

# Co-creation of Innovation by Corporates and Start-Ups

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## 1 Introduction

The current business environment is characterised by rapid technological developments that continuously require implementation and commercialisation of new creative and innovative technologies, and products. One of the most known and utilised practices applied by large companies to extend the existing boundaries to embrace new ideas and technologies is co-creation of innovation (e.g. Chesbrough 2007; Dahlander and Gann 2010; Enkel et al. 2009; Huizingh 2011; Lee et al. 2012; Loureiro et al. 2019; Simanis and Hart 2011; Tekic and Willoughby 2019). This chapter is focused on the co-creation of innovation by R&D corporates based on models of partnership with technological start-ups.

Leading technological companies define innovation as a prioritised strategic goal (Harnoss et al. 2019). The advancements of technology, the changes in markets, and the increased competition necessitate R&D corporates to continuously gain new knowledge, maintain new processes, and introduce highly innovative products (Enkel and Sagmeister 2020; Teece 2007). But, due to their size, complexity, and institutionalised organisational culture, the pace of internal organisation changes is much lower than the pace of technological and market changes (Brinker 2013). Therefore, large technical organisations struggle in their mission to remain leaders in their business domain.

Start-ups and individual entrepreneurs, on the other hand, are flexible, dynamic, and maintain creative culture. However, they work in an uncertain environment (Tomy and Pardede 2018), and most of them do not have the resources, knowledge,

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and experience to respond to potential risks effectively. Lack of a market need for the new product, lack of sufficient capital, assembly of the wrong team for the project, and superior competition are the main reasons that many start-ups turned out to be unsuccessful (Griffith 2014). To fulfil their vision, start-ups need to prevail over the shortages of limited resources and assets in three main domains: marketing, people, and funds (Marion et al. 2012; Paradkar et al. 2015). Commonly applied approaches to bridge those shortcomings and to encourage entrepreneurs by providing resources, financial support, connections, and mentorship can be in the form of accelerator programmes (Crişan et al. 2019; Drori and Wright 2018) or in the form of incubating programmes (Bruneel et al. 2012; Grimaldi and Grandi 2005). But those are short-term programmes that offer only limited support while achieving the start-up long-term vision requires stable and enduring support.

Models of co-creation of innovation by R&D corporates and technological start-ups create a synergetic long-term framework in which each party exploits its advantages. By presenting, analysing, and reflecting on R&D partnership models that have been developed and applied in recent years, this chapter aims to explore the question *what are the critical success factors and the barriers for successful co-creation of innovation by R&D corporates and technological start-ups?* Specifically, it identifies the pros and cons of three primary structural co-creation models. It also demonstrates the critical issues for synergetic collaboration between large technology companies and start-ups through cases from the innovative Israeli arena. The study contributes to the literature on the co-creation of innovation, thereby extending the open innovation research field in the context of the R&D ecosystem. Furthermore, this study has practical implications for corporates and start-ups in the process of selecting the appropriate co-creation model that will be aligned with their interests.

An explanatory case study research method was applied in the current study to investigate a contemporary phenomenon within a real-life context (Ridder 2019; Yin 2014, 2018). It is based on three in-depth exemplar case studies that have applied co-creation strategies in Israel. Each one of the cases demonstrates the implementation of a different model of co-creation programme and presents the challenges in negotiation between corporates and start-ups in the process of creating non-trivial efforts to create synergetic cooperation. It is an opportunity sampling that has emerged from the researcher's experience, offers the possibility of comparison, and enables to carefully study and explain the phenomenon (Patton 2014; Ridder 2019; Yin 2018) to form a framework to assess successful co-creation of innovation.

Different sources of qualitative data were collected, including internal documents produced in the R&D corporates, mainly minutes of the board of directors' meetings, and through unstructured interviews with the corporates' Chief Technology Officers and with the collaborating start-ups' owners. Inductive content analyses were undertaken for each of the cases to discover emerging themes and categories and to identify similarities and contrasting results (Patton 2014; Ridder 2019) concerning enablers and barriers for successful co-creation of innovation.

## 2 Models of Co-creation of Innovation

There are numerous models and variations of frameworks for co-creation of innovation in R&D companies that have been developed and investigated throughout the years (Drover et al. 2017; Hill and Georgoulas 2016), including start-up programmes, accelerators, incubators, alliances, and corporate venture capitals (Enkel and Sagmeister 2020). The current chapter is focused on three primary models by which R&D corporates develop innovation through structural collaboration with start-ups. The presentation of each one of the models includes an introduction, review of the advantages and disadvantages for each partner, a description of the processes involved in establishing the partnership, an exemplar case that demonstrates the main challenges and benefits, and a summary.

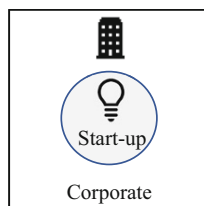
### 2.1 The Corporate Venture Model

The corporate venture model suggests that a large company invests funds in start-ups, in return to equity. The established company uses scouting mechanisms aimed at identifying relevant technologies developed outside its boundaries. Once identified, the company exploits its financial power by acquiring all or part of the start-up or by hiring the entrepreneurs to develop further the innovative technology that may lead to a breakthrough (Gompers 2002).

The corporate will apply the venture model not only for financial returns, but also to achieve strategic goals, improve innovation, create long-term value, and reinforce capabilities (Drover et al. 2017; Maas et al. 2020; Rossi et al. 2017). The intentions are to gain new knowledge about emerging technologies and evolving market trends from multiple external start-ups that can be implemented on the programme level (Keil et al. 2016).

The start-up is interested not only in funds, which can be achieved through other channels such as venture capitals but also in supporting infrastructure that encourages innovation and improves performance (Alvarez-Garrido and Dushnitsky 2016; Chemmanur et al. 2014; Weiblen and Chesbrough 2015).

The corporate venture model (Fig. 1) suggests that a corporation acquires a start-up and its knowledge and technology and embrace it into the corporate as an additional asset. In some cases, the start-up will be fully consolidated and absorbed



**Fig. 1** The corporate venture model

by the corporate R&D department. In other cases, the start-up will continue to operate as a stand-alone company fully, or substantially, owned by the corporate.

Although corporate venture investments serve as a vital force in the R&D market and demonstrate successful results (Drover et al. 2017; Rossi et al. 2017), there is evidence that in the long run, many of them are destined to fail due to misfit of strategic goals, cultural differences and gaps in expectations (Burgelman and Välikangas 2005; Teppo and Wüstenhagen 2009).

The following exemplar case describes an unsuccessful attempt to apply the corporate venture model, where a win-win situation turned into a fail-fail situation. Due to the misalignment of expectations, the entrepreneurs left the company shortly after the investment had been made, and the company lost most of the knowledge that was expected to be gained after substantial financial investment.

### **Case #1: Corporate Venture Background**

A large company in the field of medical equipment strategically decided to establish a new business unit that will focus on new products based on very advanced and innovative technology. It was clear from the very beginning that such a move requires new competencies both in marketing and technological domains, and luckily a small company with excellent technical capabilities was identified shortly after.

#### **The Process**

The parties entered into negotiations. Although the start-up needed funds, the entrepreneurs' main concern was that the intensive involvement of a big company would reduce their agility and flexibility. The company's top managers explained that it is their ultimate interest to keep the start-up work with minimal interventions.

#### **The Agreement**

By the end of the year, an agreement was signed. The company paid \$6 M in cash for full ownership. However, it was agreed that the start-up would continue to work in its original premises, 50 miles far from the corporate headquarter, and will follow its previous daily procedures.

#### **The Result**

Six months later, the corporate's CFO raised the issue of cost duplications derived from the start-up being running at a separate facility (rent, travels, overheads) and VP operation claimed that the different administrative processes generate extra work at the corporate level. Thus, it was decided to apply the corporate procedures in the new start-up. The start-up moved to the leading corporate facilities within 6 months and became an integral part of the R&D department. Despite huge objections to those decisions, most of the start-up employees (8 out of 10) decided to give it a try.

Finally, a year later, all the experts, except one, left the company. A knowledge valued at \$6 M vanished. Much worse than that was the fact that the strategic move into the new direction was delayed by more than 3 years.

As the above case demonstrates, the balance between the corporate and the start-up expectations is critical for success. The corporate venture is a favourable model from the corporate perspective. It serves the corporate's objectives, contributes to the company knowledge, extends its capabilities, and enables a high level of control (Anokhin et al. 2016; Dushnitsky and Lenox 2005; Lee and Kang 2015). The corporate has to invest funds to get direct access to knowledge on new technology and marketing trends that will be integrated into its ongoing operation. By embracing the start-up into the corporate, on both strategic and operational levels, the corporate benefits from a high level of coordination, and it can easily manage and control the additional activity as an integrated part of its overall operation.

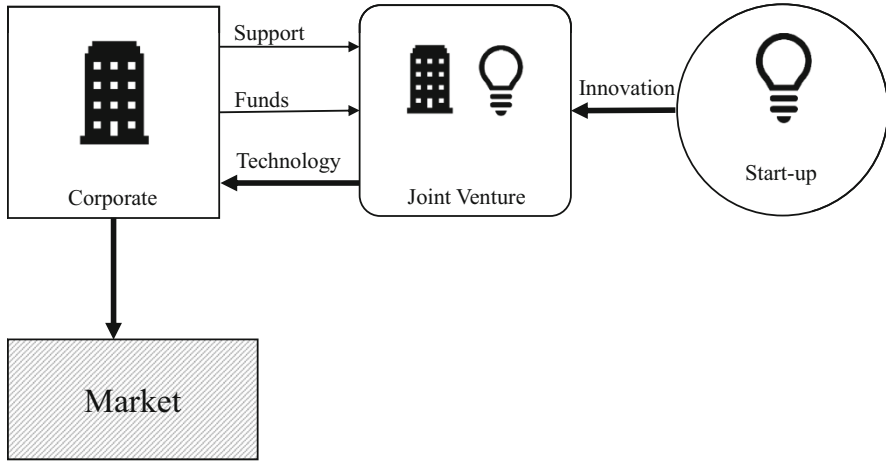
On the other hand, this model is usually much less attractive to the start-up team. While it gets the funds for further developments, the valuation may be impacted (Röhm et al. 2018). Still, its independence and level of flexibility are vulnerable both in terms of business objectives and organisational culture. The start-up is expected to be aligned with the corporate's strategy, and the team is expected to adopt a culture that may suppress their entrepreneurial spirit.

Since in most cases, when adopting the corporate venture model, the corporate is granted a lot of power, it should be used wisely. The corporate should be very careful about pushing its interests too far, in order not to put the whole deal into risk, and ensure that the start-up team will still have substantial benefits in terms of managerial support, training, and mentorship that will enable the entrepreneurs to keep their entrepreneurial spirit.

## ***2.2 The Corporate Incubator Model***

In the corporate incubator model, a new independent joint venture, owned by the corporate and the start-up, is established (Gassmann and Becker 2006). The corporate contributes funds, network assets, administrative, and marketing support while the start-up provides knowledge and competencies (Branstad and Saetre 2016). Unlike the traditional incubation models that were ultimately aimed to yield financial profits, this model is designed to create value by improving products through new technologies and developing knowledge about the corporate products and market (Becker and Gassmann 2006).

The corporate extends its technological capabilities through a controlled investment that will yield returns, in a relatively short timeframe, by commercialising external ideas that were initially developed externally (Chesbrough 2006; Gassmann and Becker 2006). Although the new initiative might disrupt the existing business model and organisational processes which may lead to resistance within the company, an array of additional benefits might include external ecosystem development and network-building, creation of new revenue streams, rejuvenation of brand image, speeding-up innovation processes, attracting and retaining talent, and promoting a cultural change (Kruft and Kock 2019).



**Fig. 2** The corporate incubator model

From the start-up perspective, this model offers solid and reliable resources in the form of funds, office space, and computing resources, as well as intangible assets in the way of mentoring and training, access to market channels, introduction to technological, professional and financial networks, and an active learning environment (Branstad and Saetre 2016; Bruneel et al. 2012; Larkin and O'Halloran 2018). The joint venture remains relatively independent in terms of operational activities. It is involved in decision-making processes and potential future revenues, but those are targeted to the corporate line of business.

The corporate incubator model (Fig. 2) suggests that following the selection, structuring, and involvement stages, the exit stage is either skipped and the joint venture remains as a stand-alone business owned by both parties, and it is replaced by an acquisition of the joint venture by the corporate, which embraces it into its operational infrastructure.

Although many companies currently adopt a technological corporate incubator as a successful approach (Kruft and Kock 2019), it may raise several difficulties, including a dispute over ownership shares (Branstad and Saetre 2016) and conflict of interests related to technology exploitation. On the technology exploitation aspect, there is an imbalance between the entrepreneurs who wish to continuously develop their dream into an array of breakthrough products and markets. In contrast, the hosting company wants to produce specific lines of products in its business domain.

Finding the right balance for the corporate and the start-up on multiple dimensions and ensuring that both parties' current and future interests are met are critical success factors for corporate incubation. This complicated situation is illustrated in the following case description.

**Case #2: Corporate Incubator****Background**

A worldwide company leader in the field of night-vision equipment, with a wide array of capabilities in design and production of such systems, owns a detector company that supplies all the IR (Infrared) detector needs to develop products in different configurations, technologies, and spectral ranges. The IR detector is based on a very sophisticated technology; its production requires cumbersome infrastructure, and the production costs significantly affect the product price.

One day, the corporate's CTO was approached by an astute and previously successful technology entrepreneur who presented a revolutionary approach to build detectors straightforwardly at a meagre cost. Once the technology is proven, it will have a disruptive effect on the night-vision market.

**The Process**

The CTO appointed a team of technical experts from different disciplines to evaluate the technology. The team was very sceptical but could not identify any mistakes in the analysis presented by the entrepreneur and reported accordingly to the management.

Based on previous bad experiences with acquisitions of technologies, it was decided to propose an incubation arrangement, based on the establishment of a new joint venture. It will be 51% owned by corporate and 49% by the entrepreneur who will serve as the CEO of the new venture. The corporate will invest in the development of a detector at a configuration that complies with its needs.

However, the entrepreneur insisted on initiating development efforts in a few other configurations to cover the broadest possible market needs. This concept was rejected by the corporate, which declared that it intended to stick to its own market without splitting efforts into other markets. After a few months of negotiations, the entrepreneur decided not to accept the offer and to look for another partner.

**The Agreement**

No agreement was signed

**The Result**

The entrepreneur received funds from venture capital and continued the development of the technology. One year later, in a lesson learned process at the corporate, it was concluded that due to inflexibility, the company missed a valuable opportunity to strengthen its position in the market and to expand its line of products.

An examination of the above exemplar case and similar cases leads to a better understanding of the advantages and disadvantages of the corporate incubator model. It is generally balanced in responding to the corporate and the start-up interests, but at the same time, it does not provide a comprehensive solution to either

party. By investing funds, the corporate can enhance its knowledge about innovative technologies. Still, the establishment of a joint venture requires additional funds for administrative support and increases the level of managerial efforts. By applying this model of cooperation, the corporate can improve its dynamic capabilities in terms of sensing and seizing technology and market opportunities (Drover et al. 2017). Still, since the new venture operates as an independent unit, the corporate is limited in the level of administrative control and chances to embrace an innovative and entrepreneurial organisational culture.

For the entrepreneurs, this model of cooperation offers much more freedom in the ability to maintain a working environment which is characterised by informal operational processes, usually based on the agile approach. Since the start-up team operates almost independently from the corporate, it gets less managerial mentorship and supervision, but can remain flexible and keep its entrepreneurial spirit. However, the team is mainly involved in technology-related decisions. Still, it has minimal impact on strategic marketing-decisions, since it is bound to the limited business and markets of the corporate. This situation might be frustrating for entrepreneurs with a solid vision about potential business or societal impact.

The corporate venture model is a viable framework that offers valuable benefits to both partners, but to be successful, it should take into consideration not only the entrepreneurs' characteristics and traits (Kerr et al. 2017; Van Weele et al. 2017) but also their vision regarding the impact on society and potential markets.

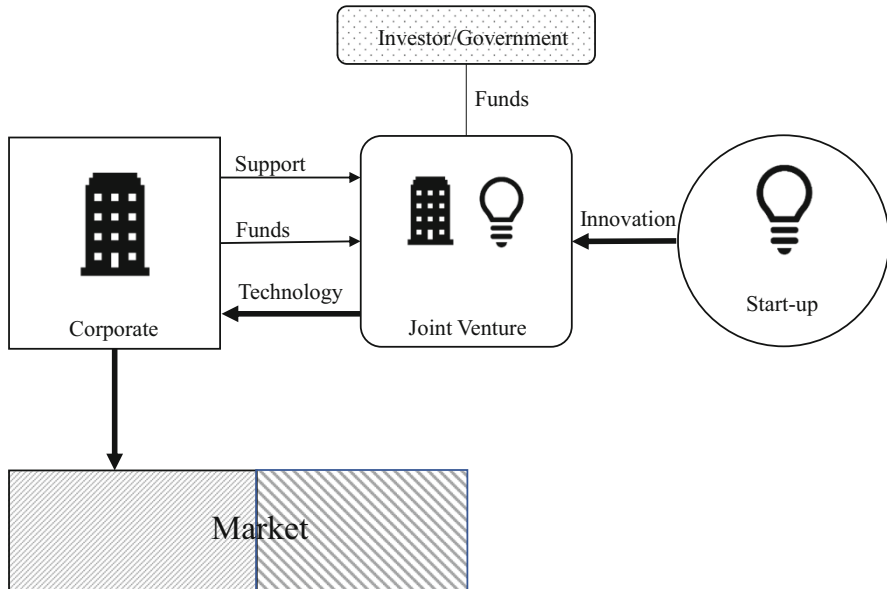
### ***2.3 The Corporate Shared Innovation Model***

Following the previous models, it is clear that the integration of start-ups into complex and established companies is valuable but also challenging. The relatively new corporate shared innovation model (Fig. 3), presented here, builds on the previous frameworks and expands the mechanism for co-creation by expanding the potential markets beyond the corporates business domain.

In this model, a new independent unit, jointly owned by the start-up and the corporate, is established. However, in this case, the new entity is both technology-oriented and business-oriented. It supports the development of new technologies for the benefit of the corporate's market and for the benefit of additional markets that are external to the corporate business domain. The additional market-oriented activities require extra financial investments to materialise the entrepreneur's vision to impact different markets and keep them engaged in the partnership for the long run.

To avoid conflict of interests, the corporate is granted exclusive rights to use the technology for its needs in the defined application areas, and the joint venture retains all technology use rights that are not within the scope of the corporate business. Each party contributes to the shared venture its expertise and assets, and each one of them can exploit the shared resources for the continuous development of new products in relevant markets. Thus, the potential created value can be amplified in more than one market.





**Fig. 3** The corporate shared innovation model

Yet, in some cases, over time, a new tension might evolve since additional funds are needed to expand the marketing activities. Then, the corporate can provide additional funds, or a third party can be introduced and join the venture. In the second option, the third-party involvement will reduce the dependence on corporate funding and therefore, will provide more flexibility and freedom concerning strategic and operational decisions. However, this is not a trivial move, in the early stages, due to the high level of risk that might be intimidating for potential investors and the possible consequential change of priorities. Thus, in certain circumstances, the third-party place will be fulfilled by governmental investment.

As part of a comprehensive national policy to support the R&D ecosystem (Frenkel and Maital 2014), the corporate shared innovation model is applied in Israel, with the support of the government, to ensure maximum exploitation of the newly developed technologies into various markets. The government does not have ownership nor on intellectual propriety neither on the joint venture equity. Studies show that in general there is a national interest in supporting R&D initiatives to strengthen the economy (Antolín-López et al. 2015) and similar programmes are employed in the USA (Mazzucato and Robinson 2018) and India (Surana et al. 2020). In the corporate shared innovation model, after a limited period or whenever a third business partner is interested in the joint venture, the government steps away.

The following case describes a successful partnership based on the corporate shared innovation model, in which a national agency investment was of great importance to enable extensive and comprehensive line of developments and removed potential conflicts between the partners.

**Case #3: Corporate shared innovation (with governmental support).****Background**

A leading company in the field of security systems has an extensive range of surveillance systems both for indoor and outdoor applications. Various sensors used by the company cover the spectrum from visible to far infrared, and the product portfolio addressed most of the market needs. However, since all the products were based on optical sensing, the need for ‘behind the wall’ sensing remained unmet. While looking for potential technologies that will be able to bridge this gap, Terahertz (THZ) imaging was found as one of the most promising.

In its scouting efforts, the company identified a small group of entrepreneurs with a solid background in the field of THZ imaging. This group was focused on building a solution to monitor senior citizens in their home without breaching privacy.

**The Process**

The company offered the entrepreneurs a very attractive acquisition deal, but they refused to accept. The second offer, which was based on joining the corporate incubator, was also rejected by the entrepreneurs. It was clear to them that by accepting, they put their dream to help the elderly population at very high risk, especially since the difference in R&D efforts for each application was quite significant. Since both parties recognised the potential benefits, they continue to negotiate. Still, one issue remained unsolved: what is going to be the leading application and where will the money be spent.

**The Agreement**

In further discussions, an agreement that follows the shared innovation model was reached. A new legal entity, jointly owned, was established. Both parties agreed that the main priority of the new venture would be the development of a new product for the market of home care, with the support of government funds for the first 2 years. The corporate will fund the additional R&D efforts needed to respond to security applications and will be granted exclusive rights to use the technology for all security applications.

**The Result**

Three years after reaching the agreement, the results are very positive. The home care product is already in the market, and advanced security products are included in the corporate portfolio. Two years after its inception, a third partner joins the venture while the government stepped away.

The case presented above sheds light on the gains that each partner can take from adopting the corporate shared innovation model and implies to some of the challenges that may be raised. Regarding the synergy of knowledge, enhancement of dynamic capabilities, and required managerial efforts, this model offers the same benefits to the corporate as the corporate incubator model. Still, it differs concerning financial investment and expected returns. In this model, the corporate invests funds

not only for R&D and administrative operations, as the previous frameworks suggested, but also for additional significant marketing undertakings. Therefore, it requires a strategic decision that is perceived at high risk for the corporate.

On the other hand, this additional investment is an opportunity for growth in terms of line of business and future expected returns. If the corporate wishes to mitigate the risk that is derived from the additional investment in an unknown market, it can share it with a third party, which is either a business investor or a governmental agency. For start-ups, the corporate shared innovation model is mainly superior to the previous models concerning the exploitation of innovative ideas that will be realised through the developments of products to additional markets. Hence, it empowers the entrepreneurs, keeps them passionate, and enables them to follow their dream to make an impact.

The corporate shared innovation model offers a promising framework for start-ups while retaining most of the benefits for the corporate. The start-up partner contributes knowledge about innovative technologies and receives tangible and intangible resources to exploit technology and target multiple markets. Thus, the start-up team gets the opportunity to follow their vision and keep working in a flexible and creative environment. The corporate contributes funds and resources in return to exclusive use of innovative technologies that enable enhancement of its products and reinforcement of its competitive advantage, and it can also extend its line of business.

### 3 Conclusions

This chapter aims at exploring structural frameworks for the co-creation of innovation by corporates and start-ups. It presents three primary models, although, in practice, those can be applied in numerous variations. Previous studies have thoroughly discussed co-creation of innovation from the corporate viewpoint (Chemmanur et al. 2014; Chesbrough 2007; Enkel et al. 2009; Tekic and Wiloughby 2019), but there is only minimal research on this topic from the start-up perspective (Drover et al. 2017). For a long-term fruitful collaboration, both partners must be able to assess the potential advantages and disadvantages of getting into a collaborative agreement. Therefore, the goals and expectations of both partners are discussed, and insights on critical success factors and barriers to co-creation of innovation are considered.

The necessary fundamental condition to be engaged in a partnership is that the corporate will get access to new technology, and the start-up will get access to funds. However, each partner has additional implicit and explicit expectations from the partnership. The corporate wishes to gain access and control over new technologies and markets, encourage synergy with external teams, get direct or indirect returns on the investment, and in the long run to significantly improve its competitive position. The start-up aspires to boost its technology development efforts, extend its managerial capabilities, market accessibility, and networking while keeping the agile

**Table 1** Considerations and expected benefits

Partner	Criteria	Description	Corporate venture	Corporate incubator	Shared innovation
Corporate	Managerial efforts	Alignment with procedures, standards, and organisational processes	High	Medium	Medium
	Dynamic capabilities	Sensing and seizing technology and market opportunities	Medium	High	High
		adopting entrepreneurial and innovative organisational culture	High	Medium	Medium
	Synergy of knowledge	Coordination between corporate and start-up teams to access current knowledge on innovative trends	High	Medium	Medium
	Investment	Level of required funds for R&D, marketing, and administrative support (presented in reverse order)	High	Medium	Low
	Expected returns	Positive financial return on investment	Medium	Medium	High
Start-up	Agility and entrepreneurship	Sustaining informal and flexible operational processes	Low	High	High
	Decision-making	Involvement in and impact on strategic decision-making	Low	Medium	Medium
	Multi-markets	Extending developments to additional markets by development of new ideas	Low	Low	High
	Mentorship	Level of managerial support, training, mentoring, and consulting	High	Medium	Medium
	Develop networking	Connection to technological, professional, and financial networks	Low	Medium	High

mindset and the entrepreneurial spirit of the team and remaining significantly involved in strategic decision-making processes.

Table 1 summarises the primary considerations for engagement and expected benefits for each one of the partners concerning the primary co-creation models: corporate venture, corporate incubator, and shared innovation.

It can be shown that there is no one ideal model for any partner and that the partners' expectations are not entirely aligned. Thus, by adopting any form of

partnership, both partners need to compromise. While the corporate venture model gives a higher priority to the corporate expectations, and as the corporate incubator model presents a more balanced approach to meet both partners' expectations, the shared innovation model is perceived as more favourable for the start-up.

In the corporate venture model, the required operational expenses by the corporate are moderate, mainly aimed to support R&D efforts. The corporate and the start-up complement each other knowledge on technological, marketing, and business aspects. But as presented in the first case in this chapter, while the corporate keeps a significant control over the start-up activities, the start-up team has to adapt itself to the organisational processes and culture of the corporate and has only limited possibilities to express its agility and entrepreneurial spirit.

In the corporate incubator model, the establishment of a new joint venture requires more coordination efforts by both partners. Since the new venture is independent, it generates additional expenses for the corporate to provide the necessary resources and to support administrative actions. Although it opens other channels for gaining knowledge on new technologies and market trends, the corporate has less managerial control on the operational activities. The start-up team, in this model, is much more involved in the decision-making processes and can keep its working environment and agile spirit. However, as can be learned from the second case presented earlier, because the new joint venture is a technology-oriented entity, it limits the start-up team to explore opportunities beyond the corporate's business interests.

In the shared innovation model, as described in the third case above, the start-up team gets a complete response to its expectations. In addition to its benefits obtained by the corporate incubator model, the joint venture has the resources to explore business opportunities that are not necessarily correlated with the corporate interests. The corporate has to dedicate more funds to support additional marketing and related R&D efforts but also has the option to strengthen its business. The model variation in which a third party (especially government) contributes to the funding of the new venture, makes the shared innovation model attractive to the corporate, as well.

Since usually, the start-up has less power when entering a negotiation; it is the corporate's responsibility to assure long-term beneficial agreement. Therefore, the shared innovation is perceived as a preferable form for co-creation of innovation, and by introducing third-party investment, this model becomes attractive to both sides.

This chapter provides insights into the multiple considerations related to strategic decisions on co-creation engagements. From a theoretical perspective, it outlines an advanced framework for co-creation of innovation by R&D corporates and start-ups: the corporate shared innovation model. The contribution of the current chapter to literature is on two aspects: motivation and outcomes. First, it adds to the extensive literature that reviews and analyses the corporate's interest in co-creation by examining how each one of the models is also perceived from the start-up viewpoint and what are the potential incentives for the entrepreneurs. It is a significant input that should be identified and analysed, since any successful partnership depends on the level of meeting both parties' expectations. Second, it presents a collaborative design

that extends traditional forms of co-creation of innovation by considering not only the exploitation of technology but also opening out additional markets. The new corporate shared innovation model, presented in this chapter, adds to the existing literature a new framework in the context of open innovation. From a practical perspective, the main contribution for R&D corporates and start-ups concerns decision-making process that is based on comparative assessment. The partners can utilise the set of criteria and evaluate the level of response that each model can provide under certain circumstances. The key message is that there is no ‘one size fits all’ model that is ideal and can be applied on all occasions. There is a need to understand the specific context, the explicit and implicit expectations of each partner in the short and long terms, and to engage in a collaborative structure that will adequately respond to both partners’ interests. On a national strategic level, this model can be further studied by policymakers to take actions at specific points to enhance innovation that will lead to economic growth and societal benefits.

This study has limitations and offers opportunities for future research. The main limitation relates to the explanatory research approach, which is associated with subjective interpretation. Although it provides a rich description, it lacks quantitative results that could have provided support to the conclusions. Further field studies that will collect data from multiple cases of implementing co-creation of innovation by R&D corporates and start-ups will be valuable to understand better which specific model is the preferable one in each state-of-affairs. Since this chapter is focused on three main structural models of co-creation, it does not provide explanations to all possible variations of engagement, which a broader investigation into the negotiation process will be able to clarify. Also, increased focus on the dynamic and emergent aspects of innovation in the context of co-creation will shed light on the impact of rational and emotional considerations in the decision-making process conducted by corporates and by start-ups and entrepreneurs.

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