

NAVIGATING INNOVATION PARTNERSHIPS: CHALLENGES AND OPPORTUNITIES IN STARTUP-CORPORATE COLLABORATIONS

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Abstract. Corporations actively pursue startups for rapid innovation, while startups seek to enhance their business models with larger companies' support, creating an ideal partnership. However, the initiation of such relationships poses challenges for both parties. The study clarifies interaction pathways among entities and how partnerships create new technology evaluation models. The research used a qualitative methodology with content analysis techniques involving 18 interviews conducted with founders of Brazilian startups. By elucidating the real impact of such collaborations, the study offers valuable insights for practitioners and researchers seeking to understand and leverage the dynamics of startup-corporation relationships for mutual benefit and innovation.

Keywords: Relationship, Engagement, Quality Research, Startups, Corporates, Entrepreneurship.

JEL Classification: O360.

1. Introduction

Interactions between startups and large corporations give rise to various forms and dynamics in their relationships. Given the demand for innovation in the business environment, companies aiming to stay relevant in the future (Oliva & Kotabe, 2019), find it impractical for a sole entity to have all the essential resources and capabilities for innovating across the innovation process (Noviaristanti et al., 2024). In this way, startups often view corporations as ideal partners, aiming to leverage their established business models. Conversely, corporations seek agility in developing technology-based products to meet customer demands. Understanding the practical pathways emerging from this interaction is crucial for fostering a balanced relationship for startups.

Corporations have the resources, scale, power, and established routines required to execute proven business models efficiently (Weiblen & Chesbrough, 2015). Moreover, startups may lack these attributes but compensate with innovative business models, organizational agility, and a penchant for taking risks. These complementary dynamics foster collaboration between startups and large corporations on innovation projects, enhancing

the competitiveness and profitability of both parties in the market (Chesbrough, 2006). One way to enhance a company's innovation activities is to incorporate the capabilities of a startup or use open innovation practices to create new capabilities (Martins et al., 2022). Thus, startups and corporations emerge as ideal partners, each bringing unique strengths to the table. Also, programs with Open Innovation [OI] have an “outside-in” path and an “inside-out” path for ideas to get to the market (Chesbrough & Tucci, 2020). Outside-in startup programs have emerged as an important vehicle for established firms to access innovations from startups (Kurpjuweit & Wagner, 2020). Moreover, corporates have a strategy to identify and source emerging opportunities capable of “driving innovation” (Joseph et al., 2021). However, collaborative efforts in OI between startups and large corporations stumble in numerous cases because of misaligned objectives and differing business methodologies (Usman & Vanhaverbeke, 2017). Also, efforts towards open innovation require a transformational experience (Bagno et al., 2020). Although many of the considered corporations report having introduced “startup-friendly procedures” the vast majority of companies still need to be educated about OI (Onetti, 2021). This underscores

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the pressing necessity to delve into, especially from the startup's standpoint, tactics for forging mutually advantageous partnerships. It's crucial to thoroughly consider the relationship's dimensions from the startup's perspective. Therefore, undertaking the proposed research is not just important but essential, particularly for Brazil, where fostering entrepreneurship can yield significant economic gains. Thus, our research focuses on identifying evolving relationship patterns between startups and corporations and how these patterns can serve as strategic references for startup entrepreneurs seeking successful collaborations with large companies.

To address this gap, we conducted a systematic literature review to identify critical studies in the field. Subsequently, we formulated a research protocol based on prominent authors' insights. Employing a qualitative approach, we conducted exploratory interviews with semi-structured data collection analysis following Bardin (2016) methodology. Based on our research questions, we have identified three non-probabilistic routes that startups can collaborate with corporations. The first route involves a mutually beneficial partnership where both entities work and grow together. The second route involves a deeper relationship that could potentially lead to the corporation acquiring the startup. Finally, the third route, with more challenges, involves startups seeking resources or investments to help scale their business models. Also, this study offers crucial insights for individuals seeking to establish a partnership with corporations and thrive in new ventures within a competitive and volatile market. Demonstrating how entrepreneurs navigate challenges and leverage opportunities provides valuable perspectives and motivation for aspiring entrepreneurs aiming for success.

2. Theoretical Background

Innovations are crucial for competitive advantage in business (Bańka et al., 2023). In this way, corporations need to rethink corporate innovation strategies (Kantis et al., 2023). Also, corporations should work with startups, but first, they must clarify their strategic intentions and clarify the criteria to fulfill to be a potential stakeholder (Kohler, 2016; Neumann et al., 2019). Partnerships between startups and established companies have become increasingly important in recent years (Gutmann & Lang, 2022). Firms have tried various approaches to managing their acceleration efforts, but the differences between startups and established firms present a challenge for collaboration (Cunha et al., 2023). However, truly benefiting from such partnerships is challenging and requires them to attract as well as sustain both agents (Prashantham & Madhok, 2023). Successful collaboration needs a close understanding of technology to reach common goals (Bertin & Mavoori, 2022). Additionally, startup was born in an uncertain environment searching for partners to leverage the business (Ries, 2011). Also, startups have been seen as a major driver of innovation

and change (Palmié et al., 2021) and they produce innovations in competitive environments by collaborating with larger companies (Korpysa, 2021).

Startups are characterized by uncertainty, lack of resources, rapid evolution, immature teams, and time pressure, among other factors. (Klotins, 2017). This means that the smaller the company, the fewer resources it normally controls (Bărbulescu et al., 2021). Furthermore, startups need a disciplined process of exploring, validating, and refining the business concept as an essential first step in developing a successful entrepreneurial venture (Aulet, 2017). Additionally, having a project with a large corporation improves the Startup's credibility in the market (Kohler, 2016). Partnerships between large corporations and startups for innovation occur in uncertain circumstances, often without clear objectives, relying on serendipity for creativity (Donada & Nogatchewsky, 2023). It seems the understanding of this relationship is non-equal, asymmetric firms' interactions to develop and commercialize innovation (Dizdarevic et al., 2023). Corporations and startups exhibit inherent asymmetry in co-creation due to contrasting characteristics in strategy, culture, structure, and decision-making, shaping their respective realms differently (Allmendinger & Berger, 2020; Rigtering & Behrens, 2021; Nobari & Dehkordi, 2023). According to research on "Innovative Companies and the COVID-19 Pandemic" by Fundação Dom Cabral in partnership with the National Association for Research and Development of Innovative Companies – ANPEI (FDC, 2020), startups are part of the partnership strategy of large companies that are looking at the medium and long term development of new businesses.

Traditional corporations differ from startups, as the former have more resources and operate in a mature market. In comparison, the latter operate with fewer resources and seek to validate their model in a new market (Unterkaustmsteiner et al., 2016). In this way, startups need an intentional environments to support them and minimize setbacks (Capatina et al., 2023). After the initial phases, startups advance by securing agreements and testing business models efficiently for sustained growth (Damasceno et al., 2023). Also, business model experiments can help reduce uncertainty (Das et al., 2022), and with product advancement and sales challenges, creativity, flexibility, and perseverance are essential (Pal, 2023). In addition, flexibility, continuity, and long-term growth are vital for corporates in working with startups (Kantis et al., 2023). For startups to grow sustainably, they look to corporations to test their business models (Giardino et al., 2014). In addition, a large number of companies are created, most of them never succeed or even survive (Reddy et al., 2024). For example, more than 90% of them fail due to "self-destruction," and they do not have a competitive market (Giardino et al., 2014). According to the NASSCOM, approximately 50% of startups die before the seed stage funding (Klonowski, 2020). For Kohler (2016) many others fail because they spend a lot of money and time building the wrong product or

launching it too late. These issues contribute to a high mortality risk in the first years of activity (Moroni et al., 2015). In this way, business support mechanisms, such as acceleration programs are found to be positively associated with business survival (Giourka et al., 2021). Moreover, startups need to work long hours and do lots of pilots to identify product-market fit, validate Minimum Viable Product [MVP], and articulate a winning business model that is repeatable and scalable (Blank, 2014). Partnerships with significant corporations offer startups vital resources and infrastructure for scaling, while corporations benefit from access to cutting-edge technologies and expanded market reach (Corvello et al., 2023). Additionally, corporate investors are crucial in assimilating new technologies and innovative processes acquired from startups (Benkraiem et al., 2023).

For Terho et al. (2015), the founding team must lay a solid foundation for growth, and scale can significantly influence the venture's success. Moreover, startups must secure an appropriate amount of capital for driving growth (Hyun & Seob, 2022). In Addition, Startup's growth can be positively affected by access to corporate resources. According to Kohler (2016), this access is related to knowledge of business and processes necessary to create and resize the Startup. One corporate characteristic of promoting innovation is providing resources or investments in startups (Weiblen & Chesbrough, 2015). Furthermore, as startups need financial resources to grow, they resort to an extensive search to obtain them and turn to established corporate companies. The outflow of skillful human capital from financially constrained inventing firms could become a valuable input to startups (Liu & Shao, 2022).

Startups must be prepared for the market demand and, thus, be able to scale the product. Even if much work is needed, the entrepreneur and his team must lay the groundwork for a scalable enterprise (Picken, 2017). For Kanbach & Stubner (2016), the venture stage refers to the maturity level of the Startup. In addition, startups can become suppliers of large corporations and thus have a satisfactory financial gain. Increasing sales revenue opens up the possibility of sustainable growth (Bonzom & Netessine, 2016) and fostering mutually beneficial relationships (Espindola et al., 2023). For startups in the beginning stage, finding and maintaining talented persons is a big challenge (Durai & Viji, 2022). Also, human capital with a high level of domain knowledge can play an essential role in the development (Chung, 2023). However, the appropriation potential is critical for small companies when talking about human capital, which larger companies can appropriate since they are more vulnerable and less skilled to defend themselves in this relationship (Katila et al., 2008).

On the other side, inflection points present opportunities for change. Startups have disrupted industries with technology, overcoming incumbent inertia (Crittenden et al., 2019). Moreover, after starting the partnership between the agents, startups provide technology

quickly, and corporations seek this technology, with great agility, to innovate in developing new services or products. Innovation speed needs agility, and startups make big firms agile (Schuh & Studerus, 2023). Moreover, for corporations, the only sustainable advantage is continuous innovation faster than rival organizations (Toivonen, 2015), as major industries are at a strategic inflection point in their business cycles and are looking to create different ways to sustain growth. Consequently, industries are evolving rapidly due to technological advances (Crittenden et al., 2017). In the context of globalized economies, corporations view the creation of disruptive innovations and the cultivation of transient competitive advantages as imperative strategies. These opportunities are essential to sustain market competitiveness (Weiblen & Chesbrough, 2015). According to Herring (2014), disruptive innovations and transient competitive advantages are opportunities seen as the only way out in globalized economies to remain competitive in the market. Startups can produce a rapid prototype, which explains the surprising success of these organizations. Moreover, many well-established companies have also turned their expectations to the lean startup method to promote and boost their innovation projects (Yordanova, 2021). In this way, corporations can accelerate or even discover new business models using technology developed by startups. However, they need help absorbing startup technology (Katila et al., 2008).

Established companies are slower to innovate, making them more inclined to establish relationships with startups. Furthermore, established organizations have embraced the concepts forged through experimentation, with the assurance that such methodologies can enhance corporate entrepreneurship (D'Angelo et al., 2023). Entrepreneurship relies on spotting and seizing opportunities (Bettenmann, 2023). Also, the entrepreneurial process involves internal and external actions, fulfilling customer needs, and courageously adopting a new business approach (Salimi et al., 2023; Tian et al., 2019). As a result, the company created new procedures for pursuing exploratory innovations, enabling it to monitor external opportunities and threats that could have medium to long-term impacts (Kitsuta & Quadros, 2022). In this way, startups can help corporations in their innovation journey, while large companies aim to promote innovation by removing possible gaps. Looking only at the gap, if the partnership between startups and corporations promotes new revenues through technology, agile methodology, and speed without running into internal issues, it will reduce the innovation gap (Weiblen & Chesbrough, 2015). One strategy to reduce the gap is design thinking for innovation. This is effective in larger corporate environments, but the hierarchical structure can hinder its success (Kwon et al., 2021). Also, this strategy is why partnering with startups can be beneficial for corporations. In addition, when corporations have a relationship with startups, it is possible to rejuvenate the corporate culture through startups (Kohler, 2016).

According to Weiblen & Chesbrough (2015), using startups as a creative resource outside the company is a form of corporate entrepreneurship as the digital transformation process can be overwhelming for established companies as managers encounter a myriad of new opportunities (Putra et al., 2023). Moreover, Corporate Entrepreneurship [CE] has a positive impact on profits and growth (Urbano et al., 2022; Hooi, 2024) as corporations usually promote a program that integrates external knowledge and should focus on fostering a close relationship between ventures and startups (Möllmann, 2023). In addition, CE supports sustained competitive advantage (Amberg & McGaughey, 2019; Ha et al., 2021). Moreover, it is essential to develop employees for entrepreneurial ventures (Saravathy, 2021). Establishing trust and maintaining transparency are key elements in crafting a positive brand image and reputation, providing startups with visibility comparable to larger entities (de Andrade & Pinheiro, 2023). Furthermore, larger corporations stand to enhance community trust by fostering relationships with startups (Guizani et al., 2023). For Wolcott & Lippitz (2007), two dimensions and four models derived from corporate entrepreneurship and innovation projects that need engaged leadership with startups. The evolution of leadership is crucial for navigating digital transformation (Duwe, 2022). Furthermore, corporations can promote innovation projects such as the Startup Program, where companies use startup technology through corporate-sponsored platforms to leverage products or services.

3. Methodology

To start our research, we defined our main question: “What are the identifiable routes or patterns in the evolving relationships between startups and corporations?”. After that, we defined secondary questions to map the characteristics of the relationship. We divided em four blocks, and the first on we explored how to start the relationship between startups and large corporations. Also, the other objective was to explore why startups pursue partnerships with large corporations. And then, we tried to understand the current relationship models and assess the focus and impact of these characteristics in the relationship. The investigation produced valuable insights on how established pathways can serve as strategic orientation for aspiring startup entrepreneurs, enabling successful journeys and partnerships with corporations.

We developed a semi-structured protocol, adhering to the Systematic Literature Review [SLR] guidelines as outlined in the Okoli (2015) framework. According to this guide, a comprehensive literature review involves four key steps. The first step is planning, where the research identifies the objective, that is the research question, contributing to the definition of the protocol. The second stage is selection, involving the identification of articles and a cross-referencing of relevant authors on the chosen theme. At this point, we conducted the analysis,

and exclusion criteria were applied to narrow down the articles most closely aligned with the theme. In the third stage, we analyzed the empirical data and evaluated the relevance of selected references. The final step, the fourth one, involves the synthesis of conclusions and executing the review.

Following our research question, we accessed Scopus and Web of Science databases and obtained articles based on the keywords “*startups and companies*”. The search yielded 5,580 texts. After that, we selected the following categories: “*Business Management, Accounting, and Engineering*”, focusing on the period from 2014 to 2024. In this stage, old articles were kept, provided they were related to the topic and were part of the search in setting up the research objectives. Following the extraction stage, we defined the keywords “*Engagement, Framework, Innovation, and Ecosystem*” to verify the abstracts and titles of the articles with one citation from the databases. Still in the extraction phase, after carefully reading 75 abstracts, the SLR was performed with 58 scientific references.

After we defined the articles, crossed between the relevant authors, and analyzed the empirical data, we confronted the relevant references. Then, we extracted the most significant elements on the subject to answer the research question. Moreover, we applied a questionnaire, the purpose of which was to guarantee the quality of the research.

The criteria for selecting interviewees are startups that have had or currently have relationships with large corporations; participants should be the Founder/CEO or hold a management/leadership position. Finally, there were a total of 18 participants.

In assembling the questionnaire, we created four blocks highlighting similarities or elements in the articles, each focusing on identifying patterns in the evolving relationships between startups and corporations. The primary aim of the first block was to pinpoint the starting point of the relationship between startups and large corporations. A secondary objective was to explore why startups pursue partnerships with large corporations. This block identified six key elements: strategic intent, credibility, growth, mortality, business model acceleration, and dependence. The second block aimed to clarify the purpose of the relationship and reveal further benefits obtained from interactions between the entities. Here, we identified five elements: innovation, technology, culture, speed, and innovation gap. The third block sought to outline current relationship models and assess the focus and impact of these relationships on their evolution. It listed four internal, external, hybrid, and leadership elements to shed light on the different partnership focuses and forms between corporations and startups. Finally, the last block aimed to present the characteristics of such relationships, exploring aspects like investment presence, the startup’s role in promoting innovations beyond the corporation’s core business, and its access to markets through corporate channels. This block detailed

eight elements: with investments, without investments, enterprise maturity, market access, growth and return, program structure, relationship maintenance, and program outcomes. These elements collectively provide insights into how established routes can serve as strategic guides for startup entrepreneurs seeking successful routes and collaborations with large companies.

We detailed the data of the interviewees (see Table 1), the qualifications of the startups, and the duration of the interviews (see Table 2). Since we did not have permission to disclose the names, we assigned them a number followed by the letter "I".

Table 1. Respondents' Qualifications

#	Main Academic / Educational Background	Field of Expertise	Position at the Startup
I1	Technology	Software Engineering	CTO
I2	Electrical Engineering with MBA	Big data	Founder
I3	Civil Engineering and MBA in Business	Innovation	Founder
I4	Electrical Engineering	Innovation	Founder
I5	Communication, IT specialization and Law	Innovation	Founder
I6	Industrial Engineering with specialization in Logistics, lean and PhD in the final stage	Logistic	Founder
I7	No Higher Education	IT/Payments	CEO
I8	Business Administration/ Management* and specialization in Hospital Administration	Big data	Co Founder e COO
I9	Technology, specialization in Business Administration/Management*, Marketing and Finance	Innovation	Founder
I10	Advertising, specializing in Marketing.	Marketing/ Research	Co Founder e COO
I11	Communication, specialization in Marketing and Finance	Finances/ Payments	Founder
I12	Electrical Engineering and Doctor of Electrical Engineering	Finances/ Payments	Founder e CEO
I13	Electrical engineering with an MBA in Technology	Technology	CEO
I14	Mathematics with a specialization in Mathematics	Insurance	Founder
I15	Accounting with MBA in Business Logistics	Supply chain	Founder e CEO
I16	Industrial Engineering	Finances/ Banking*	Founder

End of Table 1

#	Main Academic / Educational Background	Field of Expertise	Position at the Startup
I17	Business Administration	Human Resources	Founder e CRO
I18	Communication and Journalism, specialist in Domestic Violence	Marketing/ Agency	Founder

Table 2. Qualification of startups and interview duration

#	Type of Startup (current)	Hub or current city	Duration (in minutes and seconds)
I1	Marketplace	Cubo/SP/BR	72.47
I2	Martech	Inovabra/SP/BR	46.43
I3	Marketplace	BC/Canada	76.58
I4	Customer experience	Inovabra/SP/BR	50.31
I5	Legaltech and venture studio	Toronto/Canada	63.49
I6	Logitech	SP/Betim e Fortaleza/BR	33.36
I7	Fintech	Porto Digital/PE/BR	96.41
I8	Healthtech	Cubo/SP/BR	87.17
I9	Construtech e Venture building	Rio de Janeiro/BR	49.08
I10	Martech	Cubo/SP/BR	46.56
I11	Fintech	SP/BR	35.52
I12	Fintech	Inovabra/SP/BR	20.36
I13	Edtech	SP/CPS e Poços de Caldas/BR	61.14
I14	Insurtech	Inovabra/SP/BR	60.49
I15	Marketplace	Inovabra/SP/BR	37.26
I16	Retailtech	Inovabra/SP/BR	34.17
I17	HR tech	Cubo/SP/BR	31.13
I18	HR tech	Porto Digital/PE/BR	40.16

To conduct taxonomy on the elements, we utilized content analysis. Bardin (2016) explains that this method involves inferring information from the data collected in interviews, translating it, and converting it into a model. The current framework includes the pre-analysis phase, material exploration phase, phase of processing results obtained, and interpretations. Furthermore, we employed Iramuteq's software to code the analytical corpus to facilitate the categorization of text segments. This software computes the Classification Hierarchical Descending [CHD]. The CHD divides the text into segments (Brígido

& Justo, 2013). These text segments are categorized based on their respective vocabularies and distributed according to the frequency of shortened forms. Moreover, the software arranges the data analysis into a CHD dendrogram through matrix analysis to depict the relationships between the classes.

We prepared the “textual corpuses” files that corresponded to the research protocol questions. Each textual corpus consists of 18 responses referring to each interviewee. Each text has, on average, 2,233 words. Based on CHD analysis, we organized the order of greater representativeness of each class and verified if there was a relationship between the classes. In addition, a nomenclature assigned to each class referred to the interviewees’ statements.

4. Results

In our study, we utilized the Descending Hierarchical Classification [CHD] with the Reinert Method for text analysis. Through CHD’s classification, we identified three groups: The Perspective of the Most Likely Events (events with over 19% frequency), The Perspective of Average Frequency Events (events with 12.5% to 18%), and the Perspective of Opportunistic Events (events with less than 12% frequency). This examination unveiled a more coherent integration of interview texts, forming clusters based on term proximity and resulting in the emergence of these three distinct groups. We summarize these groups as follows.

4.1. The Perspective of the Most Likely Events

In this part, we summarize events that occur when a startup and a corporation form a relationship. We highlight events that have a percentage of occurrence above 19%. We begin with how the relationship starts, and the entrepreneur presents their motivations for undertaking the venture. Creating and validating a business model are essential events that help establish trust with corporations. Partnerships play a significant role in market expansion, paving the way for startup growth. Startups also focus on achieving “market fit” and closing initial deals with corporations to sustain their business. To develop new sustainable models, startups often engage in co-creation activities and collaborate with internal corporate departments. This process heavily relies on corporate culture, regulations, and procedures. While corporate leadership may follow a structured alignment process with defined timelines, some relationships endure longer than others due to shared objectives. Speed and innovation gaps are often the primary drivers for maintaining long-term company relationships. Partnerships are also formed to enhance process efficiency despite challenges arising from methodological differences between startups and corporations. Moreover, events like governance rules within large corporations may hinder the absorption of new processes developed with startups, leading to a loss of efficiency in project execution.

Also, events related to corporate programs, particularly “corporate accelerators,” play a pivotal role in shaping these relationships. Acceleration refers to a change in velocity over time, intensifying the bond between startups and corporations without direct financial sponsorship, typically funded internally by relevant departments. Although financial investments are scarce, startups require partners to sustain growth and operate in the market with limited capital. Despite securing capital, startups may face mortality concerns as their business models evolve. Entrepreneurs often pivot and adjust while preserving the essence of the original model.

4.2. The Perspective of Average Frequency Events

In this part, we highlighted the events found in CHD analysis between 12.5% and 18%. Events related to Strategic intent begin when entrepreneurs partner with corporations to seek support in validating the business. We found the lean startup methodology used to validate the entrepreneurship proposal, focusing on the validation process of this new model. Initially, corporations are only willing to partner once the process has been market-validated. Startups then explore other customers and segments to validate their model. Events from the CHD analysis showed only after building cases do corporations consider starting a relationship with startups, an essential attribute for the beginning of the relationship. Moreover, credibility certainty emerges from the initial projects with corporations after several partnerships in the market. Also, Entrepreneurs use these cases to define the customer segment strategy, and with the corporation’s support, the growth stage commences.

To increase the customer journey, startups collaborate with corporations to create new models and opportunities by adapting to feedback from product or service users. Entrepreneurs continuously launch new products and transition to the scaling stage to sustain growth. Two characteristics are essential for business continuity: adaptability and assertiveness, ensuring the corporation attends to customers as desired. In addition, events related to innovating the system to facilitate startup hiring involve entrepreneurs revising payment and contract processes to maintain relationships. Moreover, corporations have extended payment deadlines, causing cash flow issues for startups. Consequently, investment is another critical aspect for business continuity, with entrepreneurs initially relying on bootstrapping and angel investors. More often, events like demo days do not offer funding but just opportunities for presentations. In addition to that, platform interactions within relationships led to new business opportunities, with some events related to corporations firmly holding a partnership as a joint venture or acquiring a startup.

4.3. The Perspective of the Opportunistic Events

Now, we presented the events found through the CHD analysis that we called opportunistic events as they are

not related to SLR or contrary to it. The company's size defined the events related to the difficulties of growth by the startup. As a startup is a small company, it is held hostage to the demands of corporations, for example, to practice lower prices to guarantee the project. Also, this abusive practice mainly emanates from the size and power of large companies. Another event that appears in the difficulties of growing up is the entrepreneur's dilemma. By being so right, believing too much, and knowing about the model he developed, the entrepreneur can miss new opportunities. Another event is that startups must be bold in relinquishing control in exchange for investments and are open to losing team members.

Events related to corporations need to prepare to incorporate technology from startups because they decide to discontinue it after purchasing the startup, which we call the barriers to innovation. Moreover, big firms not embracing agile practices lead to innovation gaps, face process sluggishness while collaborating with startups, and do not guarantee corporate innovation. Also, events like political games appear because some departments develop innovation projects, and these may try to finalize the partnership rather than make the project progress due to the institutional situation. Thus, companies are very focused on the current business. The corporate DNA limits the emergence of new business models and, in this way, blocks the innovation's projects if the model is different from the company's core. A term like "zoo of startups" appeared as a feature in these opportunistic events, which can infer as an artificial means that can limit new business models depending on the characteristics and purpose involved in the programs developed among agents.

5. Discussion

After conducting the CHD analyses, we have integrated the crucial insights into a comprehensive map with three routes. This map offers a detailed overview of the agents' relationships, clearly representing the complex dynamics at play. We established three non-probabilistic routes. The first route was based on the perspective of the most likely events. The second route was based on the perspective of average frequency events. The third route was based on opportunistic events.

5.1. First Non-probabilistic Route

Startups identify their motivation for entrepreneurship: a passion for solving a specific problem, a desire for independence, or the opportunity to make a positive impact. These new solutions offered were based on solutions developed in other countries or came from a "pain" entrepreneur. Subsequently, they establish relationships with corporations and go through a validation process to achieve market fit by pivoting or co-creating new sustainable models. Startups must be adaptable and assertive to adjust their business model and launch new products. Moreover, until they have a good product, these agents

face "an evolution of innovation system"; they learn by adapting products and repositioning the offer according to the market. They learn by doing, applying more effectively the lean startup, in this route and common characteristics are primarily involved in the relationship between startups and corporates.

5.2. Second Non-probabilistic Route

The intention of relating to corporations is not a planned or defined strategy before the validation process. Due to this proposition, it was suggested that startups seek to interact in the early stage with corporations. Most of case as startups do not have business cases, they start a partnership with other segments before big corporations to construct market cases. After that, the corporation provides support for the startup to find market fit. Within this process, it is possible to create new self-sustaining business models by co-creating with the internal teams of the corporations. After this step, this relationship can evolve into an acquisition by corporations or a startup joint-venture partnership. We discovered that, on this route, there are no opportunistic events.

5.3. Third Non-probabilistic Route

Startups create projects arising from new ideas, which explore different models and opportunities under adverse conditions, according to reports obtained through the research. For the creation and validation process of this new model, the startup seeks support in partnership with large corporations. However, this process is immature due to the short time of experimentation and evolution of the innovation model. Moreover, it is possible to make other gains: development of a structured governance process; assertive service to customer demands. Moreover, startups are decisive because they do not fear being involved in risks and practice innovations.

The corporation also wants to innovate. However, the people who work there – used to always doing everything the same way – are afraid that innovation will remove their jobs. In addition, in the innovation process is necessary to listen carefully to the customers. Talking to them helps entrepreneurs to assemble the business model and adapt it, with various solutions, to expand the product portfolio. Nevertheless, initiatives with startups are somehow blocked by corporations because of a conflict of interest. This is due to the misalignment of expectations. The consequence of programs with corporates and startups ends up after startups are acquired by large companies. The interviewees faced one of the "innovation barriers", which is that means lack of credibility influences the hiring process of startups by corporations.

The visibility of an acceleration process with a large corporation helps the closing of new contracts. After a few contracts, it becomes simpler for startups to enter with a project in corporations. Opening the market is essential for startups to get the business model off the ground. Flexibility is necessary for adjustments to the

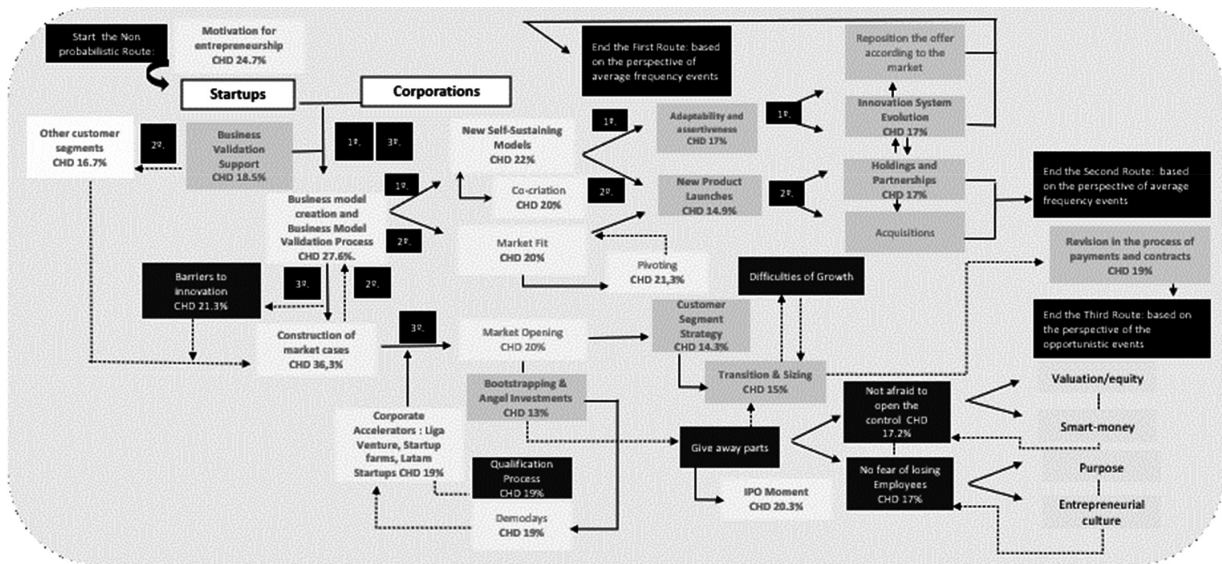


Figure 1. Navigation Map

business model based on the customer journey; the startup needs to avoid mortality. However, this flexibility must also be done by the corporation since many practice payment processes over 90 days and end up compromising the cash flow of startups. In this way, what is expected of corporations is a review of contract and payment terms in a different flow from a corporate supplier.

About accepting investors, they must help the startup in growth not only with financial values. Planning the right moment coherently makes it easier to go public without compromising the breath for the other rounds of investments. The entry and exit of the enterprise begin to be designed as startups need more investments to continue growing.

Therefore, on this route, the entrepreneur is likely to receive a large volume of investment, through corporations or venture capital to leverage the model. It is recommended to follow this route when scaling the solution. For gains arising from this option: business model acceleration, via corporate accelerator; a significant volume of investment or via corporate venture or private equity funds to scale the model; a more “robust” team to leverage the solution; market opening and company consolidation.

To summarize these three routes (see Figure 1), we defined a map with non-probabilistic paths.

6. Conclusions

This article delved into three non-deterministic routes to provide entrepreneurs with a navigational tool, a map, to assist in deciding which path to take when collaborating with large companies. By doing so, it seeks to clarify the process of relationships between startups and corporations from the perspective of startup entrepreneurs. This clarity is essential for entrepreneurs to define how these relationships can be developed, considering criteria such as the startup’s stage, the focus of the relationship,

key characteristics, observed gains for each route, and the necessary processes to traverse them. Moreover, the article outlines how these established routes serve as strategic references for startup entrepreneurs seeking to develop ventures through collaboration with large companies, providing valuable insights for startup strategy and ensuring its sustained presence in the market.

The study has potential limitations. The first is related to sampling and cultural bias, as the

studies focus on Brazilian startup founders in the interview sample might introduce a geographical bias. The findings may be somewhat representative of the global startup landscape, limiting the generalizability of the results. The second one is that the study’s reliance on 18 exploratory interviews might be considered a relatively small sample size. These could impact the comprehensiveness and diversity of perspectives, potentially overlooking specific nuances in the relationships between startups and corporations. The third, semi-structured nature of the interviews and the subsequent content analysis may introduce subjectivity in interpreting responses. Different analysts may interpret data differently, potentially influencing the study’s outcomes.

Finally, the study identification of non-deterministic routes is based on our interpretation of events and possibilities. While this adds flexibility, it also introduces an inherent level of subjectivity and uncertainty in categorizing the routes.

For future studies, we recommend conducting similar studies in different cultural contexts to understand how cultural factors influence relationships between startups and corporations. In addition, analyzing the intricacies of startup-corporation dynamics in particular sectors reveals industry-specific obstacles, possibilities, and developments. Furthermore, quantitative data can complement qualitative findings to establish statistical relationships, identify patterns, and quantify the impact of various factors on the success of startup-corporation

collaborations. Finally, the identified routes will be refined, specific case examples will be examined within each route, and the success factors and challenges associated with each will be delineated.

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