	0,91368		
	Total	335	2,3672	,96004	,963	,410

Table 6:

dependent variable: Have you used/Are you using the following vehicles to collaborate with startups? factor: How strategically important is innovation for your company?

In the extract of following post-hoc test (table 7) we see statistically significant values with the dependent variables' corporate own accelerator and startup incubator/ tech lab. Pairwise comparisons were conducted, and we see the strategic importance of innovation in both groups. For both accelerator and incubator/tech lab we notice the importance of innovation among the top 5 priorities. Table 7: post-hoc test - Does the strategic importance of innovation in the company impact the usage of different collaboration vehicles with startups?

	(I) Q33 How	(J) Q33 How			
	strategically	strategically			
	important is	important is	Mean value		
Dependent	innovation for	innovation for your	difference (I-	Standard	
variable	your company?	company?	(L	error	Sig.
Launch own	Top priority	Below top 5	,31920*	,14160	,025
corporate		priorities			
accelerator					
		Among top 5	,48530*	,16746	,004
		priorities			
		Among top 3	,45030	,28700	,118
		priorities			
Launch a startup	Top priority	Below top 5	,35336*	,13861	,011
incubator/ tech lab		priorities			
		Among top 5	,46488*	,16391	,005
		priorities			
		Among top 3	,49238	,28038	,080
		priorities			
					1

*The mean difference is significant in level 0.05.

dependent variable: Have you used/Are you using the following vehicles to collaborate with startups?

4.6 Does the experience in dealing with startups impact the strategic importance of innovation in the company?

The basic idea is whether experiences with startups have an influence on the strategic importance of innovation. Looking at the mean value and standard deviation (table 8) of the answers to the question of experience in dealing with startups, the mean value shows a rising tendency from "not at all" with (M = 3.13, SD = 1.12) to "somewhat" with (M = 2.84, SD = 1.12) to "extremely" with (M = 3.54, SD = 1.46).

Table 8 : descriptive statistics and ANOVA - Does the experience in dealing with startups impact the strategic importance of innovation in the company?

How experienced do you consider your company	n	mean value	standard
in dealing with startups?			deviation
Not at all	29	3,1379	1,12517
Slightly	64	2,7969	,97882
Somewhat	122	2,8443	1,12095
Very	96	3,3229	1,39544
Extremely	35	3,5429	1,46213
N/A	2	2,5000	,70711

Table 8:

dependent variable: How strategically important is innovation for your company? factor: How experienced do you consider your company in dealing with startups?

In following post-hoc test (table 9) we see statistically significant values beginning with "slightly" to "extremely". Pair-wise comparisons were conducted, and we see the strategic importance of innovation in both groups. For both accelerator and incubator/tech lab we notice the importance of innovation among the top 5 priorities.

Table 9: post-hoc test – LSD - Does the experience in dealing with startups impact the strategic importance of innovation in the company?

(I) Q36 How	(J) Q36 How			
experienced do you	experienced do you			
consider your company	consider your company			
in dealing with	in dealing with	Mean value	Standard	
startups?	startups?	difference (I-J)	error	Sig.
Not at all	Slightly	,34106	,27229	,211
	Somewhat	,29367	,25129	,243
	Very	-,18499	,25775	,473
	Extremely	-,40493	,30544	,186
	N/A	,63793	,88928	,474
Slightly	Not at all	-,34106	,27229	,211

	Somewhat	-,04739	,18774	,801
	Very	-,52604*	,19629	,008
	Extremely	-,74598*	,25572	,004
	N/A	,29688	,87345	,734
Somewhat	Not at all	-,29367	,25129	,243
	Slightly	,04739	,18774	,801
	Very	-,47865*	,16595	,004
	Extremely	-,69859*	,23324	,003
	N/A	,34426	,86714	,692
Very	Not at all	,18499	,25775	,473
	Slightly	,52604*	,19629	,008
	Somewhat	<i>,</i> 47865*	,16595	,004
	Extremely	-,21994	,24018	,360
	N/A	,82292	,86903	,344
Extremely	Not at all	,40493	,30544	,186
	Slightly	,74598*	,25572	,004
	Somewhat	,69859*	,23324	,003
	Very	,21994	,24018	,360
	N/A	1,04286	,88435	,239

*The mean difference is significant in level 0.05.

dependent variable: How strategically important is innovation for your company?

The results of the mean value comparisons and analysis of variance show no statistically significant values for the overall model, even though we see significance within the pairwise comparisons. That leads to the conclusion that there is no pattern or influence between the strategic importance within corporates and experience with startups.

4.7 Does the number of employees have an influence on the strategic importance of Innovation in a company?

The basic assumption is that the size of the company has an influence on the strategic importance within the company. Comparing the mean values und standard deviation in table 10 below we see that there are no big differences regarding the number of employees and the strategic importance of innovation. Taking a closer look on the post-hoc-test we notice no statistically significant values within the groups and pairs. The outcome of the ANOVA leads to the same result (F (5,355) = 0,808, p < ,544).

Table 10: descriptive statistics - Does the number of employees have an influence on the strategic importance of Innovation in a company?

How strategically important is innovation for your	n	mean value	standard
company?			deviation
0 - 999 FTEs (Full Time Equivalents)	126	3,1032	1,28890
1,000 - 9,999 FTEs	110	3,0909	1,29605
10,000 - 24,999 FTEs	47	2,8723	1,07576
25,000 - 49,999 FTEs	25	2,8000	1,04083
50,000 - 99,999 FTEs	12	3,0833	1,31137
100,000+ FTEs	41	3,3171	1,31223

Table 10:

dependent variable: How strategically important is innovation for your company? factor: How many employees does your company have?

4.8 Does the number of employees of the company impact the frequency of collaboration with different types of innovation partners?

The analysis looks at the assumption is that the size of the company has an influence on the frequency of collaboration with different innovation partners. Comparing the mean values und standard deviation from the innovation partner: startups as an example (table 10) below we see that there are no big differences regarding the number of employees.

Table 11: descriptive statistics - Does the number of employees of the company impact the frequency of collaboration with different types of innovation partners?

How frequently	How many employees	n	mean	standard	F	Sig.
do you	does your company		value	deviation		
collaborate with	have?					
the following						
types of partners						
to innovate?						
Startups	0 - 999 FTEs	121	3,3554	1,02355		
	1,000 - 9,999 FTEs	108	3,5185	0,91183		
	10,000 - 24,999 FTEs	47	3,4255	0,97233		
	25,000 - 49,999 FTEs	25	3,3600	1,03602		
	50,000 - 99,999 FTEs	12	3,4167	0,99620		
	100,000+ FTEs	41	3,6341	0,94223		
	Gesamt	354	3,4492	0,97211	,679	,639
Universities	0 - 999 FTEs	123	3,0894	0,99184		
	1,000 - 9,999 FTEs	109	2,9450	0,96066		
	10,000 - 24,999 FTEs	47	3,0851	0,92853		
	25,000 - 49,999 FTEs	25	3,0800	0,99666		
	50,000 - 99,999 FTEs	12	2,7500	0,86603		
	100,000+ FTEs	40	2,7250	0,93336		
	Gesamt	356	2,9916	0,96557	1,197	,310
Research Institutes	0 - 999 FTEs	122	2,9426	1,03891		
	1,000 - 9,999 FTEs	110	2,6182	0,97662		
	10,000 - 24,999 FTEs	45	2,9333	0,98627		
	25,000 - 49,999 FTEs	24	2,7917	1,02062		
	50,000 - 99,999 FTEs	12	2,4167	0,90034		
	100,000+ FTEs	40	2,6000	0,95542		
	Gesamt	353	2,7734	1,00548	2,013	,076
Innovation	0 - 999 FTEs	123	3,3252	1,00406		
providers	1,000 - 9,999 FTEs	109	3,2385	0,91185		
	10,000 - 24,999 FTEs	47	3,1277	0,76944		
	25,000 - 49,999 FTEs	24	3,0833	1,05981		
	50,000 - 99,999 FTEs	12	2,6667	0,98473		
	100,000+ FTEs	41	2,8537	0,98896]	
	Gesamt	356	3,1798	0,95901	2,406	,037

Suppliers	0 - 999 FTEs	126	3,7619	0,98329		
	1,000 - 9,999 FTEs	110	3,8545	0,93687		
	10,000 - 24,999 FTEs	47	4,0213	0,84672		
	25,000 - 49,999 FTEs	25	3,7200	1,13725		
	50,000 - 99,999 FTEs	12	3,8333	0,93744		
	100,000+ FTEs	41	3,7805	0,88069		
	Gesamt	361	3,8255	0,94869	,611	,691
Customers	0 - 999 FTEs	124	3,6935	1,06822		
	1,000 - 9,999 FTEs	109	3,8991	0,97130		
	10,000 - 24,999 FTEs	47	3,6809	1,04479		
	25,000 - 49,999 FTEs	24	4,0417	1,19707		
	50,000 - 99,999 FTEs	12	4,0000	0,73855		
	100,000+ FTEs	40	3,6250	1,03000		
	Gesamt	356	3,7809	1,03313	1,149	,334

Table 11:

dependent variable: How frequently do you collaborate with the following types of partners to innovate? factor: How many employees does your company have?

If we look at the outcome of the ANOVA (table 12) we can see that startups show no statistically significant values (F (5,348) = 0,679, p < ,639) but we can state that innovation consultants/ service providers have statistically significant values with (F(5,348) = 2,406, p < ,037)

Taking a closer look on the post-hoc-test (table 13) we notice statistically significant values within the following group: innovation consultants/service providers and pairs: How many employees does your company have?

Table 12: post-hoc test - LSD - Does the number of employees of the company impact the frequency of collaboration with different types of innovation partners?

(I) How many		Mean value		
employees does your	(J) How many employees	difference	Standard	
company have?	does your company have?	(I-J)	error	Sig.
0 - 999 FTEs (Full Time	50,000 - 99,999 FTEs	,65854*	,28720	,022
Equivalents)	100,000+ FTEs	,47154*	,17126	,006
1,000 - 9,999 FTEs	50,000 - 99,999 FTEs	,57187*	,28884	,048
	100,000+ FTEs	,38487*	,17398	,028
50,000 - 99,999 FTEs	0 - 999 FTEs	-,65854*	,28720	,022
	1,000 - 9,999 FTEs	-,57187*	,28884	,048
100,000+ FTEs	0 - 999 FTEs	-,47154*	,17126	,006
	1,000 - 9,999 FTEs	-,38487*	,17398	,028

*The mean difference is significant in level 0.05.

dependent variable: How frequently do you collaborate with the following types of partners to innovate: innovation consultants/service providers

4.9 Does the direct responsibility for innovation within the company impact the frequency of collaboration with different types of innovation partners?

The underlying idea if there is direct responsibility for innovation it may favor the frequency of collaboration with different types of partners.

Comparing the mean values und standard deviation from table 13 we can see top 3 values with startups (M = 3,46, SD = 0,98), suppliers (M = 3,81, SD = 0,95) and customers (M = 3,78, SD = 1,04). If we look at the outcome of the ANOVA (table 13) we can see that startups show the highest statistically significant values (F (10,348) = 0,679, p < ,001), followed by suppliers with (F (5,933) = 0,679, p < ,015).

Table 13: descriptive statistics - Does the direct responsibility for innovation within the company impact the frequency of collaboration with different types of innovation partners?

How frequently do you collaborate	n	mean	standard	F	Sig.
with the following types of partners to		value	deviation		
innovate?					
startups	363	3,4656	,98092	10,341	,001
universities	365	3,0055	,97212	2,072	,151
research institutes	362	2,7901	1,01245	1,855	,174
innovation consultants/service	365	3,1863	,97402	,334	,563
providers					
suppliers	370	3,8162	,95920	5,933	,015
customers	365	3,7836	1,04290	,539	,463

Table 14:

dependent variable: How frequently do you collaborate with the following types of partners to innovate? factor: Are you directly responsible for or working in the innovation department?

A simple linear regression (table 15) with the frequency of collaboration with startups as the dependent variable and the direct responsibility for innovation within the company as the influencing variable. 2,5 % of the variance from frequency of collaboration with startups can be explained by the direct responsibility for innovation within the company. The regression coefficient (table 15) of the variable: direct responsibility for innovation with the company is ,025 and is significant. (T(361) = -3,12, p<.001)

Table 14: linear regression - Does the direct responsibility for innovation within the company impact the frequency of collaboration with different types of innovation partners?

model	R	R - Quadrat	corrected R - Quadrat	F	Sig.
1	,167	,028	,025	10,341	,001

a. Influencing variable: Are you directly responsible for or working in the innovation department?

Table 15: linear regression – Coefficient - Does the direct responsibility for innovation within the company impact the frequency of collaboration with different types of innovation partners?

model		regression	Std.	beta	Т	Sig.
		coefficientB	deviation			
1	constant	3,928	,153		25,751	,001
	Are you directly responsible for or working in the innovation department?	-,344	,107	-,167	-3,216	,001

a. startups

4.10 Does the direct responsibility for innovation within the company impact the tried forms of Corp-Ups?

There different variants within Corp-Ups and the underlying idea of the question is to take a closer look on the effect of direct responsibility for innovation on the Corp-up variants which is tried out. The central role of Innovation was already pointed out in the previous text, Corp-ups offer a good opportunity to strengthen the power of innovation.

If we look at the outcome of the comparison of the mean values and standard deviation (table 17) we can see that the tried forms of Corp-Ups: referral model, buyer-supplier relationship and the joint product development show statistically significant values. Table 16: descriptive statistics and ANOVA - Does the direct responsibility for innovation within the company impact the tried forms of Corp-Ups?

Which form of Corp-Up	Are you directly	n	mean	standard	F	Sig.
have you tried?	responsible for		value	deviation		
	or working in					
	the innovation					
	department?					
Referral model: You refer a	Yes	259	0,2394	0,42753		
startup's service/product to	No	135	0,1407	0,34905		
your customers	Gesamt	394	0,2056	0,40464	5,332	,021
Reselling model: You	Yes	259	0,3436	0,47584		
leverage your power to	No	135	0,2741	0,44771		
product	Gesamt	394	0,3198	0,46699	1,974	,161
Buyer-supplier relationship:	Yes	259	0,4710	0,50013		
You procure from a startup	No	135	0,3111	0,46467		
	Gesamt	394	0,4162	0,49356	9,520	,002
Reverse API agreement: You	Yes	259	0,1622	0,36931		
expose your assets on standardized terms to	No	135	0,1333	0,34120		
startups	Gesamt	394	0,1523	0,35975	,569	,451
Joint product development:	Yes	258	0,4496	0,49842		
You jointly develop a new	No	135	0,2593	0,43986		
startup	Gesamt	393	0,3842	0,48703	13,987	,000

Table 17:

dependent variable: Which form of Corp-Up have you tried?

factor: Are you directly responsible for or working in the innovation department?

A simple linear regression (table 18) with the different Corp-up variants as the dependent variable and the direct responsibility as the influencing variable was performed.

Table 17: linear regression - Does the direct responsibility for innovation within the company impact the tried forms of Corp-Ups?

model	R	R – Square	corrected R – Square	F	Sig.
1	,116	,013	,011	5,332	,021
2	,071	,005	,002	1,974	,161
3	,154	,024	,021	9,52	,002
4	,038	,001	-,001	0,569	,451
5	,186	,035	,032	13,987	,001

- 1. dependent variable: Referral model: You refer a startup's service/product to your customers
- 2. dependent variable: Reselling model: You leverage your power to resell startup's service/ product
- 3. dependent variable: Buyer-supplier relationship: You procure from a startup
- 4. dependent variable: Reverse API agreement: You expose your assets on standardized terms to startups
- dependent variable: Joint product development: You jointly develop a new service/product with a startup

We can see that among the different variants the highest value with Joint product development with ,032 (corrected R-square) following the buyer-supplier relationship with ,021 (corrected R-square) and ,011 (corrected R-square) with referring a startup's service/product. Therefore, we could argue that 3,2% of the variance and can be explained by joint product development, 2,1% and 1,1% by the other two variants.

The result show that the direct responsibility for innovation within the company reflects on innovation related topics like product development, startup product and services and the sales relationship.

Table 18: linear regression – Coefficient - Does the direct responsibility for innovation within the company impact the tried forms of Corp-Ups?

model		regression	Std.	beta	Т	Sig.
		coefficientB	deviation			
1	constant	0,338	0,061		5,556	0,000
	Are you directly responsible for or working in the innovation department?	-0,099	0,043	-0,116	-2,309	0,021
2	constant	0,413	0,071		5,860	0,000
	Are you directly responsible for or working in the innovation department?	-0,070	0,050	-0,071	-1,405	0,161
3	constant	0,631	0,074		8,548	0,000
	Are you directly responsible for or working in the innovation department?	-0,160	0,052	-0,154	-3,085	0,002
4	constant	0,191	0,054		3,510	0,001
	Are you directly responsible for or working in the innovation department?	-0,029	0,038	-0,038	-0,754	0,451
5	constant	0,640	0,073		8,824	0,000
	Are you directly responsible for or working in the innovation department?	-0,190	0,051	-0,186	-3,740	0,000

- 1. dependent variable: Referral model: You refer a startup's service/product to your customers
- 2. dependent variable: Reselling model: You leverage your power to resell startup's service/ product
- 3. dependent variable: Buyer-supplier relationship: You procure from a startup
- 4. dependent variable: Reverse API agreement: You expose your assets on standardized terms to startups
- dependent variable: Joint product development: You jointly develop a new service/product with a startup

4.11 Does the share of total revenue impacted by startup collaboration effect the strategic importance of innovation in the company?

The underlying thinking is that Innovation power coming from the collaboration with a startup translates into positive effects on the turnover, therefore the higher the total

turnover influenced by the cooperation with a startup the higher the strategic importance of innovation. Comparing the mean values und standard deviation from table 20 we can see the highest mean value at a share of 51-71% revenue impacted by any form of startup collaboration. The post-hoc test (table 21) shows the highest statistically significant values at this range.

Table 19: descriptive statistics and ANOVA - Does the share of total revenue impacted by startup collaboration effect the strategic importance of innovation in the company?

What share of your total revenues	n	mean value	standard	F	Sig.
are impacted by any form of			deviation		
startup collaboration today?					
1-25%	238	2,9286	1,16884		
26-50%	21	3,4762	1,50396		
51-75%	5	4,6000	,89443		
76-100%	11	4,1818	1,40130		
Gesamt	275	3,0509	1,24585	7,706	,000,

Table 20:

dependent variable: How strategically important is innovation for your company?

factor: What share of your total revenues are impacted by any form of startup collaboration today?

Table 20: post-hoc test- LSD - Does the share of total revenue impacted by startup

collaboration effect the strategic importance of innovation in the company?

(I) Q37 What share of				
your total revenues	(J) Q37 What share of your			
are impacted by any	total revenues are impacted	Mean value		
form of startup	by any form of startup	difference	Standard	
collaboration today?	collaboration today?	(I-J)	error	Sig.
1-25%	26-50%	-,54762*	,27374	,046
	51-75%	-1,67143*	,54339	,002
	76-100%	-1,25325*	,37085	,001

*The mean difference is significant in level 0.05.

dependent variable: How strategically important is innovation for your company?

4.12 Does the number of team members (within the startup) impact the strategic importance of collaboration with a corporate?

The underling idea is to take a closer look on the number of team members within the startup and the impact on the strategic importance of collaboration. Is there a number of team member where the importance increases, because the necessary manpower is available, or does the readiness decrease with larger start-ups, because there are enough people and the cooperation does not seem necessary anymore?

Table 21: descriptive statistics and ANOVA - Does the number of team members (within the startup) impact the strategic importance of collaboration with a corporate?

How strategically important is	n	mean	standard	F	Sig.
collaborating with a corporate for your		value	deviation		
startup?					
0-4 FTEs (Full Time Equivalents)	34	4,2059	1,24996		
5-9 FTEs	28	4,4286	,74180		
10-19 FTEs	45	3,8000	1,05744		
20-49 FTEs	30	4,4000	,89443		
50+ FTEs	22	3,7727	1,02036		
Total	159	4,1069	1,04694	2,996	0,02

Table 22:

dependent variable: How many team members does your startup have?

factor: How strategically important is collaborating with a corporate for your startup?

Comparing the mean values and standard deviation there is no trend in terms of more team members higher mean value, but the number has an impact on the strategic importance. Pair-wise comparisons were conducted, and we see statistically significant values within the groups 5-9 FTEs and 10-19 FTEs/50+ FTEs. The numbers suggest that within smaller structured startups the importance may be a little bit more in the focus.

Post-hoc test- LSD - Does the share of total revenue impacted by startup collaboration effect the strategic importance of innovation in the company?

(I) How many team				
members does your	(J) How many team members	Mean value		
startup have?	does your startup have?	difference	Standard	
		(I-J)	error	Sig.
5-9 FTEs	0-4 FTEs	0,22269	0,26067	0,394
	10-19 FTEs	,62857*	0,24586	0,012
	20-49 FTEs	0,02857	0,26841	0,915
	50+ FTEs	,65584*	0,29101	0,026

*The mean difference is significant in level 0.05.

dependent variable: How many team members does your startup have?

4.13 Do the given factors in place at the corporate impact the willingness to collaborate again?

Comparing the mean values und standard deviation in table 23 we notice the highest value with the factor: a clear understanding of why to Corp-up (M = 3,35, SD = 1,07). The numbers suggest that the clarity of decision making, a defined scaling process of the startup and a dedicated budget to run a PoC or other tests may impact the willingness to collaborate again as well. But we also want to consider that 111 startups out of 117 answered the question would you collaborate with a corporate again with yes.

Table 22: descriptive statistics and ANOVA - Do the given factors in place at the corporate impact the willingness to collaborate again?

From your experience, to what level	n	mean	standard	F	Sig.
are the following factors in place at the		value	deviation		
corporates you interact with?					
A clear understanding of why to Corp-	117	3,3504	1,07732	10,775	,001
Up					

116	3,0000	1,24412	1,022	,314
116	2,9914	1,32203	6,666	,011
115	2,9739	1,23161	12,351	,001
118	2,8983	1,27024	3,222	,075
117	2,7094	1,36495	5,142	,025
	116 116 115 118 117	116 3,0000 116 2,9914 115 2,9739 118 2,8983 117 2,7094	1163,00001,244121162,99141,322031162,97391,231611152,97391,231611182,89831,270241172,70941,36495	1163,00001,244121,0221162,99141,322036,6661152,97391,2316112,3511182,89831,270243,2221172,70941,364955,142

Table 23:

dependent variable: From your experience, to what level are the following factors in place at the corporates you interact with?

factor: Would you collaborate with a corporate again?

A simple linear regression (table 24) with factors in place at the corporates as the dependent variable and the willingness to collaborate again as the influencing variable. We can see that among the different variants the highest value with the factor Clarity of decision making with ,091 (corrected R-square) following a clear understanding of why to Corp-Up with ,078 (corrected R-square). All four factors conducted with sperate linear regressions are statistically relevant. We could argue that all together by summing up the corrected R-square 25% of the variance and can be explained by the four factors shown in table 24. The results show a strong relation between the factors and the willingness to collaborate again.

Table 23: linear regression - Do the given factors in place at the corporate impact the willingness to collaborate again?

model	R	R – Square	corrected R – Square	F	Sig.
1	,293	0,086	0,078	10,405	0,01
2	,235	0,055	0,047	7,67	0,01
3	,314	0,099	0,091	9,053	0,01
4	,207	0,043	0,034	6,706	0,01

- 1. dependent variable: A clear understanding of why to Corp-Up
- 2. dependent variable: Dedicated budget to run a PoC or other tests
- 3. dependent variable: Clarity of decision making
- 4. dependent variable: Defined scaling process of the startup

Table 24: linear regression – Coefficient - Do the given factors in place at the corporate impact the willingness to collaborate again?

model		regression	Std.	beta	Т	Sig.
		coefficientB	deviation			
1	constant	4,847	,466		10,405	,001
	Would you collaborate with a corporate again?	-1,423	,434	-,293	-3,282	,001
2	constant	4,461	,582		7,67	,001
	Would you collaborate with a corporate again?	-1,397	,541	-,235	-2,582	,011
3	constant	4,795	,530		9,053	,001
	Would you collaborate with a corporate again?	-1,731	,493	-,314	-3,514	,001
4	constant	4,05	,604		6,706	,001
	Would you collaborate with a corporate again?	-1,275	,562	-,207	-2,268	,025

- 1. dependent variable: A clear understanding of why to Corp-Up
- 2. dependent variable: Dedicated budget to run a PoC or other tests
- 3. dependent variable: Clarity of decision making
- 4. dependent variable: Defined scaling process of the startup

4.14 Does the stage of the startup impact the strategic importance of collaboration?

Is there a connection between the stage of the start-up and the strategic importance of collaboration, i.e. is it especially important for very young start-ups to collaborate? Looking at table 26 there is no big difference between the mean values and standard deviation and no statistically significance. The numbers suggest that the stage of the startup has no impact on the strategic importance of collaboration.

Table 25: descriptive statistics and ANOVA - Does the stage of the startup impact the strategic importance of collaboration?

What is the current stage of your	n	mean	standard	F	Sig.
startup?		value	deviation		
SEED STAGE (<2m Euro in funding; no or	60	4,1167	1,15115		
few paying customers)					
EARLY STAGE (<10m Euro in funding;	60	4,0500	,98161		
good customer traction)					
GROWTH STAGE (< 50m Euro in	29	4,0690	1,09971		
funding; international scaling)					
LATER STAGE (Series C/Acquired/IPO;	9	4,0000	1,11803		
large customer base					
also internationally)					
Total	158	4,0759	1,06803	<i>,</i> 055	,983

Table 26:

dependent variable: What is the current stage of your startup?

factor: How strategically important is collaborating with a corporate for your startup?

Comparing the mean values und standard deviation in table 26 we notice no big differences: the range is from (M = 4,00, SD = 1,11) with later stage to (M = 4,12, SD = 1,15) with seed stage startups. The numbers suggest that the stage of the startup has no impact on the strategically importance of collaborating.

4.15 Do the objectives of the startup impact the strategic importance of the collaboration with the corporate?

The basic assumption is that the objectives of the cooperation have an influence on the importance of the cooperation. If we compare the mean values and standard deviation, we find the highest value (M=4.33 and SD = 1.84) with the objective: investment. The results of the ANOVA show statistically significant values for Investment, Corporate owned accelerator and Corporate sponsored accelerator see table 27.

Table 26: descriptive statistics and ANOVA - Do the objectives of the startup impact the strategic importance of the collaboration with the corporate?

What were the objectives of the	n	mean	standard	F	Sig.
startup collaboration(s) from your		value	deviation		
perspective?					
Acquisition	60	4,1167	1,82350	,991	,432
Investment	86	4,3256	1,84354	2,316	,051
Corp-Up	108	3,3611	1,08048	1,595	,168
Corporate owned accelerator	59	3,1864	1,41999	3,212	,019
Corporate incubator/ tech lab	56	3,0536	1,66700	1,898	,111
Corporate event	84	3,1429	1,58413	1,385	,239
Corporate sponsored accelerator	57	3,1228	1,58193	2,577	,037

Table 27:

dependent variable: What were the objectives of the startup collaboration(s) from your perspective? factor: How strategically important is collaborating with a corporate for your startup?

A simple linear regression (table 28) with objectives of the startup as the dependent variable and the strategic importance of collaboration as the influencing variable. We can see that among the different objectives the value of the corrected R-square vary from ,002 with investments, -,003 with corporate owned accelerator to -,010 corporate sponsored accelerator. Interestingly the values show no statistically significance. Table 27: linear regression - Do the objectives of the startup impact the strategic importance of the collaboration with the corporate?

model	R	R – Square	corrected R – Square	F	Sig.
1	,118	0,014	0,002	1,191	,278
2	,121	0,015	-0,003	0,852	,360
3	,091	0,008	-0,010	0,459	,501

- 1. dependent variable: Investment
- 2. dependent variable: Corporate owned accelerator
- 3. dependent variable: Corporate sponsored accelerator

Table 28: linear regression – Coefficient - Do the objectives of the startup impact the strategic importance of the collaboration with the corporate?

mo	del	regression	Std.	beta	Т	Sig.
		coefficientB	deviation			
1	constant	3,395	0,876		3,875	0,001
	How strategically important					
	is collaborating with a	0,218	0,2	0,118	1,091	0,278
	corporate for your startup?					
2	constant	2,390	0,882		2,710	0,009
	How strategically important					
	is collaborating with a	0,187	0,203	0,121	0,923	0,360
	corporate for your startup?					
3	constant	2,492	0,954		2,613	0,012
	How strategically important					
	is collaborating with a	0,147	0,216	0,091	0,678	0,501
	corporate for your startup?					

1. dependent variable: Investment

2. dependent variable: Corporate owned accelerator

3. dependent variable: Corporate sponsored accelerator

4.16 Do the following factors in place at the corporate impact the perception on the success of the Corp-Up activities?

The assumption is that several factors in place at the corporate show a positive effect on the perception of the success of the Corp-Up activities.

If we compare the mean values and standard deviation, we see the highest value (M=3.34 and SD = 1.08) with the factor: A clear understanding of why to Corp-Up. The results of the ANOVA show statistically significant values for all six factors given table 30.

Table 29: descriptive statistics and ANOVA - Do the following factors in place at the corporate impact the perception on the success of the Corp-Up activities?

From your experience, to what level	n	mean	standard	F	Sig.
are the following factors in place at		value	deviation		
the corporates you interact with?					
A clear understanding of why to Corp-Up	116	3,3448	1,08029	5,218	,001
Dedicated resources to drive the Corp-Up	115	2,9826	1,23532	6,655	,000
Dedicated budget to run a PoC or other	115	2,9739	1,31430	9,679	,000
tests					
Clarity of decision making	115	2,9739	1,23161	6,021	,000
Streamlined procurement/ contracting	117	2,8803	1,26056	2,748	,032
process					
Defined scaling process of the startup	116	2,6897	1,35399	3,547	,009

Table 30:

dependent variable: From your experience, to what level are the following factors in place at the corporates you interact with?

factor: Overall, do you consider your Corp-Up activities a success?

A simple linear regression with the factors (table 31) in place at the corporate as the dependent variable and the perception that the Corp-up activities was successful as the influencing variable was conducted. We can see that all the objectives show statistically significant values. The factor: Dedicated budget to run a Proof of Concept or other tests stands out with the corrected R-square of ,243 followed by the clarity of decision making with ,153 (corrected R-square). Almost 40% of the variance and can be explained by the two factors. All together 80,5% of the variance can be explained by all factors, that leads to the conclusion that the factors in place at the corporate in table 31 have a huge impact on the perception that the Corp-up activities was successful.

Table 30: linear regression - Do the following factors in place at the corporate impact the perception on the success of the Corp-Up activities?

model	R	R – Square	corrected R – Square	F	Sig.
1	,372	,138	,131	18,280	,001
2	,357	,128	,120	16,541	,001
3	,500	,250	,243	37,594	,001
4	,401	,161	,153	21,778	,001
5	,282	,080,	,072	9,939	,002
6	,363	,094	,086	11,800	,001

- 1. dependent variable: A clear understanding of why to Corp-Up
- 2. dependent variable: Dedicated resources to drive the Corp-Up
- 3. dependent variable: Dedicated budget to run a PoC or other tests
- 4. dependent variable: Clarity of decision making
- 5. dependent variable: Streamlined procurement/ contracting process
- 6. dependent variable: Defined scaling process of the startup

Table 31: linear regression – Coefficient - Do the following factors inn place at the corporate impact the perception on the success of the Corp-Up activities?

model		regression	Std.	beta	Т	Sig.
		coefficientB	deviation			
1	constant	2,167	,291		7,451	,001
	Overall, do you consider your Corp- Up activities a success?	,408	,095	,372	4,275	,001
2	constant	1,694	,335		5,062	,001
	Overall, do you consider your Corp- Up activities a success?	,446	,110	,357	4,067	,001
3	constant	1,052	,331		3,179	,002
	Overall, do you consider your Corp- Up activities a success?	,668	,109	,500	6,131	,001
4	constant	1,533	,327		4,684	,001
	Overall, do you consider your Corp- Up activities a success?	,499	,107	,401	4,650	,001
5	constant	1,833	,351		5,227	,000
	Overall, do you consider your Corp- Up activities a success?	,363	,115	,282	3,153	,002
6	constant	1,474	,374		3,942	,001
	Overall, do you consider your Corp- Up activities a success?	,421	,123	,306	3,435	,001

1. dependent variable: A clear understanding of why to Corp-Up

2. dependent variable: Dedicated resources to drive the Corp-Up

3. dependent variable: Dedicated budget to run a PoC or other tests

4. dependent variable: Clarity of decision making

5. dependent variable: Streamlined procurement/ contracting process

6. dependent variable: Defined scaling process of the startup

4.17 Does the strategic importance of collaboration impact the number of corporates approached regarding Corp-Up in the past 12 months?

Looking at the mean value and standard deviation (table 33) there is no big difference between the mean values and standard deviation, no statistically significance. The numbers suggest that the number of corporates approached for Corp-Up activities does not reflect the importance of collaboration even though the pair-wise comparison in the post-hoc-test show some statistically significant values.

Table 32: descriptive statistics and ANOVA - Does the strategic importance of collaboration impact the number of corporates approached regarding Corp-Up int past 12 months?

How many corporates have you approached	n	mean	standard	F	Sig.
regarding Corp-Up in the past 12 months?		value	deviation		
1-25	87	4,149	,8830		
26-50	18	4,000	1,084		
51-75	5	4,250	,9574		
100-	6	4,333	,8165		
Total	117	4,153	,9155	,615	,653

Table 33

dependent variable: How many corporates have you approached regarding Corp-Up in the past 12 months? factor: How strategically important is collaborating with a corporate for your startup?

Table 33: post-hoc-test - LSD - Does the strategic importance of collaboration impact the number of corporates approached regarding Corp-Up int past 12 months?

(I) How many corporates	(J) How many corporates			
have you approached	have you approached	Mean value		
regarding Corp-Up in the	regarding Corp-Up in the	difference	Standard	
past 12 months?	past 12 months??	(I-J)	error	Sig.
51-75	1-25	1,58750*	,60011	,009
	26-50	1,87500*	,65477	,005
	100-	1,30000	,78573	,101

*The mean difference is significant in level 0.05

dependet variable: How strategically important is collaborating with a corporate for your startup?

4.18 Does the current stage of the startup impact the number of approached Corp-Ups in the past 12 months?

Is there a connection between the stage of the start-up and the number of corporates approached, i.e. do start-ups at a later stage reaching out for more collaborate than others? Looking at the mean value and standard deviation (table 35) we notice that the more mature the startup stage the higher the mean value and standard deviation but there is no statistically significance.

Table 34: descriptive statistics and ANOVA - Does the current stage of the starup impact the number of approached Corp-Ups in the past 12 months?

What is the current stage of your startup?	n	mean value	standard
			deviation
SEED STAGE (<2m Euro in funding; no or few	43	1,2093	,67465
paying customers)			
EARLY STAGE (<10m Euro in funding; good	49	1,3878	,78571
customer traction)			
GROWTH STAGE (< 50m Euro in	23	1,4348	,89575
funding; international scaling)			
LATER STAGE (Series C/Acquired/IPO; large	3	2,3333	1,52753
customer base also internationally)			

Table 35:

dependent variable: How many corporates have you approached regarding Corp-Up in the past 12 months? factor: What is the current stage of your startup?

The numbers suggest that the stage of the startup has no impact on number of approached Corp-Ups in the past 12 months (F(3,114) = 2,13, p<0,10).

4.19 Do the years in business impact the importance of collaboration between corporates and startups?

The underlying idea is to take a look at the factor experience and if the year in business impact the importance of collaboration. Looking at the mean value and standard deviation (table 36) the numbers suggest that the number of years in business has no impact on the strategic importance of collaborating with a corporate (F(4,48) = 1,115, p<0,360).

Table 36: descriptive statistics and ANOVA

How long has your startup been in business for?	n	mean value	standard	
			deviation	
1,00	4	4,2500	1,50000	
2,00	7	3,7143	,75593	
3,00	12	4,2500	1,28806	
4,00	6	4,8333	,98319	
5,00	24	4,0833	,77553	

Table 35:

dependent variable: How strategically important is collaborating with a corporate for your startup?

factor: How long has your startup been in business for?

5 Interpretation and Discussion

In the following chapter I would like to sum up and interpret the results of the evaluation and reflect the current state of knowledge. As mentioned at the beginning, the approach to the individual questions was explorative, I took from the dataset internal factors such as size of the company or start-up, experience, importance of innovation, etc. to look for influence, correlations or patterns.

The structure of the questions and answers from the data set provides a certain form, therefore the topic of innovation and the perception of the importance and success of cooperation was a central point within the survey. For a better overview I would like to divide the results into two sub-groups, innovation-related and success-related findings.

5.1 Innovation-related

Innovation an essential part of cooperation and underlying motivation, especially in Corpups and became clear from the results of the analysis.

Importance of Innovation and frequency of collaboration

It is not surprising that the importance of innovation has an influence on the frequency of collaboration and the choice of innovation partner. In this case the high value of innovation can be seen with the innovation partners Startup, Customer and Research Institute. As far as the literature and studies are concerned, customers and start-ups are the most important sources of innovation and external innovation partners. The finding aligns with existing studies.

Importance of Innovation and usage of collaboration vehicles

Here we see that the importance of innovation within the company has an influence on the use and selection of the collaboration. If the importance of innovation is particularly high the two cooperation vehicles: startup incubator/tech lab and own corporate accelerator are preferred. This does not mean, that the other collaboration vehicles as listed in Table 6 can be completely neglected and it does not show how high the mutual influence of importance and collaboration vehicles is.

Importance of Innovation and experience with startups

The results show that the strategic importance of innovation is not influenced by existing experiences with start-ups (from a corporate point of view). That may lead to the conclusion that awareness of the importance of innovation exists already in the corporate before collaborating with external partners like startups.

Importance of Innovation, frequency of collaboration and numbers of employees

In both cases we do not see any statistical significance, i.e. the number of employees (from a corporate perspective) has no influence on the importance of innovation and the frequency of collaboration. Here, one could have argued in relation to the importance of innovation, that in companies with more employees the topic of innovation has a greater weight than in very small companies, because a different prioritization.

• Direct responsibility for innovation and frequency of collaboration

The results show that direct responsibility for innovation within the company has a strong influence on the frequency and type of innovation partner. Especially startups, customers and suppliers show high values compared to universities, research institutions and innovation consultants/service providers. In the case of startups, we can say that 2,5 % of the variance from the frequency of collaboration with startups can be explained by the direct responsibility for innovation within the company.

• Direct responsibility for innovation and tried from of Corp-Up

In this context, see a strong correlation between the tried-out Corp-up variants and the direct responsibility for innovation in the company. The result show that the direct responsibility for innovation within the company reflects on innovation related topics like product development, startup product and services and the sales relationship. This seems plausible because the variants listed are particularly suitable for strengthening innovation within the company.

• Share of total revenue and strategic importance of innovation

It seems obvious the higher the share of sales attributable to the strengthening of innovation through the Corp-Up activities, the higher the strategic importance of innovation in the company. And indeed, we can observe statistically significant results. However, the connection between strengthening of the innovative power through the Corp-up activities must be accepted as a causality.

Overview – Innovation related

Question	statistically
	significant
4.4 Does the strategic importance of innovation in the company impact	Yes
the frequency of collaboration with specific innovation partners?	
4.5 Does the strategic importance of innovation in the company impact	Yes
the usage of different collaboration vehicles with startups?	
4.6 Does the experience in dealing with startups impact the strategic	No
importance of innovation in the company?	
4.7 Does the number of employees have an influence on the strategic	No
importance of Innovation in a company?	
4.8 Does the number of employees of the company impact the frequency	No
of collaboration with different types of innovation partners?	
4.9 Does the direct responsibility for innovation within the company	Yes
impact the frequency of collaboration with different types of innovation	
partners?	
4.10 Does the direct responsibility for innovation within the company	Yes
impact the tried forms of Corp-Ups?	
4.12 Does the share of total revenue impacted by startup collaboration	Yes
effect the strategic importance of innovation in the company?	

5.2 Success-related

The success-related questions cover the direct assessment of the respondents with regard to the importance of collaboration, specific factors in place (for example budget, resources, etc.) but also, parameters such as the size of the corporate or start-up stage.

Willingness to collaborate and tried form of Corp-Up

Apparently, the experience with a Corp-Up variant has no influence on the willingness to start another cooperation. Within the survey the participants were asked the question: Would you collaborate with a startup again? The answer yes was given by 252 corporates out of 257, only 5 corporates would not collaborate again with startups. That leads to the conclusion that from a corporate's perspective regardless the form of collaboration (or even no collaboration at all before) corporates would Corp-up with startups again.

• Concerns against starting a collaboration

Remarkably, the analysis has shown that among the various concerns the fear that the collaboration could damage the reputation of the company is most pronounced. Even more than monetary aspects such as unclear ROI or uncertainties regarding the process and outcome.

Given factors implemented and perception on the success of Corp-Up activities

The result that none of the listed factors (table 3) have an influence on the perception of whether the Corp-Up activities were successful is somewhat surprising. Since factors such as aligned objectives on why to Corp-Up and dedicated resources and budget are a prerequisite for success.

Factors in place and willness to collaborate again

With regard to the willingness to collaborate again, the following factors (in place in the company) have a great influence. We notice the influence (in contrast to the perception whether the Corp-Up activities were perceived as successful) of the factors:

- a clear understanding of why to Corp-Up

- dedicated budget to run a PoC or other tests,
- clarity of decision making and
- defined scaling process of the startup

• Stage of the startup and strategic importance of collaboration

The results of the evaluation showed that the stage of the startup has no influence on the strategic importance of collaboration. A possible assumption would have been that start-ups in a very early stage are less focused on collaboration than start-ups in a later stage due to different priorities.

• Objectives of the startup and strategic importance of collaboration

The objectives of the start-ups as following: investment, corporate owned accelerator and corporate sponsored accelerator have a statistically significant impact on the strategic importance of the collaboration with the corporate. Even though this significance was not shown in the simple regression for each of these objectives. From my point of view, it is interesting to note that objectives from a start-up perspective, such as Acquisition, Corp-Up, Corporate incubator/ tech lab and corporate event are less important in comparison.

• Factors in place and perception on the success of the Corp-Up activities

The result of the analysis shows that all factors have an influence on the perception on the success of the Corp-Up activities. Furthermore, the significance is as well given in the regression conducted for each factor. It aligns with the assumption that all of the factors have a positive influence on the perception of the activities.

- A clear understanding of why to Corp-Up
- Dedicated resources to drive the Corp-Up
- Dedicated budget to run a PoC or other tests
- Clarity of decision making
- Streamlined procurement/ contracting process
- Defined scaling process of the startup

• Strategic importance of collaboration, stage of the startup and number of approached corporates

Both the strategic importance of the cooperation and the stage of the start-up have no statistically significant influence on the number of approached corporates. Here, the assumption would have been in terms of importance, the more important the more corporates would be approached. Start-ups at an early stage would approach fewer corporates than start-ups at a later stage due to business realities and priorities.

Number of team members and strategic importance of collaboration

The number of team members within the startup has no impact on the strategic importance of the collaboration with a corporate. Here the assumption would have been, at a certain point with enough team members collaboration with the outside would be possible and more interesting.

Overview

Question	statistically
	significant
4.1 Does the willingness to collaborate (again) with a startup depend on	No
the tried form of Corp-up?	
4.2 Do the following concerns deter corporates to start a collaboration	Yes
with startup?	
4.3 Do the given fulfilled/implemented factors within the organization	No
impact the perception on the success of the Corp-Up activities?	
4.13 Do the given factors in place at the corporate impact the willingness	Yes
to collaborate again?	
4.14 Does the stage of the startup impact the strategic importance of	No
collaboration?	
4.15 Do the objectives of the startup impact the strategic importance of	Yes
the collaboration with the corporate?	
4.16 Do the following factors in place at the corporate impact the	Yes
perception on the success of the Corp-Up activities?	

4.17 Does the strategic importance of collaboration impact the number of	No
corporates approached regarding Corp-Up int past 12 months?	
4.18 Does the current stage of the startup impact the number of	No
approached Corp-Ups in the past 12 months?	
4.19 Does the number of team members (within the startup) impact the	No
strategic importance of collaboration with a corporate?	

Wrap-Up

I think it is important to point out that this explorative approach is of course not exhaustive with regard to all possible variants within the data set. Furthermore, one has to keep in mind that the statically significant values from the analysis of variance and regression give an indication of dependencies and influencing factors.

Looking at the two sub-groups innovation- and success-related. On the innovation side it is interesting that neither the experience in dealing with startups nor the number of employees influence the strategic importance of innovation within the company. As the Corp-Ups are used to strengthen the innovation abilities by collaborating with startups the statistically significance of the direct responsibility for innovation seems plausible. I think this direct reasonability is one of the findings that is not outlined in recent studies yet.

On the success related side of the results it is interesting to see that obviously there are certain factors that influence the willingness to collaborate again even though it is not the tried form of the Corp-Up and there are objectives of startups that influence the strategic importance of collaboration. Furthermore, it is remarkable that factors that appear to be very influential at first glance do not have any influence on the perception on the success of the Corp-Up activities.

Bibliography

Deloitte. (2017). Kooperationen zwischen Mittelstand und Start-ups.

Franke, v. H. (2006). *Finding commercially attractive user innovations: A test of lead user theory*. Journal of Product Innovation Management.

Linus Dahlander, D. M. (2010). How open is innovation? Elsevier B.V.

M., S. (2017). Strategic Management of Technological Innovation.

Marion Poetz, N. F. (2014). *Sometimes the Best Ideas Come from Outside Your Industry.* Harvard Business Review.

Match Maker Ventures. (2019). The age of collaboration II. Wien.

Sawhney, S. N. (2007). A Buyer's Guide to the Innovation Bazaar. Havard Business Review.

Teppo Felin, T. R. (2014). *Closed or open innovation? Problem solving and the governance choice.* Elsevier B.V.

Wrobel, M., Preiß, K., & Schildhauer, T. (2017). *Kooperationen zwischen startups und Mittelstand LEARN. MATCH. PARTNER.* Berlin: Alexander von Humboldt Institute for Internet and Society.