The Great Disruptive Transformation: The Impact of COVID-19 crisis on Innovative Startups in India

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कर्मण्येवाधिकारस्यते मा फलेषु कदाचन ।
मा कर्मफलहेतुर्भूः मा ते सङ्गोऽस्त्वकर्मणि ॥

You only have a right to action (karma) and not to the fruits of your karma. Do not become a person who constantly meditates upon (gets attached to) the results of one's karma. Do not get attached to inactivity (no karma). $\|2.47\| - BhagwatGita$[1]

[1]https://culturalsamvaad.com/thought

Abstract

Startups are one of the main agents of creative destruction especially in times of crisis, because of their favourable characteristics such as size, flexibility and lack of bureaucracy. This study aimed to investigate how hi-tech innovative startups in India are responding to the COVID-19 crisis and how the crisis stimulates creative destruction. Towards this purpose, Schumpeterian innovation theory has been combined with dilemma theory and Trompenaars' seven dimensions of national cultural differences. The design deployed in this study entailed a qualitative case study approach, involving in-depth interviews with the leaders from 15 hi-tech startups in India from various industries. The results demonstrate that the investigated startups are undergoing major transformations. They are successfully pivoting to new business models and new markets based upon their core capabilities. They are experiencing emerging opportunities, and are innovating in various ways, resembling both Schumpeterian evolutionary economics notions of creative destruction and creative accumulation. Seven major dilemmas have been identified and reconciled. These reconciled dilemmas, coupled with several identified key learning points, provide further understanding and knowledge on best entrepreneurial practices to support startups through the COVID-19 crisis, potentially relevant to a broader context than the current study.

Glossary

COVID-19 Corona virus disease

DRP Dilemma Reconciliation Process

THT Consulting Trompenaars Hampden-Turner Consulting

7-D Model 7 Dimensions of Cultural Difference Model

SDGs Sustainable Development Goals

OTT Media Service Over The Top Media Service

BFSI Industry Banking, Financial Services and Insurance Industry

IP Intellectual Property

MSMEs Micro, Small and Medium Enterprises

B2B Business-to-business

B2C Business-to-consumer

Acknowledgements

Acknowledgement makes me feel humble and I wonder whether it would not be fairer to accredit this thesis to a whole network of people who have helped me. I owe much of the inspiration for this thesis to prof. dr. Fons Trompenaars and his esteemed colleague Charles Hampden-Turner. Their work has inspired me tremendously, which constitutes the heart and soul of this study.

In the month of February, I started to look into the dilemmas of the future by analysing the perceptions of the futurists, trend researchers and leaders involved in the long term strategy formulation on megatrends and megashifts. This idea came during one of my conversations with the CTO of THT Consulting, Lucas de Jong de Abril on the book *Physics of The Future* by Michio Kaku. However, this ambitious project had to be discontinued, because of the current pandemic. That is, the COVID-19 crisis influenced and disrupted the data collection tremendously over a period of time. Simultaneously, the COVID-19 crisis evolved to becoming a very significant event in history. Given this, I decided to adapt and pivot my investigation to study the impact of the crisis on business and innovation. It was early May, after careful consideration and healthy pragmatism, that I decided to investigate the hi-tech innovative startups in India within the context of COVID-19. In the end I look back at one of the most learning intensive journeys in my academic career so far.

I am grateful to several people who helped to make this thesis possible. First of all I want to acknowledge the efforts of my supervisors dr. Mark Bagley and prof. dr. Fons Trompenaars. They have fully supported my independence and guided my path whenever I felt lost. Another scholar that I would like to thank is prof. dr. Peter Woolliams. In spite of being very busy we had multiple early morning conversations on the study design, methodology and dilemma management.

These are extraordinary times in which the ways of living and working have changed tremendously. During these times my family and friends were always there for me, in spite of large geographical distances. This thesis project has been running from February. It has not been easy discontinue my earlier study in the middle of data collection and then completely redesign and execute it from scratch. I am immensely grateful to my wife and my best friend Nadine Kraamwinkel-Jha, who kept on motivating me and making sure that I have a comfortable home and work environment to be productive.

In the end I also want to thank all the study participants. Without them this project would never have been possible. They have been very cooperative and open for discussion on difficult topics. I also thank all the staff at the School of Business, Economics and Law at University of Gothenburg for their contribution to this amazing Innovation and Industrial Management masters program.

Chandu

To Nadine

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1

Introduction

When Michael Dell was entering the computer industry there were solely two segments in the market: (I) inexpensive simple computers and (II) expensive specialised computers. Choosing either segment leads to certain pros and cons. Michael Dell actually felt inclined to serving both. He was faced with a dilemma where; on the one hand he wanted to serve the general population, but on the other hand he also wanted to serve a more specialised group. In addition, he neither liked to compromise on quality, nor to lose profit. The solution was a bridge ('reconciliation') between the two: the combination of individually configured PCs and the Direct Selling Model, which allowed customers to choose preferred system configurations without going through an intermediary. This is exemplary for innovative visionary leaders and companies who have the ability to combine competing values and options, instead of choosing one and to compromise.

The above example is illustrative to what differentiates a successful innovative leader from the rest. Moreover, it is their ability to combine competing values instead of choosing one of them (Trompenaars & Hampden-Turner, 2001). Important here is that *values* are not 'things', such as money in the bank and the possession of material items as represented in the materialistic world. Values are differences. And with any difference, when viewed on a continuum scale, it posits two contrasting ends (Trompenaars & Hampden-Turner, 2001, p. 4). Thus, values are also contrasts in our worldly experiences. Examples of some opposite ends of the continuum are: we can be honest or tactful, courageous or cautious, patient or insistent, trusting or supervising, and truthful or loyal. If Michael Dell valued preferring the general population more than the specialised group, or vice versa, then Dell would have been a very different company today. Similarly, Steve Jobs also found a way to combine values of aesthetic and functionality in Apple products, instead of compromising on any of them. As a result, everything that has a functionality in their products looks beautiful - and everything that is beautifully designed has a functionality.

However, not all leaders are as acclaimed as Michael Dell or Steve Jobs. More concretely: what makes such successful leaders different is their ability to focus on such value tensions, both individual and organisational, and in turn to reconcile them, whereas others fail to do so (Johnson, 1992; Peters & Waterman, 1982; Schad et al., 2016; Smith & Lewis, 2011; Trompenaars & Hampden-Turner, 2001; Ulrich et al., 2017, p. 100). These tensions are commonly referred to as *dilemmas.* Managing dilemmas requires one to shed light on a different way of 'managing'. One has to go beyond the 'rational model' of decision making which assumes that the 'rational actor' has perfect information, cognitive ability and relevant resources are readily available for decision making. However, in the real world perfect information in combination with relevant resources is rarely available (Peters & Waterman, 1982). Hence, for this different type of managing, one replaces the 'rational actor' with a 'dynamic human being' in a dynamic society with its own strengths, weaknesses and characteristics (Hampden-Turner, 1990; Peters & Waterman, 1982; Van de Ven, 1983).

It is important to recognise that reconciliation of dilemmas cannot be reduced to mere leadership quality. In fact, a wealth of empirical evidence is emerging that demonstrate that dilemma reconciliation enables entire organisations to innovate and potentially outperform its competitors (Hampden-Turner, 1990; Peters & Waterman, 1982; Schad et al., 2016; Smith & Lewis, 2011; Trompenaars & Hampden-Turner, 2001; Ulrich et al., 2017). To see the parallel and relevance with innovation, through the aforementioned examples of Dell and Apple and one can observe that these reconciliations have led to the innovative success of these companies. Arguably, to innovate is to combine values that are not easily joined. Examples can be found in the reconciliation of luck or fortune versus careful preparation by Louis Pasteur (Hampden-Turner, 2009, p. 53); divergent thinking versus convergent thinking by J.W. Getzels and P.W. Jackson (Getzels & Jackson, 1962); designed strategy versus emergent strategy by Henry Mintzberg (Mintzberg et al., 1987); mass production versus customised products by Joe Pine(Pine, 1993) and; supply innovation versus demand innovation by

Adrian Slywotzky and Richard Wise (Slywotzky et al., 2003), and the list goes on in various disciplines. Is it not therefore, looking at reconciled values, as viewed through a 'dilemma lens' actually another way of theorising about innovation? Similarly, one of the most famous innovation theory of "creative destruction" by Schumpeter can actually be viewed as a reconciliation of *creativity* and *destruction* (Hampden-Turner, 2009; Schumpeter, 1934). Given all of the aforementioned, the question arises whether there is a way or a method that thinkers, business leaders and managers can use to identify their dilemma and reconcile it?

Charles Hampden-Turner has touched a chord here with his *Dilemma theory*[1]. Dilemma theory provides a unique perspective to understand these tensions between values or conflicting propositions and can be operationalised through a technique referred to as the Dilemma Reconciliation Process (DRP) methodology (Hampden-Turner, 1990; Trompenaars & Hampden-Turner, 2012). The DRP methodology actively helps to integrate opposing values and propositions and can be applied across contexts, cultures and disciplines. In practice this methodology can be utilised for decision-making and innovation, both within homogeneous and heterogeneous business settings and organisations. Notable, its efficacy has been evaluated and a Spearman's rank correlation coefficient of 0.69 was for instance found between 'reconciliation of dilemmas' and 'bottom line business performance in profit centre/budget stream' (Trompenaars & Hampden-Turner, 2001, p. 429). Furthermore, it has been retrospectively used to study the context of the economic recession in 2007-2008 and has shown what has gone wrong with the capitalist system; what led to the financial crisis and how innovation & creativity can be harnessed in times of crisis (Hampden-Turner et al., 2019; Trompenaars & Hampden-Turner, 2009). However, it has never been used to study organisations (except for consultancy practices and in terms of paradoxes) in the time of a crisis, in spite of its potential. It offers a reflective way of looking at a phenomena which is vital for managing an organisation during a crisis, and crises in itself are a combination of contradictory values (threat and opportunity) and require cautious decisiveness.

[1] The original version was published in "Approaching Dilemmas: Shell Guide to Planning" by Charles Hampden-Turner in 1985, the paper is still strictly confidential.

Problem Statement, Research Scope and Aim

Arguably, there cannot be a more relevant time to addressing and reconciling dilemmas than the current ongoing COVID-19 crisis in which we are witnessing an extraordinary time where a healthcare pandemic is combined with an economic recession as well as an energy crisis. Although the COVID-19 crisis is not a "black swan" event, it has similar societal and economic impacts. This has resulted in individuals, groups, organisations, nations and the global community to undergo normative changes overnight. All these have implications on business, and at the same time the business environment has drastically changed and the future is very uncertain. During these uncertain times we are faced with many alternative scenarios and the choices made now will have long term consequences on us as an individual, on society and business.

The upcoming 5-10 years will be heavily influenced by the COVID-19 crisis. There is a general consensus among the experts that the 'old normal' might never come back (AARP, 2020; World Economic Forum, 2020a). There are already signs of the so-called 'new normal', where more digital technologies are being deployed in a practical way, especially in communication, healthcare, e-commerce and education. Employees all over the world have been directed to work (if they can) from home, patients are consulting doctors virtually, food and essentials are increasingly being delivered at peoples doorsteps, and universities have switched to giving online education. Remarkably, companies like Facebook, Twitter, TCS and Shopify have attracted headlines on their plans to permanently work from home (Financial Express, 2020; Forbes, 2020). Therefore, in the coming years technology will play a crucial role in determining the nature of our way of living, communicating and working, which will have an impact on the nature of our decision-making and consumption behaviour. The rate of change and adaptation will vary; in the corporate world different organisations have different levels of flexibility and capability to react to changes.

Startups in particular are at an advantage, because they are equipped with favourable characteristics - including size, flexibility and lack of bureaucracy - making them one of the main agents of creative destruction especially in times of crisis (Eggers et al., 2012; Hong et al., 2012; Irvine & Anderson, 2004; Smallbone et al., 2012). This transformation process requires resolving a number of dilemmas, and entrepreneurs need to be creative and innovative in doing so (Hampden-Turner, 1990; Stopford & Baden-Fuller, 1994). This creativity and innovation is harnessed in the process of connecting what seems *contrasting*, which is a characteristics of Schumpeterian entrepreneurship (Stopford & Baden-Fuller, 1994). Other scholars such as, Wenzel et al. (2020) proposed innovation as one of the strategic responses to the crisis. He also refers "strategic renewal" as innovation (p. v11). This notion is very close to the notions of Schumpeter's "creative destruction" which in essence is "creative renewal". Furthermore, Bryson (1981, p. 181) asserts that a crisis relaxes "(...) the 'normal' constraints around decision making". This gives firms enough room to think about new things (Roy et al., 2018), including opportunities to innovate business models (Clauss, 2017; Ucaktürk et al., 2011), which is triggered by the crisis (Clauss et al., 2019). Therefore, this thesis asserts that recognising and resolving dilemmas to innovate is the sustainable way to cope with the COVID-19 crisis and the DRP is a crucial instrument to support this.

In spite of being a frequently utilised theory and method in business consultancy practices and academic research, the Dilemma theory and DRP methodology has not been applied to the COVID-19 crisis[1] and has mostly been used and applied to big and established organisations with a global footprint. The COVID-19 crisis has disrupted businesses and created uncertainty for startups. Amidst these unknowns, they are faced with a big question: what is the right thing to do now in order to be relevant and compete in the market of the coming future? This crisis has emphasised the need of going beyond the "rational model" of decision-making and examining the situation through the "dilemmas lens". The COVID-19 crisis is such a significant contemporary phenomena such that the decisions made today will not only have implications in the present, but also on the long-term future of the organisations. In light of this situation, the logical next step is to conduct a case study on innovative startups in times of the massive ongoing COVID-19 crisis.

This thesis aims to capture the impact of the COVID-19 pandemic on startups and to accumulate knowledge of best entrepreneurial practices to support startups through the crisis.

[1]As per author's best knowledge only Fons Trompenaars has written about this, though from a cultural dilemma perspective, in his short handbook - *"The Covid-19 Survival Guide: Dilemmas and Solutions"*

Thesis Outline

This work is divided into eight chapters and follows the *Linear-analytical structure*[1] as proposed by Yin (2014, p. 188). The remainder of this thesis is structured as follows. In *Chapter 2* I explain the notions that are foundational to this thesis and elaborate on the Dilemma theory, Schumpeter's innovation theory, the key concepts entrepreneurs, entrepreneurship and innovative startups, and determinants of our value preferences. In *Chapter 3* I present and discuss the case study. In addition to this, I provide elaboration on the COVID-19 crisis and how startups and entrepreneurs have dealt with previous world crises. Chapter 3 concludes with presenting the research questions. In *Chapter 4* the research design and utilised methodology can be found discussed. This is followed by presenting the results in *Chapter 5*, the discussion in *Chapter 6* and conclusions in *Chapter 7*. The appendices can be retrieved from *Chapter 8*.

[1]This yield the common approach of writing a research report starting with the description of the problem followed by relevant literature, descriptions of methodology and data analysis, and ends with a conclusion section and the implication of the study findings.

2

Theoretical Background

'There is nothing so practical as a good theory' - Kurt Lewin

This chapter introduces the relevant theory and concepts for this thesis with the intention to provide a theoretical lens to understand and interpret the study findings. It begins with an overview of Dilemma theory, including its analogous theories. Then, key concepts used in the study, including creativity destruction, creative accumulation, entrepreneurs, entrepreneurship, innovative startups are defined. The chapter ends with the seven dimensions of culture, which influences value preferences and determining in managing dilemmas.

2.1 The Essence of Dilemma Theory

2.1.1 What is a dilemma?

The word 'dilemma' comes from the Greek *'di-lemma'* which literally means 'two propositions'. The Cambridge dictionary defines dilemma as: "a situation in which a difficult choice has to be made between two different things you could do". Given the scope of this study the following definition for dilemma will be used:

> *"A dilemma describes a situation whereby one has to choose between two good or desirable options"*

In other words, a dilemma is a situation where one has to choose between two options, both of which are *attractive* but appear to be mutually *exclusive* - hence it entails an "either/or" scenario (Ramsey, 2005). Since dilemma resembles a kind of tension, it has both positives and negatives and instead of focusing on the negatives, it makes sense to get the best out of the positive side of the tensions by combining them. A dilemma describes *positive elements* of both sides of the tension, such as individual versus group; objective versus subjective; logic versus creativity; analytical versus intuitive; formal versus informal; rules versus exceptions, etc.

Dilemmas appear very logical when examined on their individual positives, but when presented together they look irrational (Hampden-Turner, 1990). For instance, examine the following three examples of dilemmas: (I) On the one hand, we need to make decisions ourselves quickly. Whilst on the other hand, we need to consult more widely across the organisation when making decisions. (II) On the one hand, we should strive for standard global products and services. Whilst on the other hand, we should try to develop and offer unique products and services adapted to the needs of local markets and. (III) On the one hand, we need to apply "positive discrimination" in recruitment to increase diversity. Whilst on the other hand, we need to maintain equal career opportunities and job security for existing employees.

Another crucial element and potential cognitive pitfall is that for the reconciliation process, the dilemmas have to be framed in 'positives'. Some also refer 'dilemmas' in its negative form. For instance, Buytendijk (2010), Haque (2011), Peters and Waterman (1982), among others, refer to the dilemma as a "choice between two bad alternatives". Without going into the length of explanation as of yet; the whole idea behind Dilemma theory is that there are positive sides of conflicting tensions and one proposition is enriched with the positive of another, and vice versa. Therefore, it is important to frame dilemmas properly after eliciting them. It is a skill in itself, which will be further elaborated and clarified in the following sections. Now that we have defined what we mean with a dilemma our next task is to define what is *not* a dilemma before we can have a more fruitful discussion on its academic and societal relevance and implications.

2.1.2 What is *not* a dilemma?

Trompenaars and Coebergh (2014, p. 14) elucidate on what is not a dilemma through the following examples:

A dilemma is *not*:

- A description of a current and ideal state: *"We have good communication tools but we need to use them better".*
- An either-or option: *"Should we start hiring new employees now or wait till next*

year".

- A complaint: *"We make good strategic plans but due to lack of leadership we are not able to follow them through".*

If observed closely, the above examples illustrate that it is important to distinguish between dilemma and problems, and not all tensions are dilemmas. Problems can be solved by investing financial and non-financial resources, but reconciling dilemmas need a change in mindset. For example: on the one hand we want to train our employees, but on the other hand we do not have a budget. This is not a dilemma because only the negative side of one proposition is reflected in the pair of tensions. Thereby it will look like one of them is not a desirable option. Then, by definition, it is not a dilemma. However, we can frame the above example also in the following way: on the one hand we want to train our employees, but on the other hand we want to save cost. Both propositions reflect the positive side of a tension and are therefore desirable. Hence, it is a dilemma.

Smith and Lewis (2011) point out that because of the lack of conceptual clarity, tensions are described using various words. There is a tradition of using the notion 'dilemma' interchangeably with 'paradox'. Schad et al. (2016), Smith and Lewis (2011) have extensively used 'paradox' in their years of work. Therefore, at this point, it is important to make a distinction between two most interchangeably used terms to describe 'simultaneously addressing contradictory or contrasting demands' - *'dilemmas' & 'paradoxes'.* Since the notion 'dilemma' has been described in the above section in detail, the following paragraph will describe the notion of a 'paradox', in support of argumentation what is not a dilemma.

Paradox has been used alongside dilemma by many scholars. The notion 'paradox' also has its origins in Greek. *Para* means 'contrary to' and *doxa* means 'opinion', which represents something different from what is thought. Buytendijk (2010, p. 4) points out that "contrary to a dilemma, a paradox does not force you to choose; it is more of a conceptual exercise". In addition, paradoxes are "contradictory yet interrelated elements that exist simultaneously" (Smith & Lewis, 2011). The definition of Smith and Lewis (2011) is very similar to the definition of a dilemma by Charles Hampden-Turner and Fons Trompenaars. They both emphasise that dilemmas/paradoxes persists over time and individually seem logical, but when brought together they seem illogical and irrational. Paradoxes are also tensions but these conflicting options can not be reconciled. Whereas dilemmas are tensions/conflicting propositions that can be reconciled and are always two desirable/positive options. Furthermore, some other terms that are similar to dilemmas are: *"Catch-22", "Dualities", "Dialectic", "Mexican Standoff"* (Buytendijk, 2010; Smith & Lewis, 2011). They represent different things and are different from dilemmas and hence will not elaborated here in further detail.

2.1.3 Dilemma Theory

Dilemma theory was developed by Charles Hampden-Turner while he was working at the Group Planning Department at Royal Dutch Shell (commonly known as Shell). This theory was first tested on 54 most senior members of Shell and was restricted for publishing (Hampden-Turner, 1990). Dilemma theory was first published in *"Beyond the Looking Glass"* and its later version *"Approaching Dilemmas"*. Since Dilemma theory and the Dilemma Reconciliation Process (DRP) methodology is a part of Charles Hampeden-Turner and Fons Trompenaars consulting practices, its application and essence can be found in various literature written by them.

Dilemma theory enables a person to view a situation through a perspective of underlying tensions. These can be polarities and could be in various forms. To mention a few: Reflection versus Action, Planned Processes versus Emergent Processes, Individual Rights versus Community Obligations, Learning versus Performing, Flexibility versus Consistency, Collaboration versus Competition, Change versus Stability, Pragmatic Choices versus Ideals, etc. These dilemmas may seem candid, however within a context they reveal rich dynamic complexities with clashing values.

Dilemma theory involves also a logical technique, 'dilemma reconciliation', to combine one value with its opposite by integrating or reconciling them to create synergy (Kangaslahti, 2012; THT Consulting, 2019).

> *"Dilemma reconciliation is a way of thinking which moves beyond either or thinking, and even and-and thinking. By using through-through thinking the aim is to synthesise seemingly opposing viewpoints, giving value/respect/ appreciation to different sides of a value proposition"* (THT Consulting, n.d.).

Instead of choosing one value over another, reconciliation emphasises the circularity of the relation between values and presenting them as complementary to each other. In terms of relevance to innovation it can be noted that during the reconciliation process many innovative solutions can be discovered, which might not have been thought of previously. This process is also referred to as 'dilemma reconciliation methodology' and synonymous as Dilemma Reconciliation Process (DRP) methodology. A description in further detail will be provided in the methodology chapter of this thesis (Chapter 4).

2.1.4 Other Analogous Concepts

Dilemma theory has its origin in the 1970s, but being faced with an unsettling social and business environment several other scholars have come up with analogous concepts.

One of them in particular is closer to dilemma theory, by Rushworth Kidder. Kidder points out in his book *How good people make tough choices*, how several of our values come in conflict. What stands out in his book is the description on 'right versus right'. He further elucidates among others, right versus wrong, what it means to be ethically fit, our sense of what's right, how we develop our core of values, (ethical) dilemmas, and it also provides direction for resolution (Kidder, 1995).

Conventional reasoning does not work has been the lesson from Charles Handy in two of his books *The Age of Paradox* and *Age of Unreason* (Handy, 1995, 2012). He is of a view that the rate of socioeconomic change has been fast and has brought new types of problems related to the organisation of work. This discontinuous change required new ways of thinking and new ways of work approaches. He points out that thinking in terms of paradox and the management of these paradoxes is the way ahead, which is at the heart of both of his books (Handy, 1995, 2012).

Several others such as, Wheatley (2011), Zohar (1997) have looked in to "new physics" for "paradoxical ideas in business leadership" (Trompenaars & Hampden-Turner, 2001). In the book *Leadership and the New Science* by Margaret H. Wheatley, which is based on "New Science", Wheatley gives numerous examples from natural science, thereby connecting it to chaos and organisational leadership (Fitzgerald et al., 1999; Wheatley, 2011). Danah Zohar, in her book *Rewiring the Corporation*, explains the models of organisations with the help of the brain structure metaphor. Zohar also uses the "new science" theories of quantum- and complexity theory to point out contradictions and ways of organisational transformation (Ogilvie, 1999; Zohar, 1997).

A very similar theory, again independently constructed, is explained by Barry Johnson in his book *Polarity Management: Identifying and Managing Unsolvable Problems*. Johnson (1992) emphasises that all complex problems do not have solutions, rather a manager/leader should learn how to manage them. He also distinguishes the notions of 'both/and' versus 'either/or' and tries to explain that how our thought-process can be changed to tackle problems when two solutions are competing but are at the opposite end of the spectrum (Johnson, 1992).

Other scholars have also contributed in the field of what they call as 'management of paradoxes'. The notion is however very similar to that of Dilemma theory. Professors Kim Cameron and Bob Quinn have emphasised the challenges and the importance of managing competing values (paradoxes). They have indicated that there are mainly four competing values - collaborate, create, compete, control, and the tension among them has to be managed by transformational leaders (Quinn & Cameron, 1988). Professor Marianne Lewis and Wendy Smith have also extensively written about paradox management. Smith and Lewis (2011) have proposed a theory of paradox and they propose a "dynamic equilibrium model of organising" for organisations. Similar claims have been made by Dave Ulrich and colleagues' research on *Leaders as Paradox Navigators*. They emphasise that navigating a paradox has become the "next wave in the evolution of leadership effectiveness" (Ulrich et al., 2017).

The rationale behind pointing out that there are other analogous concepts is to demonstrate that other scholars have also studied the phenomena of tensions between two contrasting values. They refer to them differently. However, what stands out of the dilemma theory and DRP is that it actually provides a structured way to reconcile these contrasting values, whereas others point out the contrasting values or emphasise the importance of managing them.

2.2 Schumpeter, Innovation and the Crisis/Discontinuities

Schumpeter was one of the first scholars to recognise and emphasise the importance of innovation and business cycles in his *Theory of Economic Development* (Schumpeter, 1934). He not only described the circular flow created by the introduction of novelty, but also described the 'entrepreneurs' as an economic actor turning the wheel of economic development. Later, in his classic *Capitalism, Socialism and Democracy* he emphasised the role of R&D (research and development) in larger firms who are also engaged in routine innovation processes (Schumpeter, 1942).

This thesis asserts that Schumpeter's views on innovation are very relevant in times of discontinuities or a major crisis. Schumpeterian innovation theory uses three basic premises for industry growth: (I) creative accumulation, (II) creative destruction, and (III) rejection of competitive market equilibria (Archibugi et al., 2013a; Sengupta, 2014). All these aspects of Schumpeterian innovation theory emphasises the 'evolutionary growth and endogenous innovation' of the firm (Sengupta, 2014). From the three aspects mentioned, two are of particular interest for this thesis: creative accumulation and creative destruction. Both the concepts are multidimensional in nature (Filippetti et al., 2009) and hence require to be examined through various perspectives. These two notions help in explaining the consequences of industries pushed into uncertainties, such as a financial crisis or sudden regulation change or trade war between nations, or the introduction of a new technology (Berggren et al., 2011). The explanation is in two-fold and are partly contradictory, as explained by the notions of creative destruction and creative accumulation. In the following subsections both the notions will be elaborated in further detail.

2.2.1 Creative Destruction

Many well-known scholars and thinkers over thousands of years have reconciled contrasting values or dilemmas in various fields. To mention a few: *yin versus yang* primordial opposites is reconciled by The Tai Chi, authors unknown; *dissent versus loyalty* by Socrates and Immanuel Kant; *violence versus peacefulness* by Mahatma Gandhi; *divergent thinking versus convergent thinking* by J.W. Getzels and P.W. Jackson (Getzels & Jackson, 1962); *designed strategy versus emergent strategy* by Henry Mintzberg (Mintzberg et al., 1987); *mass production versus customised products* by Joe Pine(Pine, 1993) and *supply innovation versus demand innovation* by Adrian Slywotzky and Richard Wise (Slywotzky et al., 2003), and the list goes on.

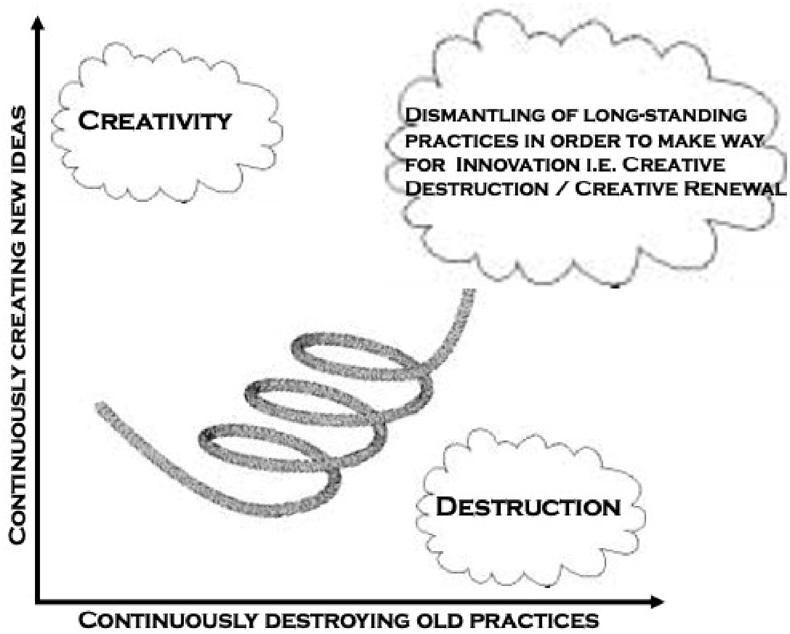

Figure 2.1: Creativity versus Destruction

However, in this particular context where the business environment is rapidly changing, the scholarship of one particular economist and thinker stands out in terms of many aspects, including reconciling contrasting values - Joseph Schumpeter. In his popularised notion of "Creative Destruction" Schumpeter reconciled the contrasting values of *creativity versus destruction*, by pointing out that innovation and entrepreneurship is 'a gale of creative destruction' (Schumpeter, 1942). Which in other words means 'creative renewal'. He describes creative destruction as a "process of industrial mutation that continuously revolutionises the economic structure from within, incessantly destroying the old one, incessantly creating a new one" (Schumpeter, 1942, pp. 82–83). The essence of creative destruction is that the established products, processes, and services had to be deliberately dismantled to make them new and improved. This is also an important criteria for innovation and Schumpeter was of a view that "innovation is the engine of change and economic development in modern capitalistic systems" (Schumpeter, 1934), which he explains in his *Theory of Economic Development*.

So what can trigger creative destruction? In times of technological discontinuities there is an immense effect on the established industry structures. The incumbent firms are required to make changes in their existing products and services in order to be relevant and competitive in the market, usual basis of competition might cease to continue thereby leading to intensified technological competition (Abernathy & Clark, 1985; Anderson & Tushman, 1990; Berggren et al., 2011; Utterback & Suárez, 1993). As a consequence of this disruption in the 'normal market structures', the incumbent firms' existing norms, values and business processes are challenged and their core capabilities turn into rigidities thereby hindering the innovation within these firms (Leonard-Barton, 1992). This whole process leads to the process of creative destruction (Schumpeter, 1942). Which implies that the established firms find it difficult to adapt quickly due to accumulated knowledge, resources and structures hence "attackers" get a competitive advantage (Foster, 1986). These attackers are new entrant innovators who quickly realise the potential in such a situation, which is often blindsided to the larger incumbents.

Through the lens of creative destruction, the innovation-drivers are entrepreneurs (and new firms) (Schumpeter, 1934). Notably, there is a great emphasis on 'new and smaller firms' in the notion of creative destruction. Owing to the characteristics of the flexibility and responsiveness, the smaller firms and the new entrants are the innovators. These attackers have an advantage over the incumbent larger firms. Christensen and Rosenbloom elaborate that the larger incumbent firms rely heavily on the value network (Christensen, 1997; Christensen & Rosenbloom, 1995). This is a defined context where the firm competes and engages with the customers. However, in the case of innovation the nature of the value network changes, and larger firms find it difficult to respond to this change - not because of the technological competences - but inertia of being deeply embedded with an old context and association with the old customers (Christensen, 1997; Christensen & Rosenbloom, 1995; Filippetti et al., 2009). In addition, new and smaller firms do not usually have a large accumulated R&D knowledge unlike larger firms and therefore - to overcome the constraints associated with the capabilities and other resources - they tend to collaborate with other smaller and new firms (Filippetti et al., 2009). Unlike 'creative accumulation', which will be defined shortly, firms involved in creative destruction focus on new technologies and involve in path-breaking innovations, with a greater relevance of applied knowledge (Filippetti et al., 2009).

2.2.2 Creative Accumulation

Creative Accumulation is a dynamic concept and consists of dynamic factors including, 'new combinations', 'entrepreneurship', 'dynamic flexibility', and 'the role of the banker' in facilitating finance in investment (Sengupta, 2014). To innovate requires the aforementioned factors playing a big role. Through the lens of creative accumulation: the innovation drivers are the *larger incumbent firms*. Scholars, including Berggren, Cefis and Orsenigo, Granstrand and Pavitt, hold the view that due to the cumulative nature of technological development, established firms are important agents of innovation (Berggren et al., 2011; Cefis & Orsenigo, 2001; Granstrand et al., 1997; Pavitt, 1986). In other words, the incumbents have an advantage of their accumulated knowledge and they exploit it to innovate successfully. They tend to seek new solutions backed by their formal research. Since, there is a significant importance of appropriation and cumulativeness of knowledge, past innovations and accumulated knowledge (i.e. formal R&D) are highly relevant and the barriers to entry are high in such markets (Filippetti et al., 2009).

There are five basic types of innovations associated with the Schumpeterian creative accumulation theory (Andersen, 2011; Sengupta, 2014):

1. Product innovation: addition of a new product or service to the existing system and a change in consumption network.

2. Process innovation: introduction of new technology that change the quality of input and output.

3. Organisational innovation: changes in the strategies for new market structure (e.g. same products adapted for different countries).

4. Market innovation: it involves globalisation of trade, which involves changes in market structure.

5. Input innovation: use of new raw material or intermediate inputs (e.g. software development).

2.2.3 Creative Destruction versus Creative Accumulation

Given the theories on creative destruction and creative accumulation, this suggests that on the one hand due to the higher flexibility and rapid responsiveness smaller and new firms are more likely to come up with path-breaking innovations during technological discontinuities (Filippetti et al., 2009). Whereas on the other hand, larger firms tends to bring routine incremental innovations, based upon their accumulated knowledge (Filippetti et al., 2009). Furthermore, Berggren et al. (2011) points out that creative accumulation is much more common than creative destruction. Interesting to note here is that the creative accumulation and creative destruction are on the opposite end of the continuum, see Figure 2.2. It represents the contrasting nature of the values involved in it. In fact, Schumpeter contrasted himself over a period of time, which resulted in the the formulation of these two concepts. The contrasting nature of the two concepts can be found summarised in Table 2.1 (p. 17). Although the two values or concepts contrast each other, they co-exist, and depending upon the organisation they tend to prioritise one over another. This tension is a *dilemma*.

Figure 2.2: Creative Destruction and Creative Accumulation as contrasting values.

Table 2.1: Creative Destruction versus Creative Accumulation, taken from Archibugi et al. (2013b)

Creative Destruction versus Creative Accumulation		
Dimensions	Creative destruction	Creative accumulation
Characteristics of the innovating firms	Small firms, new entrants are key drivers in the innovation process. They use innovations and exploit economic turbulences to acquire market share from incumbent firms or to open new markets.	Innovations are driven by large, incumbent firms that seek new solutions through formal research exploiting their pre-existing capability.
Characteristics of the market structure	Low barriers to entry into the newly emerging industries. A high rate of entry and exit leads to low levels of concentration and high competition. Discontinuous technologies are available that generate growing markets and new opportunities.	Barriers to entry are high due to relative importance of appropriation and cumulativeness of knowledge and high costs of innovation. Dominance of oligopolistic markets. Technological advancement based on path-dependent and cumulative technological trajectories.
Characteristics of the key technologies	New technologies around which a large number of opportunities arise	Technological advancement based on path dependent technological trajectories
Type of knowledge source	Higher relevance of collaborative arrangements leaning towards the applied knowledge base (other firms). Exploration of new markets and technological opportunities.	High relevance of past innovations and accumulated knowledge. Importance of formal R&D, in-house, but also jointly performed, or externally acquired.
Type of innovation	The emphasis is on path-breaking innovations often able to create new industries. New organisational forms contribute to generating innovations.	The innovation process is dominated by a large number of incremental innovations. Organisational routines drive the generation of innovations.

2.3 Entrepreneurs, Entrepreneurship and Innovative Startup firms

2.3.1 Entrepreneurs & Entrepreneurship

Schumpeter had specifically emphasised on the role of entrepreneurs. He asserts that "the function of entrepreneurs is to reform or revolutionize the pattern of production" (Schumpeter, 1942) with a focus on new combinations (Schumpeter, 1934). It is not the same as 'managerial bureaucrat' and German sociologist Max Weber has made a distinction between 'managerial bureaucrat' and entrepreneurs' (Ruef, 2010). According to Weber, "[entrepreneur] is the only type who has been able to maintain at least relative immunity from subjection to the control of rational bureaucratic knowledge" (Weber, 1978, p. 225). In addition, Ruef (2010) argues that entrepreneurship is seldom a solitary activity and therefore, emphasis should also be on 'entrepreneurial groups'. According to Ruef, "an entrepreneurial group can be described as the set of actors — either individual or organizational — who actively support the creation of a new organization" (Ruef, 2010, p. 15).

Although there is a consensus on the notion of an entrepreneur and what they do, the notion of 'entrepreneurship' however has attracted various views. Most of the scholars have defined entrepreneurship as a function of who an entrepreneur is and what he or she does (Venkataraman, 1997). However, Venkataraman is very critical of this fact. He defines entrepreneurship as "the study of sources of opportunities; the processes of discovery, evaluation, and exploitation of opportunities; and the set of individuals who discover, evaluate, and exploit them" (Venkataraman & Shane, 2000, p. 218). Furthermore, these entrepreneurs or entrepreneurial groups lay the foundation of firms that are new, innovative and have growth ambitions. One can roughly call these firms startups, however, what a startup exactly entails requires further definition.

2.3.2 Innovative Startups

There is little disagreement on the belief that innovative startups are an important agents in stimulating growth and national competitiveness (Birch et al., 1995; Kirchhoff et al., 2007). However, 'what is a startup' has been a topic of debate. People and organisations differ in how they define a startup. Various factors have to be taken into consideration to define a startup, including; new business model, stage of the life cycle, revenue generated, number of employees, level of innovation, etc. Arguably, the most famous definition is from Steve Blank, who defines a startup as *"a temporary organi-*

zation designed to look for a business model that is repeatable and scalable" (Blank, 2017). Another definition that has attracted attention is by Eric Ries, who defines a startup as a "human institution designed to deliver a new product or service under conditions of extreme uncertainty" (Ries, 2010). Furthermore, StartupRanking puts a timeline to the notion, adding an element of growth, independence and technology to it: "[a startup is] an organization with high innovation competence and strong technological base, which has the faculty of an accelerated growth and maintains independence through time. The max lifespan should be of 10 years" (StartupRanking, 2020). Due to the high level of complexity involved there is no clear and widely accepted academic definition of a startup. However, there are two approaches that dominate the discussion on startups (Söderblom & Samuelsson, 2014). The first approach is based upon Schumpeter's definition of innovation. Schumpeter (1928, p. 378) defines innovation as:

> *"What we, unscientifically, call economic progress means essentially putting productive resources to uses hitherto untried in practice, and withdrawing them from uses they have served so far. This is what we call 'innovation'."*

This approach is usually more applicable to technology-intensive product-based firms, which have certain criteria to check the 'innovativeness' of a product. It has a focus on novelty and somehow tries to objectively measure it (Söderblom & Samuelsson, 2014). This approach has become popular in technical innovation research (Almus & Nerlinger, 1999), in which some criteria has to be laid down for evaluation of innovativeness of a new firm, such as financing of R&D (Riding et al., 2012), patents, IPs, etc.

The second approach is more open and is based on contexts and perceptions. This particular extract from van de Ven eloquently describes innovation as follows (Van de Ven, 1986, pp. 4–5):

> *"An Innovation is a new idea, which may be a recombination of old ideas, a scheme that challenges the present order, a formula, or a unique approach which is perceived as new by the individuals involved (Rogers, 1983; Zaltman et al., 1973). As long as the idea is perceived as new to the people involved, it is an 'innovation', even though it may appear to others to be an 'imitation' of something that exists elsewhere."*

Notably, this approach does not make distinction between technical (products and services) and non-technical (business models, policies, organisational structure, procedures) innovations (Van de Ven, 1986). Moreover, it includes both.

For this thesis, the second approach can be found more applicable and hence will be followed. The reason is that this approach does not fragment innovative activities and allows one to take context into consideration. Given the aforementioned, an innovative startup is defined in this thesis as:

> A firm that has been founded less than ten years ago, which has to some extent a technological base, and approaches innovation according to the logic from van de Ven (1986).

2.4 Determinants of our value preferences : 7-Dimensions of Culture

On a daily routine leaders face competing demands from various stakeholders. Their approach when facing these demands is consciously or unconsciously biased by their values, which in turn are culturally influenced. In today's multi-cultural and globalised work-environment, making decisions has become increasingly more challenging as one value might be preferred over other, although both have their own advantages and disadvantages. These competing demands results in dilemmas. Putting it into more concrete terms, every individual and organisation face certain universal dilemmas, though approaches to values and moral reasoning differ considerably among nations (Hampden-Turner, 1990; Hofstede, 1980; Trompenaars & Hampden-Turner, 2012). In addition, culture influences the choice of action (Hampden-Turner, 1990; Hofstede, 1980, 1984; Schein, 2004; Trompenaars & Hampden-Turner, 2012). Under these circumstances, the situation of a dilemma where one decides to choose one value over another instead of managing and combining them, might generate friction in an organisation.

Differences in approaches are also evident with different approaches taken by different national governments in dealing with the ongoing COVID-19 crisis. Sweden, for example, never went in a lockdown and has minimum restrictions on its citizens whereas India had kept 1.3 billion people under a complete lock down for 3 weeks before slowly opening up. Some countries, like the US prioritised economy over health and some like India prioritised health of people over economy. Trompenaars and Hampden-Turner (2012) have elucidated the underlying rationale of understanding different approaches through the *"Seven Dimensions of Culture"*, which is a model that can help understanding how national cultures can affect the corporate environment. The Seven Dimensions of Culture model looks at these issues and challenges under three headings:

- Those which arise from our relationships with other people: *Universalism – Particularism*, *Individualism – Communitarianism*, *Specific – Diffuse*, *Neutral – Affective*, *Achievement – Ascription*;
- Those which come from the passage of time: *past - present - future*;
- Those which relate to the environment: *internal - external*.

Each dimension is a continuum which extends from one extreme to the another between two contrasting values, see 2.3.

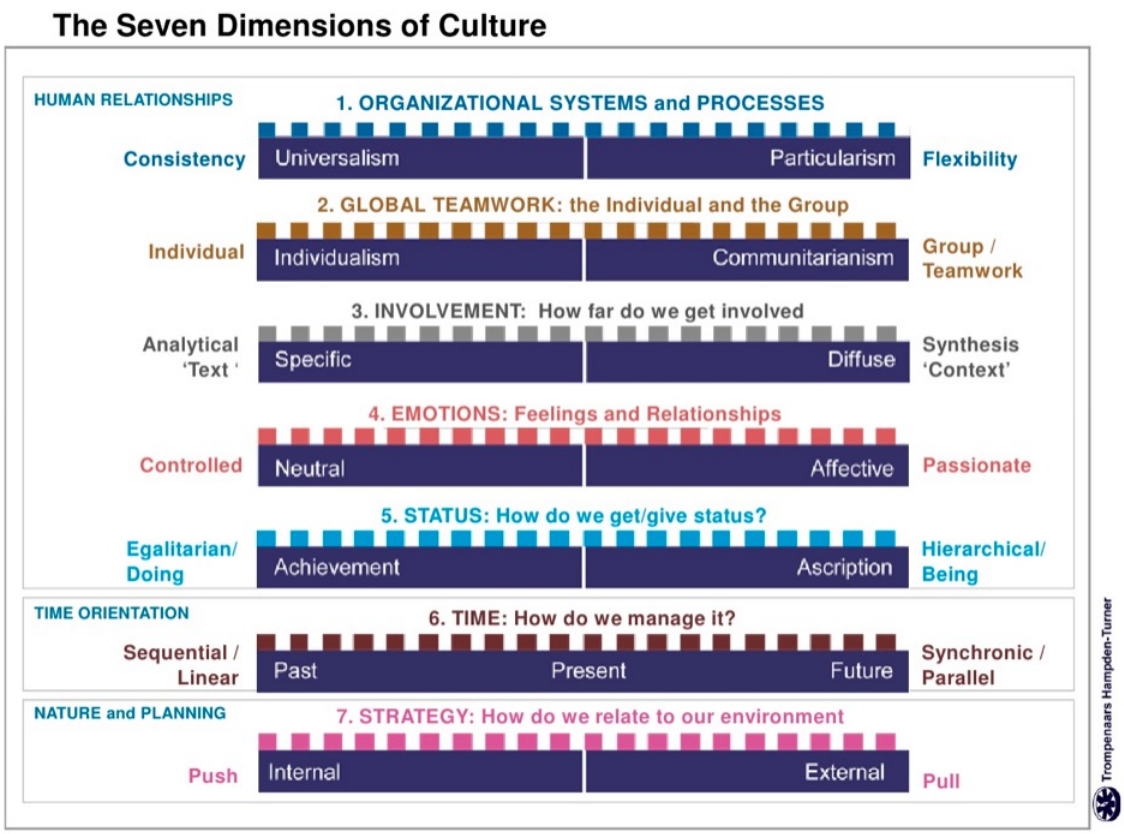

Figure 2.3: An Overview of 7-Dimension of Culture Model (THT Consulting, 2019)

This section is divided into 7 subsections, each representing 7-Dimensions of culture of the figure above. These 7-dimensions are described in the book "Riding the Waves of Culture" by Fons Trompenaars and Charles Hampden-Turner (pages 39 - 191) and various internal documents (THT Consulting, n.d., 2013, 2019).

Universalism versus Particularism

"The dimension universalism-particularism concerns the standards by which relationships are measured."

Universalist societies tend to feel that same rules should apply to everyone, with an assumption that their standards are the right standards, whereas particularist societies are pay more importance to particular circumstances and relations are more important than rules. At the same time, their response to circumstances 'depends' accordingly. Table 2.2 points out some differences between universalist and particularist societies. Implications of this for business includes: the meaning of a contract, role of Headquarters, negotiating processes and branding. Further illustration can be obtained from Appendix A, Figure 8.1, which shows the scores of some countries on this dimension.

Table 2.2: Universalism - Particularism differences (THT Consulting, 2013)

Recognising the difference in universalistic and particularastic cultures	
Universalism	*Particularism*
Focus is on rules and regulations than on relationships.	Focus is more on exceptions made for relationships, rather than on rules.
Legal contracts are readily drawn up.	Legal contracts are readily modified.
A trustworthy person is the one who honours his or her word or contract	A trustworthy person is the one who honours the changing interests in the business relationship.
There is only on truth or reality, that which has been agreed to.	There are several perspectives on reality relative to each participant.
A deal is a deal.	Obligation and rights of relationship evolve.

Individualism versus Communitarianism

"The dimension individualism-communitarianism relates to the conflict between an individual's desire and the interests of the group she belongs to."

In a predominantly individualistic society people are expected to make their own decisions and to take care of first and foremost themselves, and then their immediate family members only. It is also a general assumption that the quality of life for society for general is a result from the personal freedom and individual development of its members. On the other hand, predominantly communitarian societies are group-oriented and believe that the quality of life for the individual will improve when an individual takes care of other members of the society or group. Table 2.3 points our differences between individualistic and communitarian societies. It can be asserted that in individuslistic societies an individual comes before the group, and in a more communitarian society a group comes before an individual in which the group is oriented towards a common objective. Implications for business involve: negotiation, reward systems and decision-making. Further illustration can be obtained from Appendix A, Figure 8.2, which shows the scores of some countries on this dimension.

Table 2.3: Individualism – Communitarianism differences (THT Consulting, 2013)

Recognising the difference in individualistic and communitarian cultures	
Individualism	*Communitarianism*
More frequent use of "I" form.	More frequent use of "we" form.
Decide by voting.	Decide by consensus.
Pay for performance.	Team rewards.
Individual mandate.	Group mandate.
One representative.	Delegation.
Selection based on skill.	Fitting the team.

Specific versus Diffuse

"The specific-diffuse dimension refers to the degree to which we engage others in specific areas of our lives and single levels of personality, or diffusely in multiple areas of our lives at several levels of personality at the same time."

People from specifically oriented cultures tend to concentrate on hard facts and each element in a situation is analysed separately. Private and professional relations, while engaged in a task, remain separate. On the other hand, diffusely oriented cultures tend to examine each element of a situation within a context of the whole picture. There is also notably an overlap between personal and professional space. From Table 2.4 points can be retrieved about their differences and individual scoring from numerous countries can be found in Appendix A, 8.3. The implications for business entails involve: management style, communication, giving feedback and the concept of 'face' (respect and dignity in front or others in a social setting).

Table 2.4: Specific - Diffuse differences (THT Consulting, 2013)

Recognising the difference in specific and diffused cultures	
Specific	*Diffuse*
Analytic / Differentiated.	Holistic / Integrated.
Direct, to the point, relating.	Indirect, roundabout, seemingly "aimless" forms of relating.
Precise, blunt, definitive and transparent.	Evasive, tactful and ambiguous.
Communication style stands independent of person being addressed.	Communication style depends on person and context encountered.
One representative.	Delegation.
Selection based on skill.	Fitting the team.

Neutral versus Affective

"The neutral-affective dimension focuses on the degree to which people express emotions, and the interplay between reason and emotion in human relationships. Every culture has strong norms about how readily emotions should be revealed."

In affective cultures it is acceptable to express one's emotions spontaneously and more affective people tend to express their emotions more freely, whereas in emotionally neutral cultures it is incorrect to overtly show feelings and people are reluctant to express themselves emotionally. Implications for business entails the interpretation of emotions and humour, effective intercultural communication, feedback, and product design. From Table 2.5 differences between Neutral and Affective societies can be obtained. How numerous countries score can be retrieved from Appendix A, 8.4.

Table 2.5: Neutral - Affective differences (THT Consulting, 2013)

Recognising the difference in neutral and affective cultures	
Neutral	*Affective*
Do not reveal what they are thinking or feeling.	Reveal thoughts and feelings verbally and non-verbally.
May (accidentally) reveal tension in face or posture.	Transparency and expressiveness release tension.
Damned up emotions may occasionally explode.	Emotions flow easily without inhibition.
Cool and self-possessed conduct is admired.	Heated, vital, animated expressions are admired.

Achievement versus Ascription

"The dimension achievement-ascription focuses on how personal status is accorded."

Achievement-oriented societies attribute status to people based upon their performance and what a person does. In turn, ascription-oriented societies accord status based on background such as age, class, education, etc. Table 2.6 below provides an overview of the differences. In Appendix A the scores from various countries on achievement-ascription can be obtained in Figure 8.5.

Table 2.6: Achievement - Ascription differences (THT Consulting, 2013)

Recognising the difference in achievement - ascription cultures	
Achievement	*Ascription*
Use of titles only when relevance to the competence you bring to the task.	Extensive use of titles especially when these clarify your status in the organisation.
Respect for superior in hierarchy is based on how effectively they perform their job.	respect for superior in hierarchy is seen as a measure of your commitment to the organisation and its mission.
Typically most senior managers are of varying age and gender and have shown proficiency in specif jobs.	Typically, most senior managers are male, middle-aged, and qualifies by their background.

Sequential versus Synchronous & the Past-Present-Future orientation

"The time dimension has two aspects: how people perceive the relative importance given to the past, present, and future, and their approach to structuring time."

Different cultures hold different orientations. Some are more past oriented, while others are more present or future oriented. Those cultures predominantly oriented towards the past view the future as a repetition of the past. Interestingly, from those predominantly present-oriented it can be observed that their life is subject to day-to-day experiences. However, in a future-oriented culture, activities are future directed and significance of the past is very little. Figure 2.4 shows illustrations of six countries on the Past-Present-Future orientation dimension.

This dimension also has another sub-dimension, which looks at people's approach to structuring time. People who structure their time sequentially tend to perform one task at a time, and commitments to time and planning are well respected. However, people structuring their time synchronously do several things at the same time and tend to be relatively less committed to planning and time. Table 2.7 elaborates on the differences between different time orientations of societies.

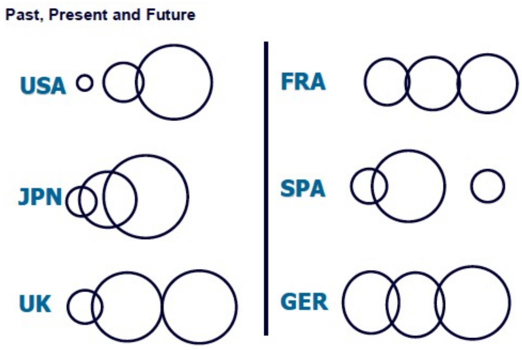

Figure 2.4: Relative importance given to the past, present, and future, and its overlap (Trompenaars & Hampden-Turner, 2020)

Table 2.7: Sequential - Synchronous : Past - Present - Future differences (THT Consulting, 2013)

Recognising the difference in sequential - synchronous cultures	
Sequential	*Synchronous*
Only engaged in one activity at a time.	Engaged in more than one activity at a time.
Keep strict to appointments: schedules in advance and do not run late.	Appointments are approximate and subject to "giving time" to significant others.
Relationships are generally subordinate to schedule.	Schedules are generally subordinate to relationships.
Strong preference for following initial plans.	Strong preference for following where relationships lead.
Time is tangible and measurable.	Time is intangible

Internal Control versus External Control

"The internal versus external control dimension concerns the meaning people assign to their environment."

People who are internally controlled tend to believe that whatever happens to them is their own doing. On the other hand, externally controlled people tend to believe that whatever happens to them is subject to external factors. Furthermore, internally controlled people also tend to believe that one can dominate nature, and they usually see themselves as point of departure for determining the right action. Externally controlled people however, tend to believe that man is controlled by nature and they tend to focus on wider environment rather than on themselves. Implications from this for business involves implications on the strategy to product development, planning for the future and product & process strategies. From Table 2.8 the differences between internally and externally controlled societies can be retrieved and individual scoring of several countries can be obtained from Appendix A, Figure 8.6.

Table 2.8: Internal Control - External Control differences (THT Consulting, 2013)

Recognising the difference in internally - externally controlled cultures	
Internally controlled	*Externally Controlled*
Often dominating attitude towards environment.	Often a flexible attitude , willing to compromise and keep peace.
Conflict and resistance means that you have convictions.	Harmony and responsiveness show sensibility.
Focus is on "self", function, own group and own organisation.	Focus is on "others", the customers, partners, colleague, etc.
Uncomfortable when environment seems "out of control" or changeable.	Comfortable with waves, shifts, cycles, if these are "natural".

3

The Case: Impact of the COVID-19 Crisis on Startups in India

"A crisis is an opportunity riding a dangerous wind." — Chinese Proverb

3.1 Case Study

This thesis implements and follows the principles of case study design. According to Yin (2014) this is an appropriate method when one requires to study contextual conditions while analysing a contemporary phenomena. Therefore, for this purpose, three important elements that are fundamental for a case study need to be defined: (I) the phenomena whose effect requires to be studied, (II) the context, and (III) the unit(s) of analysis. As evident from the research aim, the phenomena that is intended to be studied is the COVID-19 crisis, and the unit of analysis are startups (multiple of them at the same time). What remains is identifying a context to which we would like to orient (and delimit) the case study. The remainder of this chapter is structured as following. First, the context for this case study will be presented and motivated before elaborating on the phenomena and the units of analysis. Then, an overview is presented about how startups have previously dealt with crisis and what challenges they face. It is crucial to know this as this gives a context about the startups when faced with crisis and will help in better understanding the essence of the research questions. At the end of this section, the research questions will be presented and further delimitation of this study will be discussed.

3.2 The Context: India

At the time of designing this study it departed with two assumptions. The first assumption was that low- and middle-income countries would generally be most impacted by the COVID-19 pandemic. This assumption was based on the analysis of existing medical infrastructure and the general communitarian culture. Second assumption was that a heterogeneous response from the startups can be anticipated; in the way they would deal with COVID-19 crisis. Primarily based on the first assumption, the scope of this study narrowed down to two countries from two different continents that could be interesting to study: Nigeria and India. Nigeria is located in Sub-Saharan Africa and India is located in South-East Asia. They are both considered emerging markets, have booming startup ecosystems, a predominant young dynamic population, and big diverse consumer markets (Invest India, 2020; Oloruntoba, 2020).

In terms of start-up ecosystem, India (17) ranks much higher than Nigeria (56) in the 2019 StartupBlink ranking (StartupBlink, 2020). One of the main criteria utilised in this ranking-system is the level of innovation in the startup ecosystem. India as a country also ranked (52) much higher than Nigeria (114) in Global Innovation Index (World Intellectual Property Organization, Cornell University and INSEAD., 2019). In addition to this, India's huge population of 1.3 billion people had just gone into lockdown (and eventually by the time of the analysis, it had gone into multiple lockdowns, including at regional levels), thereby restricting economic activities across the entire country. Another important determining factor in choosing India is that the country is one of the fastest growing major economies of the world and is expected to be the same in coming years. In addition to this, it homes worlds largest youth population, and it has recently gained progressive policies for supporting startups (incl. tax exemption and funding) (Invest India, 2020). Given the aforementioned details, including India's start-up ecosystem and their contemporary struggle with COVID-19, India is considered by far the most interesting and applicable case to study, both theoretically and empirically, in this thesis.

3.3 The Phenomena: COVID-19 crisis

A crisis is defined as *"a process of weakening or degeneration that can culminate in a disruption event to the actor's (i.e., individual, organisation, and/or community) normal functioning"* (Williams et al., 2017, p. 739). The COVID-19 pandemic is a health crisis combined with an economic crisis, which is unprecedented. It has demonstrated far reaching consequences to all walks of our lives, societies and nations. This section will highlight some impacts of this global crisis. It has to be also taken into consideration that the situation is very dynamic. With the rate of change the situation enfolds this section's information and data should be considered in light of the time it was written.

3.3.1 Global Health Impact

Since the spread of this pandemic, the virus, which originated from China in late 2019, has spread to almost all the countries of the world (Worldometer, 2020a). As of end of August 2020, almost 25 million cases and more than 840,000 deaths have been reported globally (Worldometer, 2020a). In most of the countries the hospitals are overburdened with scarcity of Intensive Care Units (ICUs) and necessary medical equipment and protective materials. Experts speculate that there can be multiple waves of this pandemic hitting nations around the world, until it can be put under control through a developed vaccine.

3.3.2 Economic Impact

The Global Economy is Projected to Contract and go in Recession.
On 15 March 2020, the Financial Times reported that we have harboured global recession and economists have even predicted that this recession is going to stay for a significant long time (Financial Times, 2020; The New York Times, 2020). This is predominantly an outcome of necessary protection measures taken to tackle the COVID-19 pandemic. Consequently, IMF (2020) projects that the global economy will contract by -3% in 2020, which is worse than the last financial crisis of 2008-09. In addition to this, advanced economies and emerging markets and developing economies will contract by -6.1% and -1% respectively.

Global Shares take a Hit and Oil Prices Crash.
In the wake of the COVID-19 crisis, there has been a widespread fear in the investors. This is clearly reflected in the drastic drop in the stock market. Since the beginning of the crisis on 31st December 2020, the FTSE, Dow Jones Industrial Average and the Nikkei, have sharply fallen (BBC, 2020). Moreover, on 31st March 2020, the BBC reported that the Dow Jones and the FTSE saw their biggest drop ever since 1987 (see Figure 3.1) (ibid). Furthermore, although governments and central banks have taken immediate measures across the world, such as slashing interest rates and coming up with huge economic packages, many believe that the government's actions are insufficient and the situation could be volatile until the pandemic is fully under control (ibid).

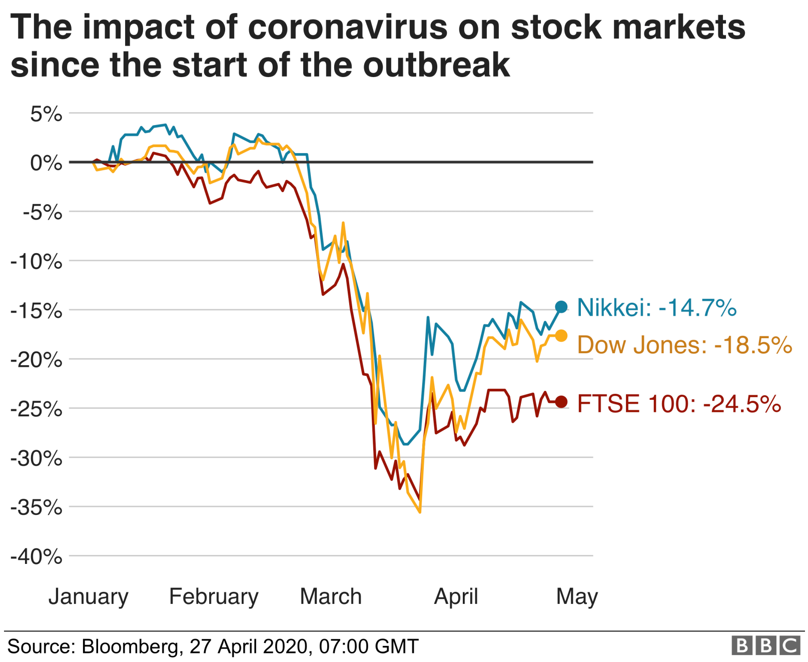

Figure 3.1: Impact of COVID-19 Crisis on Stock Market (retrieved from BBC (2020))

Alongside the crashing stock market, the oil prices also crashed. As a result of the lockdown, in more than 100 countries around the world, the demand for oil plunged. Coupled with the oil price war between OPEC and Russia, the COVID-19 crisis resulted in low oil price since the last 21 years (ibid). Surprisingly, on 21 April 2020, the US oil price turned negative for the first time in history (ibid).

Hardest Hit Industries and Massive Unemployment.
Due to restrictions on movement and norms of social distancing the service sector has been particularly hit hard. Industry such as the retail trade, travel, leisure and hospitality, recreation, and transportation services - which require physical interaction - are among the hardest hit (UN, 2020). Moreover, in Europe and North America, the aforementioned industries account for more than 25% of employment (UN, 2020). Not only these, but also due to the huge lack of demand, other industries including manufacturing have also been hit very hard. This resulted in massive layoffs. Additionally, self employed entrepreneurs are equally affected. The BBC reports that, during March-April within a period of 6 weeks 30 million Americans applied for unemployment benefits (BBC, 2020). Many other countries have record high unemployment rates. In countries like India, Pakistan and Bangladesh - where a major part of the workforce is in the unorganised sector (including daily wage earners) without social benefits - this workforce is in severe financial jeopardy. If the situation is prolonged the poorer workforce population in unorganised sectors might be pushed over the edge further into extreme poverty.

3.3.3 A major Setback to the Sustainable Development Goals.

This pandemic is a huge setback to the United Nations Sustainable Development Goals (SDGs) and yield longterm implications. The UN (United Nations) observes that the relevance of SDGs is even more than ever during this pandemic (United Nations, 2020a). And it has particularly exposed the vulnerabilities of the global health system (World Economic Forum, 2020b). For instance, the aim of achieving the SDG 3 (i.e. good health) is severely undermined, which will have a negative trickling effect on other SDGs as well. Further, UNESCO has estimated that this crisis has kept 90% of the students (1.57 billion) out of school world wide, which relates to SDG 4 (i.e. Quality Education) (United Nations, 2020c; World Economic Forum, 2020b). Schools and universities are closed and many have resorted to virtual education. However, due to the difference in the digital infrastructure and digital literacy (difference among nations, between rural and urban areas and economic status), it is unequally affecting students, making those with less access to digital infrastructure and technology (i.e. phones and laptops) worse off. Furthermore, the school closure has not only affected the education of children but has also severely impacted over 370 million kids who depend on meals given at school (United Nations, 2020c).

At the same time, the International Labour Organisation (ILO) estimates that 1.6 billion people working in the informal sectors can lose their livelihood (United Nations, 2020b). This translates to half of the global workforce including the formal job sector. Informal sector is hit much harder than the formal sector, also because of the lack of social protection. This has again elevated people into poverty, thereby undermining years of efforts to elevate people out of poverty (SDG 1) and result into food insecurity (SDG 2). Oxfam estimates that half a billion could go back into poverty (Oxfam, 2020) and 71 million people are expected to be pushed back into extreme poverty in 2020 (United Nations, 2020c).

3.3.4 COVID-19 in India

Overview. As of end of August, India has reported over 752,424 active cases, about 2648998 people have been cured and discharged and 62550 COVID-deaths have been reported (Ministry of Health and Family Welfare, 2020). Notably, India was one of the first countries to go under lockdown (on 22 March, 2020), imposing normal international travel restrictions which is still in effect (as of 30 August, 2020)[1]. This helped India to keep the number of cases initially very low. However, due to the economic pressure the country had to slowly open up, and in combination with migration of labourers within the country, the number of cases has recently spiked. Initially, the concentration of the infection was predominantly found in the bigger cities, like Mumbai and Delhi. However, recently the number of cases are also increasing in the remote parts of the country. Due this spike in the infection-rate many states including Bihar, Jharkhand, Assam, Maharashtra and Tamil Nadu are again forced into lockdown until July 31. Furthermore, the Government of India has taken various measures for economic recovery. This relates to tax measures (e.g. payment deferrals, rate reductions, etc.), Employment-related measures (e.g. state compensation schemes, training etc), Economic stimulus measures (e.g. loans, moratorium on debt repayments etc), and measures related to export, import and corporate affairs etc (KPMG, 2020). However, discussion of all these measures is beyond the scope of this study. Therefore, the focus shall now be oriented towards measures that could

[1]Some special flights are operational for repatriation and limited number of domestic flights are operational.

have direct implications on innovative startups.

Relevant Measures. The Government of India has approved a stimulus package worth USD 284.3 billion 9.7% of GDP) through *Aatmanirbhar Bharat Abhiyaan* (the self-reliant India program) (Government of India, 2020b). This comprehensive package also includes a relief package for Micro, Small and Medium Enterprises (MSMEs), keeping in mind that MSMEs are playing a major role in innovation and growth of the country (Government of India, 2020a). At the same time, they have been one of the most affected sectors and most of the startups fall under this category. KPMG (2020) reports that the Government of India has announced the following for the MSMEs: (I) USD 39 bn collateral free loan with 100% credit guarantee; (II) USD 2.6 bn subordinate debt for stressed MSMEs; (III) USD 6.5 bn equity infusion for MSMEs with growth potential and viability through Fund of Funds; (IV) No global tenders for government contracts up to USD 26 mn; (V) E-market linkage to be promoted as replacement of trade fairs and exhibitions; (VI) MSME dues to be cleared within 45 days; and (VII) for better inclusion, they have redefined the definition of MSMEs (Government of India, 2020a; KPMG, 2020). The steps taken by the government have attracted criticism from the politicians in the opposition. They have particularly criticised the government on the sudden lockdown decision, the mismanagement of millions of migrant labourers in big cities, and the economic relief package, to mention a few.

3.4 The Unit of Analysis: Startups in India

India has the 3rd largest startup ecosystem in the world with about 50000 startups registered as of 2018, out of which about 9300 are technology-led startups and 27 tech-unicorns (Ministry of Commerce and Industry, Government of India, 2020; NASSCOM, 2020). These numbers are growing and it is estimated that the annual growth in the number of startups in India yield 12-15%, and only in 2019 alone there were more than 1300 new tech startups founded (Ministry of Commerce and Industry, Government of India, 2020). The startups have directly employed more than 400,000 people in the country (NASSCOM, 2020).

3.4.1 Growth Drivers of the Indian Startup Ecosystem

A number of growth drivers have contributed to the extraordinary growth of startups in India. Out of those there are three dominant drivers for the startup ecosystem in the country.

First, the characteristics of the Indian market. India has a population of almost 1.4 billion (Worldometer, 2020b) with more than 50% of its population less than the age of 25 years (Poonam, 2018). To put this into perspective, the whole population of European Union is 446 million (Eurostat, 2020) and the population of people below the age of 25 is more than 600 million in India. In combination with the country's huge diversity in culture, language, ethnicity and religion, the huge market size of India provides enough opportunities for niche players as well. This diversity can be both advantageous and disadvantageous.

Second, with this young population growing in the 21st century, the country has embraced digitalisation and technology. As of January 2020 there are 688 million internet users in India (Statista, 2020). This is a huge opportunity in itself, which the startups are exploiting.

Third, there has been increased political will and support from the government. The government has taken initiatives such as: *'Startup India'* - which aims to promote entrepreneurship at grassroots level for economic empowerment and job creation; they funded and initiated the *'Atal Innovation Mission'* for the creation of incubators around the country; *'Aspire'* - a Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship; policies related to Intellectual Property Rights; and special funds for startups (Department for Promotion of Industry and Internal Trade, GoI, 2020).

3.4.2 Challenges Facing the Indian Startup Ecosystem

At the same time, the startups also face numerable challenges that exist independent of the ongoing crisis. Although there are universal challenges that startups face around the world, there are certain challenges that are peculiar to Indian startups. Korreck (2019) points out five major challenges of the Indian startups.

First, building and scaling up startups in India is difficult. Korreck (2019) observes that, this is due to the fact that most of the founders have a technical background but lack business acumen. At the same time, there is a lack of working capital, and the majority of them (at early stages) become depend on bootstrapping. Second, the Indian population is very diverse and digitally divided. This diversity has created a lot of opportunity though is also a big barrier to growth. Around 70% of the population dwells in the rural areas. Although the internet and digital technology has reached the majority of rural India, the difference in digital literacy between the rural and urban areas is substantial. There creates a digital divide within the country, therefore, the reach to the majority of customers becomes difficult through the digital channel (Korreck, 2019).

Third, another challenge is taking products to market and low willingness to pay. Korreck points out that convincing an Indian customer is difficult and this is even more challenging if a startup has an innovative product. On top of that, the cost-consciousness of the Indian customers and the competitive environment with big and established players dominating the market adds to their woes (Korreck, 2019). Due to this, most of the business is volume-driven in India and smaller players lack the economies of scale.

Fourth, another issue is the hiring of qualified employees. The startups are not considered attractive employers in the country as they possess inherent risk of failure, they cannot provide the same competitive salary as other established firms, and they lack the benefits associated with established and bigger firms (Korreck, 2019).

Lastly, one major issue is the complex regulatory environment of the country. Although efforts have been made to ease the difficulty in doing business and tax reforms, still it is comparatively difficult. India jumped 79 positions from 142nd (2014) to 63rd (2019) in 'World Bank's Ease of Doing Business Ranking 2020', however in the ease of starting a business in the country India still ranks 136 (World Bank, 2020).

3.5 Startups in the Time of Crisis

Startups, by its definition, are newly formed firms and commonly smaller in size than established firms. There is a plethora of evidence that smaller and newly formed firms are more vulnerable to failures (Freeman et al., 1983; Stinchcombe, 1965). This is mostly because of their 'liability of smallness' and 'liability of newness' (Stinchcombe, 1965) and notably both coincides (Freeman et al., 1983). Furthermore, due to their small size they have limited resources, making then more vulnerable to the internal and external shocks such as: financial issues, losing a critical employee, entry to new market, financial crisis or a pandemic like COVID-19 (Eggers, 2020; Freeman et al., 1983). Stinchcombe (1965) points out that their increased risks are attributed to their dependency on cooperation with strangers, lower degree of legitimacy, and inability to compete effectively with bigger and more established firms. Today, many startups are born global, so the liability of newness is their biggest concern.

Being already at a disadvantage, a crisis-situation should make a firm's situation difficult. However, there are conflicting arguments against it. For instance, Schumpeter's theory of "creative destruction" indicates that a downturn can create opportunities for innovation and innovative startups can capitalise on the situation. Empirical results show that startups are positively impacted and have a higher probability of surviving during a crisis than during growth periods (Cowling et al., 2018; Simón-Moya et al., 2016). This can be attributed to their small size, lower level of bureaucracy and hierarchy (Eggers et al., 2012; Hong et al., 2012; Irvine & Anderson, 2004) and limited social responsibility compliance of these firms (Baumann-Pauly et al., 2013; Lepoutre & Heene, 2006; Udayasankar, 2008), which make them flexible in times of both threat and opportunities (Smallbone et al., 2012). Innovative startups and firms such as Airbnb, Uber, Instagram, Pinterest, Slack and WhatsApp, among others were founded in the middle of the previous recession and firms such as Netflix, Zoom, BigBasket and Kry, benefited a lot from the crisis. This demonstrates of entrepreneurship and the level of resilience in these startups and firms.

Literature on entrepreneurship and crisis management have specifically pointed out the importance of being resilient (Doern et al., 2019). Williams et al. (2017) views that crisis and resilience are closely related, and the combined study of the two can help us better understand the failure and success of a firm in the crisis. They also point out that a crisis is also evolutionary in nature. Other scholars have noted that within the entrepreneurial crisis management, context concepts of *bricolage* and *effectual logic* are important (Doern et al., 2019). The term 'bricolage' was first coined by Claude Levi-Strauss in his work "The Savage Mind" (Lvi-Strauss, 1966). This concept has been studied by scholars including Mallak (1998) and Weick (1993) who assert that it involves an "ability to create order out of disorder and fashion a solution on the spot, from the resources available" (Doern et al., 2019). Conversely, the notion of 'effectual logic' is more in line with the decision-making process during a crisis. Sarasvathy (2001) describes it as a flexible and an emergent approach similar to Mintzberg's views on crafting strategy during changing environments Mintzberg et al. (1987). The underlying logic behind effectuation is that only up to a certain extent the future can be controlled; one does not need to predict it (Sarasvathy, 2001), which is opposite to the causal logic of decision-making. As per the effectuation logic, during dynamic situations such as a crisis, the approach should be flexible and with emerging situations, the strategy should be crafted with the available means (Sarasvathy, 2001). Whereas, causal logic of decision making is on extensive pre-planning and its importance have also be been empirically supported (Laskovaia et al., 2019). In reality however, we need a blend of both the contrasting views. As discussed above and in the previous chapter, there are contrasting views on approaches and strategies on how to 'generally' tackle a crisis. In the face of the ongoing pandemic, entrepreneurs and innovative startups are presented with contrasting propositions: *should they want to follow causal or effectual logic, should they exploit what they have or explore new avenues of business opportunities, should they focus on tackling the short term crisis at hand or should they make a long term strategic move, top down or bottoms up, lead the crisis or follow the other players*, the list goes on. These are all dilemmas, and the failure to recognise and resolve dilemmas can end up in a vicious cycle, however, if reconciled will create a virtuous cycle. Additionally, there is abundance of empirical evidence that the reconciliation of dilemmas often results in innovative solutions and is a clear competitive advantage for organisations (Hampden-Turner, 1990; Peters & Waterman, 1982; THT Consulting, n.d.; Trompenaars & Hampden-Turner, 2001; Trompenaars, 2007). Combining these contrasting values is innovation and creativity (Koestler, 1964).

3.6 Further Delimitation of the Study

In India it has been declared that the "COVID-19 is the biggest challenge that India's nascent tech start-up ecosystem has faced" (NASSCOM, 2020). Keeping in mind the above mentioned unique set of characteristics of diversity, digital divide and complexity of the India; the Indian startup ecosystem is an interesting case for empirical investigation on what types of challenges, opportunities and dilemmas the startups are facing, and how they are dealing with it. This comes with highlighting some further delimitations in this study. First, this study is focused on startups based in India. These are those startups who are based (head quarters or majority of its operations) in India. Though many of them also serve international customers. Second, the focus of the study is on the impact of the COVID-19 crisis, from February 2020 to June 2020. It is important to note that several incidents such as, natural events (cyclone and monsoon), political events and other religious events have also occurred during this period in parallel to the crisis, and therefore these events might also add to the complexity of COVID-19 crisis and vice versa. Third, and finally, the idea and aim of this thesis is not to prove or test dilemma theory and Schumpeter's theories on innovation, but rather to use it as a lens to understand and visualise the study's empirical findings.

3.7 Research Questions

Given the research aim, theoretical background and case study design, the following main research question has been formulated:

> How are the innovative startups in India responding to the COVID-19 crisis and how is this crisis stimulating creative destruction?

Towards this end and to support answering the main research question, the following sub-questions have been formulated:

1. What are the biggest challenges innovative startups in India are facing amidst the COVID-19 crisis and how does it impact their day-to-day business and innovation?
2. What dilemmas are innovative startups in India facing while responding to the COVID-19 crisis and how are they responding to these dilemmas?
3. Up until now, what opportunities and key learnings have emerged out of the COVID-19 crisis and to what extent are these being exploited and incorporated by innovative startups in their innovation practices?

The case study can be summarised visually as following:

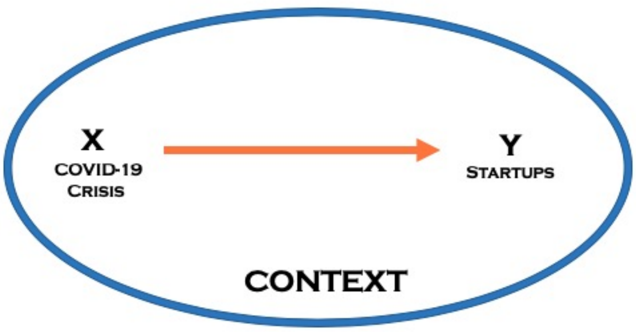

Figure 3.2: Case study summary: the impact of COVID-19 crisis (X: Feb-June 2020) on the startups (Y: day-to-day business, innovation, dilemmas) in the context of India.

4

Research Design

> *"Not everything that can be counted counts, and not everything that counts can be counted"* - Albert Einstein

The previous chapters included an overview of the state of the art theory and concepts underlying the research questions and case study. This thesis is situated in the field of innovation and industrial management and within this it is embedded in case study research. Case study research uses methodology that is considered most appropriate to answer the proposed research questions. This thesis aims to explore the impact of a phenomenon (i.e. the COVID-19 pandemic) and it utilises a unique combination of theory and concepts that have not yet been deployed earlier in research. Towards this aim, exploratory research was deemed most appropriate. The rationale behind opting for a case study design was that it can answer *'how'* questions in a real-life context. Furthermore, this study builds upon earlier research conducted on innovation and entrepreneurship in crisis and also on dilemma theory. Specifically, the structuring of the qualitative inquiry (i.e. interview design, analysis, and overall research design) is tremendously benefited by research in dilemma theory. In the following sections, the research approach, methods for data collection and analysis will be discussed in detail along with the rationale behind each of them.

4.1 Research Approach

A qualitative research approach was considered most suitable to guide answering the research questions. The rationale behind this involved: (I) gathering perspectives of persons, in which emphasis is placed on discovering a phenomenon in depth. This is benefited by deploying a qualitative approach. In addition, with this study it is intended to capture perspective, underlying assumptions, motivations and opinion of decision makers. Further, (II) the study of dilemmas requires understanding of context and environment of a particular industry or a firm; and (III) viewing the startups' challenges from a perspective of dilemma is a complex task and quantifying is both difficult and not necessarily supporting the specific inquiry at hand.

4.2 Research Design

Bryman and Bell (2011) discuss five different types of research design: experimental design; cross-sectional or social survey design; longitudinal design; case study design; and comparative design. For this thesis, a case study design was considered most appropriate. In essence, such a design is preferable for studying research questions that are typically framed as "how and why" questions, for when the researcher faces "little or no control over behavioural events", and when the focus of research is on a "contemporary phenomenon" (Yin, 2014, p. 2). In congruence with this view, a case study investigates a case (i.e. a contemporary phenomenon) in its real-world context, and boundaries between the phenomenon and context may not be clearly evident (Yin, 2014). Furthermore, case study research can be applied to evaluation studies in which a possible application is to explain the presumed causal links in real-world interventions, or to describe the intervention and its real-world context, among other applications.

The other designs were also explored. They were not opted as they would defeat the purpose of this study of capturing tensions, dilemmas and underlying assumptions of the organisations. Such a task requires in-depth in-context analysis of the subject to be investigated. The experimental design was rejected, because the behaviour of the people and organisation are deemed uncontrollable (i.e. there is virtually no ethical option here to let startups experiment on something), and at the same time simulating COVID-19 in its entirety renders impossibility (Zhang & Shaw, 2012). With the cross-section design the problem emerges that the data could not be collected at a single point in time, which is the essence of the cross-sectional design (Zhang & Shaw, 2012). That is, the data was collected over a dynamic period of more than a month, thereby eliminating the possibility of using this study design. Longitudinal research design could have been of particular interest, though it yields time constraints. Although very interesting, following multiple organisations for a long time is non-pragmatic and unfeasible. Further, a comparative study design could also have been an interesting. Studies such as comparing multiple industries, organisations, countries, nations, etc. from multiple contexts could be interesting and provide useful information for potential generalisations. However, again due to the constraints of time, resources and study delimitations, it was most appropriate to focus on a single case study. Hence, considering all factors and deploying healthy pragmatism, a case study design was prioritized for this study.

Critical Realist Approach. Case study design is a very popular research design among scholars in the domain of business and management (Eisenhardt, 1989; Gray, 2014; Piekkari et al., 2009; Welch et al., 2011; Yin, 2014). However, Welch et al. (2011) and Piekkari et al. (2009) argue that in management studies researchers have utilised the case study method differently. They indicate that case studies are mostly influenced by a positivist view, as developed by Eisenhardt (1989) and Yin (2014). In light of this study, from all different epistemological orientations, a critical realist approach is most applicable. Hence, this warrants for an alternative approach of case study's *Contextualised Explanation*, to ensure it follows a critical realist approach as developed by Bhaskar (2014). In essence, critical realism assumes the existence of a single reality that is independent of the observer. This view is against both the philosophies of positivism and constructivism, but at the same time, critical realism can be viewed a reconciliation of these two contrasting philosophies.

Welch et al. (2011) elaborates that critical realism acknowledges both the perceptions of reality as advocated by positivism and constructivism philosophies. A critical realist acknowledges that the reality is independent of our perception, thereby emphasising objective ontology; and at the same time it is recognised that reality of a social phenomena is subject to interpretation, thereby emphasising subjective epistemology (Bhaskar, 2014; Welch et al., 2011). Hence, in the words of Welch et al. (2011), "Bhaskar provides a way to reconcile explanation (erklären) and understanding (verstehen)". This is reflected in the *Contextualised Explanation* approach. If critically observed, this is a reconciliation of a dilemma where on the one hand one wants to put more emphasis on specific contexts, and

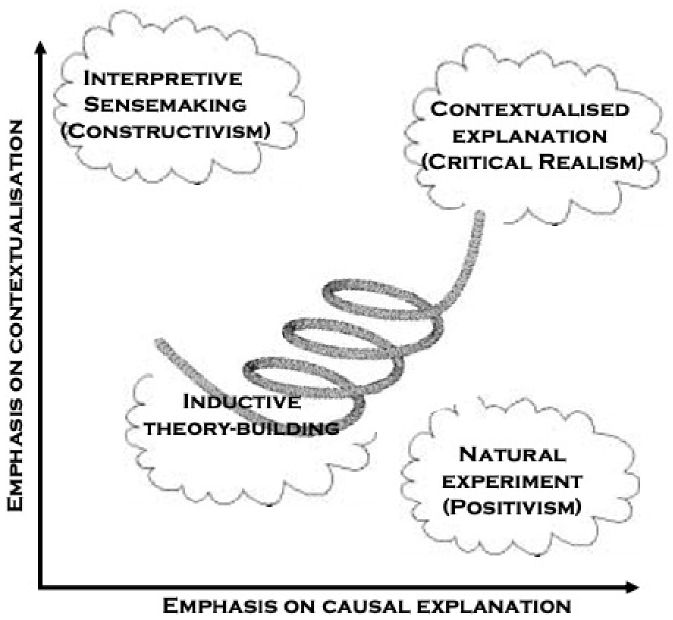

Figure 4.1: Typologies and philosophical orientation of case study theorising (developed by author based on Welch et al. (2011))

on the other hand one also wants to explain the cause-effect relationship. This dilemma is captured in Figure 4.1. Thus, this case study is epistemologically oriented towards a *critical realist* perspective.

Before elaborating further on the case study design, it is important reiterate three aspects: (I) what is the phenomena being studied i.e.*the impact of COVID-19 crisis*; (II) the impact of this phenomena on what, i.e. on the startups; and (III) the context - the study is *'bounded'* within the context of India. In *Chapter 3*, the phenomena of COVID-19 crisis, and the context (India), can be found described in detail. In the following paragraphs the aforementioned aspects will be further elaborated on in light of this study's design.

What is a case? Roughly, a case study is an inquiry concerning a particular phenomenon, but once we move in detail it becomes more complex. The paper of Ragin (1992) on *'What is a case?'* points out that social scientists show differences in answering the question 'what is a case?' and that answers affect the conduct and outcomes of research. Ragin's analysis involves a dichotomy consisting of, firstly, that cases can be conceived from a realist or normalist axis, and secondly, that the various descriptive categories for cases can range from being case specific (developed in the course of research) to more general and relatively external (applying across many cases). This dichotomy of Ragin (1992) causes difficulty over the definition of what a case is - because what are the boundaries of a case and how are they determined? This ambiguity in definition makes it seem very dependent on the researcher. Therefore, for this study, it has been defined that *a case is a phenomenon*, and in this study this involves the impact of the COVID-19 crisis. Lastly, clarifying the boundaries of a case is important, because this helps in shaping the research questions and vice-versa to check if the research questions require to be sharpened.

Criticism of case study design. Like any other research design, there are certain concerns and limitations raised by the scholars on the case study design.

Table 4.1: Misunderstandings of Case Study design (Flyvbjerg, 2006) (taken from Merriam and Tisdell (2015, p. 53))

5 misunderstandings about case study	
Misunderstanding	*Restatement*
1. General knowledge is more valuable than context-specific knowledge.	Universals cannot be found in the study of human affairs. Context dependent knowledge is more valuable.
2. One cannot generalise from a single case so a single case does not add to scientific development.	Formal generalisation is overvalued as a source of scientific development; the force of a single example is underestimated.
3. The case study is most useful for generating hypotheses, whereas other methods are more suitable for hypotheses testing and theory building.	The case study is useful for both generating and testing of hypotheses but is not limited to these activities.
4. The case study confirms the researcher's preconceived notions.	There is no greater bias in case study toward confirming preconceived notions than in other forms of research.
5. It is difficult to summarise case studies into general propositions and theories.	Difficulty in summarising case studies is due to properties of the reality studied, not the research method.

Most of the criticisms involve the issues of ethics, subjectivity, rigour, reliability, validity, and generalizability. Guba and Lincoln (1981) are of a view that a case study can be vulnerable to unethical practices. They point out that, an "unethical case writer could so select from among available data that virtually anything he wished could be illustrated" (Guba & Lincoln, 1981, p. 378). Another criticism is on the overall design of the case study used as a methodology by Hamel et al. (1993). He criticises that, "the case study has basically been faulted for its lack of representativeness...and its lack of rigor in the collection, construction, and analysis of the empirical materials that give rise to this study. This lack of rigor is linked to the problem of bias...introduced by the subjectivity of the researcher and others involved in the case" (Hamel et al., 1993, p. 23). However proponents of case study design scholars such as Flyvbjerg (2006), Merriam (1998), Merriam and Tisdell (2015), Stake (1995), Yin (2014) have argued against these claims made by the critics. Flyvbjerg (2006) calls them misunderstandings and he presents the five most common misunderstandings about case study. He then attacks each of the statements and corrects them. Table 4.1 summarises the five misunderstandings and the restatements by Flyvbjerg (2006). Although Yin (2014) defends the critiques, he is also concerned about the rigour of the study. He warns us that due to the freedom available to the researcher, chances of getting diverted from the systematic procedures are considerably high. To remedy this, it is recommendable to maintain a study protocol.

Pilot. Prior to this main case study a relatively less formal *pilot study* was conducted. The main objective of conducting a pilot study was to get orientated with the startup ecosystem and to obtain an overview of how the COVID-19 crisis is impacting the startups in India. The respondents consisted of people involved in startups and other experts involved with the startup ecosystem. An overview of the respondents in the pilot study is depicted in the Table 4.2. The pilot study helped in refining the interview questions, defining the scope/delimitation and clarifying some of the concepts involved in the main case study. Based on the insights from these experts, research questions were refined, which helped in further structuring the case study. One of the key learnings from this pilot study startup was that the high technology based startups are of particular interest due to its distinct culture and tech-savviness they are handling the crisis better than others. Hence, this case study is focused on the *'Technology-Based Startup'* and all the respondents are from the hi-tech startups.

Table 4.2: Respondents from the pilot study

Respondent	**Respondent's function and location**	**Mode of communication**
1	Business Analyst at a hi-tech startup *(Bangalore)*	Phone
2	Production Manager at a low-tech manufacturing startup(*Delhi*)	Video
3	Chartered Accountant (in interaction with a number of of startups and entrepreneurs)*(Rajkot)*	Phone
4	Assistance Vice President handling SME loans department at one of the largest private bank in India (*Ranchi*)	Video

4.3 Sampling

The recruitment of the respondents took place through a combination of purposive and convenience sampling (Gray, 2014; Patton, 1990). Purposive sampling is a type of non-random sampling where information-rich samples are selected deliberately to gather in-depth data (Patton, 1990) pertaining specific inquiries. Meanwhile, convenience sampling refers to non-random sampling when availability and accessibility interfere in the selection of the respondents (Gray, 2014).

For this study, two sets of sampling had to be carried out: one for the inclusion of startup as an organisation, and second for the respondent to be interviewed. Four filters were applied to select the type of startups to be investigated. They were: (I) the firm should be less than 10 years of age as of June 1, 2020, (II) the firm is not yet acquired as of June 1, 2020, (III) the has not gone through an IPO as of June 1, 2020, and (IV) the firm is technology intensive. Whereas, the selection criteria that were taken into account to select the respondents were: (I) that respondents should be involvement in a startups, (II) should be a founder/CEO/top management executive/decision maker in a startup, and (III) should be directly involved in managing the COVID-19 crisis. In the end 15 respondents from 15 different startups were interviewed. Communication with the (prospective) respondents occurred through email, phone, WhatsApp, Zoom, Skype and LinkedIn. An overview of the respondents included in this study can be retrieved from Table 4.3.

Table 4.3: Characteristics of Interviews for the case study

Respon. No.	Startup name (foundation year)	Sector/Expertise	Location	Mode of communication	Length (min)
1	MoEngage (2014)*	Customer Engagement Platform	Bangalore	Phone	67
2	RevFin (2018)	Financial Services (Fintech)	New Delhi	Phone	64
3	Sumeru Enterprise Tiger (2016)	Software Product	Bangalore	Phone	82
4	InnovoSoft Technologies (2016)	Various sectors (Hi-tech manufacturing, Solution provider, Ed-tech etc)	Thivandrum	Phone	96
5	Instamojo (2012)	Social Commerce, Mobile Commerce, Payments, MSME	Bangalore	Phone	37
6	SFarmsIndia (2018)	Digital Agricultural Land Marketplace	Hyderabad	Skype	49
7	Inventindia Innovations (2011)	Product Design and Development	Ahmadabad	Zoom	37
8	Beagle Security (2016)	Cyber Security software product	Trivandrum	Zoom	62
9	LegalWiz (2015)	Professional services for small businesses, start-up entrepreneurs and individuals (main focus on legal services)	Ahmadabad	Zoom	49
10	366Pi (2013)	IT Consulting and Solutions	Ranchi	Phone	56
11	Mobiotics (2011)	Over The Top (OTT) Media Services	Bangalore	Zoom	34
12	Yulu (2017)	Urban Mobility/ Micro-mobility service provider	Bangalore	Zoom	55
13	Meesho (2015)	Platform for E-commerce	Bangalore	Zoom	37
14	Verloop (2016)	Support Automation Platform	Bangalore	Zoom	57
15	Biziga (2012)	Digital Business Simulations	New Delhi	Zoom	#

* Although MoEngage is headquartered in the US, most of its operational activities are based in India.

Rest of the 14 startups have their headquarters in India. # Interview was interrupted multiple times.

4.4 Data Collection

Both primary and secondary data were collected for this study. The primary data was collected mostly through qualitative interviews and secondary data were collected through desk search. The following sections discuss and elaborate on the data collection methods.

4.4.1 Desk Search

Desk study or desk (re)search involves the gathering and summarising of secondary data. The purpose for conducting an extensive desk search was to identify important literature and information which could help in further understanding the background of the study as well as aspects pointed out by the interview respondents. In addition to this, the desk search supported triangulating of results (i.e. desk search and interview findings), which helps further strengthening its validity and robustness.

The collected data involved digital books, peer reviewed articles. These were obtained through utilising search engines: Science Direct, Web of Science, Google Scholar and Gothenburg University digital library. Several keywords (and combinations of them) were used during the search, which included: *COVID-19, dilemma, paradox, Schumpeter, crisis, disaster, startups, innovative startups, innovation in crisis, creative destruction, entrepreneurs, list of startups in India.* In addition to this, government websites and news websites were used, predominantly for COVID-19 related facts and policies. Notably, a significant number of these sources are considered 'grey literature'. Grey literature refers to the type of scientific information that is not published in scholarly journals (Gray, 2014, p. 107). It was important to look at grey literature, because the situation with COVID-19 is rather dynamic and novel, such that hardly to no earlier relevant published scientific study can be obtained.

4.4.2 Semi-Structured Interviews

Approaching potential respondents for interviews

Based upon the above selection criteria in total 40 startups were approached and around 60 potential respondents were contacted. Most of the respondents from startups were first contacted through LinkedIn. A connection invite was sent and once the respondent was connected a message was sent to them requesting for a conversation (the template can be found in the Appendix B). It was noticed that many respondents were spontaneously sharing their phone numbers and preferred to chat over WhatsApp. Thereafter, 14 out of 15 interviews were scheduled either through conversation on LinkedIn or through chatting on WhatsApp. One was scheduled through email conversation. Based upon their preferences a calendar invite was sent with a Zoom/Skype invitation or just an invite for an audio call through the mobile phone on WhatsApp. The empirical data collection took place from June 1, 2020 to July 4, 2020. The interviews were conducted in English, Hindi and a combination of English and Hindi.

Rationale for semi-structured interviews

Since the nature of the study is exploratory with a focus on attitudes, actions and implicit tensions, there is a need for a conversation rather than an interrogative interview. At the same time, an open unstructured conversation as well as a structured format is desired. On the one hand going only with unstructured interviews can lead to non-directiveness and sidelining from the main focus, and on the other hand pursuing only structured interviews will become an interrogation and defeats the purpose of collecting the required data. Therefore, to systematically channel the thoughts of respondents in a direction that serves the purpose of the thesis, a semi-structured interview guide was deemed most suitable to stimulate the respondents in thinking of responses to certain thematic questions and eliciting future dilemmas. It is the reconciliation of unstructured and structured interviews - a guided conversation, which gives both flexibility as well as structure/focus.

Gray (2014) explains that the semi-structured interviews are non-standardised interview types and very suitable when views and opinions are to be collected. The interviewer has a list of issues or questions that she wants to cover but it is not necessary to go through all of them. It depends upon the interviewee and course of the interview. Gray further mentions that the order of the questions or topics is not important and the interviewer should go with the flow of the conversation (Gray, 2014). On asking questions during the interview, Gray (2014, p. 395) advises a number of ways in which the interview questions should not be formulated. However, this research does not follow the traditional research guidelines, therefore many of these advice contradicts the study's mode of investigation. For e.g. Gray (2014) advises 'not to contain hypothetical statements and double questions', in this study these are effective ways to elicit tensions and dilemmas. Based upon these rationale an interview guide was prepared to conduct the interviews (see Appendix B).

A potential risk of leaving the questions broad (and thus less structured) could lead to imaginative responses rather than focused responses. Therefore, this was done in two systematic levels. Level one of this investigation was designed to identify answers to questions pertaining the challenges being faced by the startups on certain thematic areas, new opportunities emerging from the crisis and best practices, etc. and level two consisted of follow-up questions to elicit underlying assumptions, tensions, attitudes and organisational culture to capture dilemmas. In the following paragraphs both the levels are explained in further detail.

4.4.2.1 Level 1: Explicit Thematic Questions

The main objective of the first level is to use the methodological model developed by Peter Woolliams and Fons Trompenaars (Trompenaars & Coebergh, 2014, p. 43)), which points out the major components of an organisation which can be potential sources of dilemmas. For the purpose of this study this model has been modified and presented in Figure 4.2[1]. These components were used as the themes for finding out challenges pertaining to the organisation (sub-research question 1) along with other themes. One of the components of the organisation, namely "shareholder", is not applicable in this context since startups did not have their IPO. However, questions were asked to whom these startups were financially liable, such as the Venture capitals (VCs).

Questions were asked relating to the themes incorporated in this framework, which included: challenges related to technology, customers/suppliers/partners/ clients, employees and business process. The answers to these thematic questions were mostly straightforward and explicit. Hence, this part of the inquiry therefore constitutes a deductive semantic approach. In other words, the data is collected and analysed based on preconceived themes and it involves analysing the explicit content of the data. The data was collected with the help of extensive notes made during the interview and listening back to the interviews (i.e. audio/video recording) immediately after conducting the interviews.

[1] This conceptual framework was inspired by private conversations with prof. dr. Peter Woolliams.

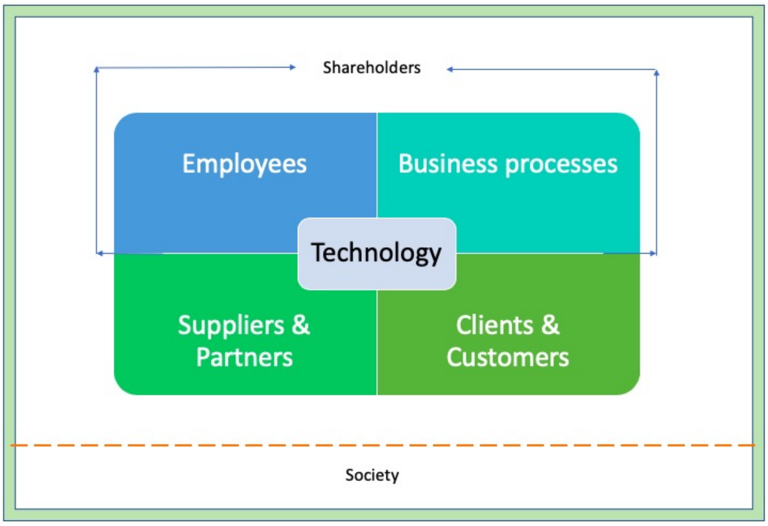

Figure 4.2: Potential Source of dilemmas

Table 4.4: Components and its sectional interests

Each component has its own sectional interest	
Components	**Sectional Interest**
Technology and Business Process	Data collection, Cognitive & Mechanical Efficiency = Corporate Efficiency
Employees	Up to date with relevant skills and work-life balance
Clients, Customers, Suppliers and Partners	Satisfaction with personalised solutions
Shareholders	Financial gain
Society at large	Contribution to society

4.4.2.2 Level 2: Implicit Answers On The Dilemmas

The dilemmas are rarely brought explicit. Hence probing requires going a level deeper, which has to be more inductive and latent. This means that the dilemmas will be rather emergent and that the focus is on subtexts and assumptions. In order to reach there, follow-up questions were asked on the thematic questions. It is important to note here that the aforementioned framework has seven components (when combined together it is five) and each of them has their own sectional interest. These interests are presented in Table 4.4. The conflicting and competing interests of these components in various situations are the cause of tensions, which are framed in a form of dilemmas. These were captured through follow-up open ended questions throughout the interviews. Questions such as, "how is this creating a challenge for you? how are you addressing them? what is hindering you in addressing this challenge"? These questions bring up the underlying assumptions and give an indication of a tension faced by the organisation.

Where to find dilemmas?

There are multiple ways of identifying dilemmas. These methods can be used in combination as well. Eliciting dilemmas is a skill and takes years of practice to extract all dilemmas out of various methods and techniques used to identify these dilemmas. Key herein is to focus on "thinking dilemma" while conducting the interview (Hampden-Turner, 1999). In addition, it is also important to know where to find dilemmas. The dilemmas can be mostly found in a number of hiding places, such as:

- *On the shadow side of virtues:* Most of the managers try to give accounts of themselves or their companies in a very positive way. It is mostly one-dimensional and reflects accomplishments mostly. It is the work of the researcher to elicit dilemmas to question the negative/shadow side of these virtues.

- *Within a metaphor:* The researcher that is eliciting dilemmas has to be very attentive to metaphors as many times they reflect dilemmas directly.

- *In a joke (humour) or story:* A lot of emphasis is put on eliciting dilemmas through paying attention to humour. Trompenaars (2007, p. 19) mentions *"Because humour is the process of discovering that two apparently opposite logics turn out both to be logical. That is what makes you laugh."*. This suggests that there are clashes between two perspectives/contrasting ends and this is where dilemmas are also hidden.

- *In a conflict among people:* Conflict among people can also point out a number of dilemmas. The conflicts can usually be traced back to "matters of principle", where conflict among people end up being conflicts between individuals. It is the identification of these underlying principles that hides dilemmas, within a context.

- *In the condemnation of indecision and sitting on the fence:* It is when people have an expression of very strong disapproval or unable to decide on a subject. Figuring out "why" and paying attention to words can reveal numerous dilemmas.

It is the duty of the person who is eliciting dilemmas to find out these hiding places.

Eliciting dilemmas through interviews

Knowing how to identify dilemmas is not sufficient. It also requires ways of eliciting dilemmas for which there are several methods, factors and strategies to consider.

Hampden-Turner (1999) observes that there are six methods to elicit dilemmas. These are: (I) interviews, (II) questionnaire, (III) storytelling, (IV) data analysis, (V) humour/cartoons, and (VI) participant observation. The main source of the empirical data for this study is interviews, and other methods were incorporated within the interview setting. Within this setting various types of scenario-based follow-up questionnaires were asked to the respondents; they were asked to narrate incidents and at the same time participants were closely observed (when through video interview expressions and body language and in case of telephonic interviews attention was paid towards the tone of the respondents). Thus, a combination of the methods were used with interviewing the participants.

There are various factors that have to be taken into consideration while eliciting dilemmas through interviews. Three of them are most important. **(I) Think dilemmas:** as mentioned previously, an important factor to remember is that in order to find or identify dilemmas one has 'to think dilemmas all the time' while interviewing and focus on certain attributes and attitudes of the respondents. **(II) Dilemma Holder:** another aspect to take into consideration is who is actually facing the dilemmas - the individual or the organisation. Many times the boundaries between personal and organisational dilemmas are not evident. Therefore, attention was paid both to the *Nomothetic* and *Ideographic*[1] nature of responses. Nomothetic means the participant is describing the dilemma more as faced by the organisation - and thus what dilemma the organisation needs to reconcile. Ideographic means the participant was describing a dilemma they faced

[1] These notions were explained to me by Prof. dr. Peter Wooliams in a private conversation (https://www3.thtconsulting.com/we-are/our-people/peter-woolliams).

themselves more as individuals and what they had to reconcile "themselves" as part of their own job (or team) to be more effective. (III) **Avoid use of certain words:** Hampden-Turner (1999) advises that while trying to identify dilemmas through an interview avoid the use of the word "dilemma". The use of the word "dilemma" gives a wrong impression and might suggest to some interviewees that we want complaints. Instead use the words such as, "challenge", "issue", "uncertainty", "question", "quandary". Hence, the use of word dilemma was avoided during initial communications and in the beginning of the interview, but during the course of the interview it was made clear that dilemmas are not complaints but in fact two contrasting and attractive options.

During the interviews following strategies for eliciting dilemmas from Hampden-Turner (1999) and Burger (2008) were followed:

- *Taking a value to the extreme:* the interviewer on purpose exaggerates the value so that it turns into a pathology. E.g. use of phrases such as "doing surveillance of the team member working from home" instead of using words like "tracking or checking" with the respondents.
- *Focusing on the opposing value:* the interviewer stipulates the importance of value on the other side of the continuum. E.g. asking questions such as, "your product/solution is going to make various aspects of life easy, but in the process of making life easy what problems will it create?"
- *Focusing on the condemnation of indecisions:* the interviewee is belittling of those distressed by the conflict. E.g. asking a follow-up to a respondent: "why does your organisation not want to make a solution for other industries?"
- *Gauging the centrality of key issues and the amount of emotional energy invested in key dilemmas:* E.g. in interview with one respondent in this study, the respondent emphasised multiple times the lack of social interaction among employees.
- *Focusing on personal conflicts:* the conflict within each person has become a conflict between persons, each at one horn of the dilemma. Since the interviewer (author of this study) is not an expert yet in eliciting dilemmas through an interview, there is a chance that attention on all personal

conflicts could not have been paid. Also, the nature of some of the conversations was telephonic such that the participant's body language could not be observed. However, many personal conflicts were adequately captured during the interviews. For e.g. one respondent in this study prefers to talk with clients physically face to face but due to COVID-19 crisis, one is forced to deal with clients virtually.

- *Testing the validity of what the first interviewee said with the second, third and nth interviewees to see if there are common convictions:* this could only partially be done with the other respondents as the respondents are active in different industries and talked from different perspectives. However, many of the statements made by previous respondents were checked with the following ones, except of the final interview.

Criticism of using interviews as a source of evidence
Although these interviews provide unique and valuable insights there are some limitations that one has to be aware about. Yin (2014) points out that there is a likelihood of bias due to the poor formulation of questions, poor recall may cause inaccuracies, and of reflexivity (interviewee gives what interviewer wants to hear). However, precautions were taken to minimise these biases. The questionnaire was verified by experts (Prof dr. Fons Trompenaars and Prof. dr. Peter Woolliams) who have been using the dilemma reconciliation process and dilemma theory for more than 20 years. To avoid the problems of poor recall the interviews were recorded, notes were made during interviews and immediately after the interview the notes were further elaborated with use of the audio/video recordings.

4.5 Analysis

The essence of data analysis is to find relationships and contrasts among the variables. In comparison to other study designs such as experimental design there are fewer strategies for the analysis of qualitative case study (Gray, 2014; Yin, 2014). However, there are five analytical methods that stand out in case study analysis: pattern matching, explanation building, time-series analysis, logic models, and cross-case synthesis.

Among these, explanation building seems most logical to be used in the context of this study. Although the study is explanatory in nature, it also explains causal links of the events and at the same time develops ideas for further studies. Other methods were also considered but they were not suitable for this study, including logic models and cross-case analysis, which are out of scope as the study is a single case study and data were gathered for a short period of time. Furthermore, these methods will not answer the research questions. However, pattern matching is very similar to explanation building though this study does not intend to compare two different patterns.

4.5.1 Explanation Building

This study is a type of pattern matching but less structured. It helps in building an explanation about the case. In an exploratory study, the idea is not to conclude but to develop ideas for further study (Yin, 2014). In qualitative studies often the analysis of data is concurrent with data collection, which helps in further adjusting subsequent data collection. This method is also iterative in nature where subsequent data is collected based upon the information provided by the previous respondents. After the first few interviews some patterns were already visible. This observation led to consideration of investigating these observations with prospective respondents (see also the previous section on dilemma eliciting strategies). In fact, while eliciting the dilemmas, the validity of what a respondent said was tested with the subsequent respondents.

The degree of freedom is high with this explanation building analysis, but there are a few drawbacks. One of them is that the researcher has to be very vigilant of the sensitivity of the analysis; it requires much more analytical insight (Yin, 2014). Another drawback is that there is a chance that the researcher drifts off from the main objective. This happens because of the iterative nature as the prospective respondents are questioned based on the previous insights. This can result in selective bias of certain data (Yin, 2014). However, precautions were taken to avoid them as much as possible by revisiting the original objective of the study and continuous reflection. Furthermore, a case study protocol was followed throughout (see Appendix B).

4.5.2 The Process of Reconciling the Dilemma

Apart from identifying the most important dilemmas faced by the startups, the second research question of the study concerns reconciling those dilemmas. Reconciling dilemmas strategically consists of following the six steps of Dilemma Reconciliation Process (DRP), which involves: (I) Identify dilemma, (II) Chart dilemma, (III) Stretch dilemma, (IV) Define epithets, (V) Reconcile dilemma, and (VI) Define action points. These individual steps will be discussed in the following paragraphs. Figure 4.3 gives an overview of DRP with the help of a Reconciliation Worksheet.

(I) Identifying the Dilemmas

This is the first step in the reconciliation process. Dilemmas were actively elicited during and immediately after the interviews. The process has been described in detail in the previous sections.

(II) Chart the Dilemmas

Step two of the DRP process is charting the dilemmas in the Dilemma Grid on the dual axes. It begins by drawing horizontal and vertical axes (i.e. X-Y axes). Now the axes are labelled by using positive or neutral words reflecting "opposing proposition". It is better to be as specific as possible while labelling these dilemmas. Most of these dilemmas fall under one of the 7 Dimensions of Culture (7-D model). Therefore, in this step dilemmas can also be linked to the relevant dimension of the 7-D model. Then once the aforementioned is accomplished, it is the time to plot the position of actor(s). The actor is the dilemma holder and while charting the dilemmas it is also important to know who is the dilemma holder - individual, team or organisation.

It was not possible to plot the exact position of the organisation on the axes. The reason being that only one person was interviewed from each startup; they were the decision makers and not from various levels of the organisation. This leaves less room to triangulate data in order to get a good estimation of position on the axes. Another reason is the privacy of the organisation, since the thesis is a public document it would be unethical to plot the dilemma of an organisation publicly. Hence, in the context of this study, the positions of organisations will not be plotted, only the dilemmas will be charted on the Dilemmas Grid.

(III) Stretch the Dilemmas

In step three of the DRP process, the positives and negatives of position 1 and 2 are listed in Figure 4.3 (position 1 on top left, position 2 can be found on the

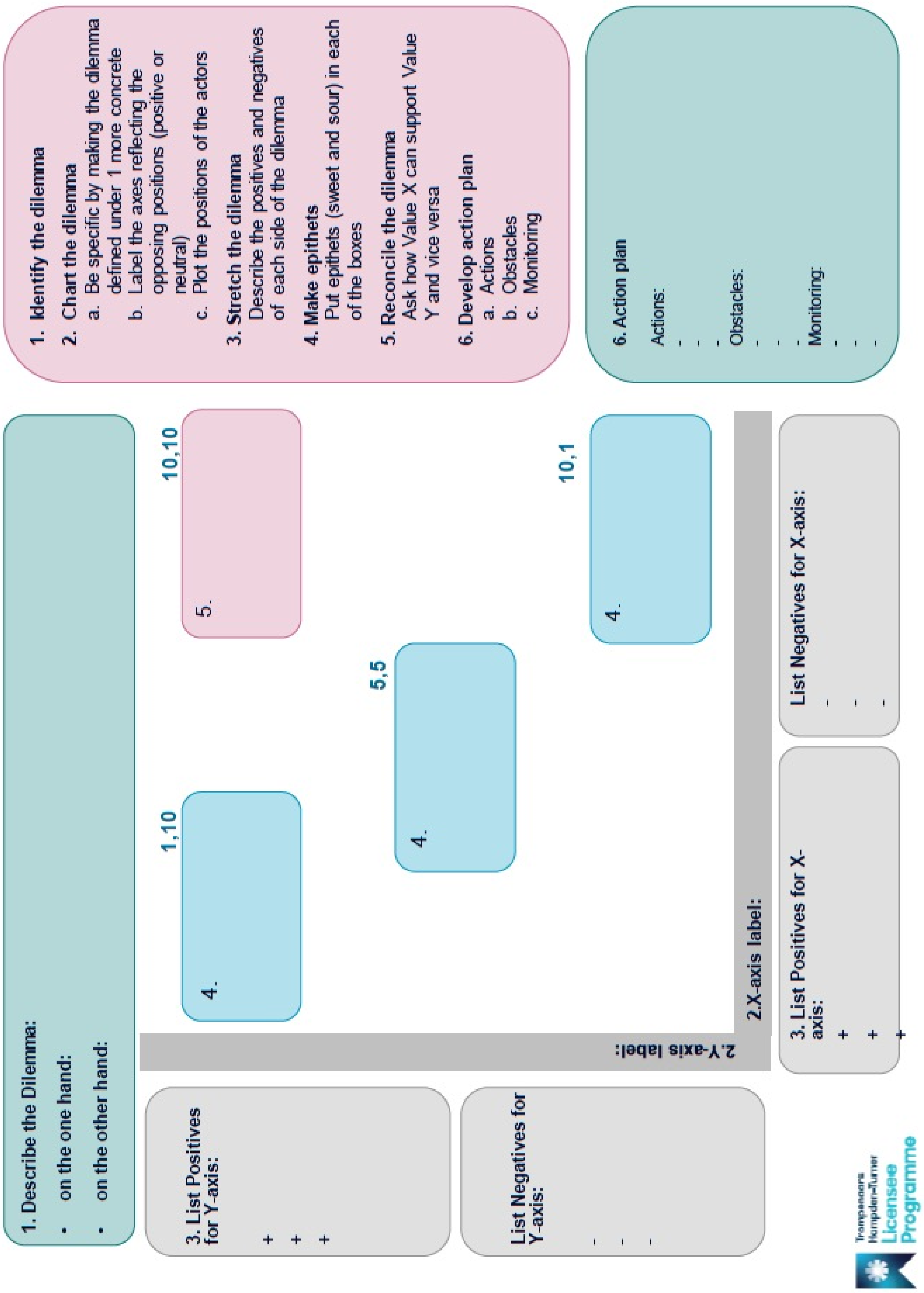

Figure 4.3: Dilemma Reconciliation Process (DRP) (internal document of THT Consulting)

axes). This presents both the sides of two propositions, in essence, dilemmas.

(IV) Make Epithets

In this step, one has to formulate "Epithets". They are represented in the Figure 4.3 at number 4, near positions (1,10), (10,1) and (5,5). They are always labelled as a negative form of the extreme values on that axis. The reason is that one does not want to be in that position. Position (1,10) represents the situation when the value labelled on Y-axis (vertical axis) is taken to its extreme and excluded value in X-axis. Similarly, position (10,1) represents what happens when the value labelled on X-axis (horizontal axis) is taken to its extreme and excluded value in Y-axis. In the end, position (5,5) represents a compromising situation between two extremes of vertical and horizontal axes, where neither get what they want. This situation is a win of neither values. However, the aim is to attain (10,10) position as it is the reconciliation which is inclusive of both contrasting values.

However, since this is a qualitative study and a survey is not conducted to determine these numerical coordinates on the graph space, the numerical coordinates were not be used. Instead, a dual axes was used without any coordinates attached to it and epithets were marked on the graph at the approximate positions.

(V) Reconcile the Dilemmas Step 5 is reconciling dilemma i.e bringing the opposites together. This step in itself involves 7 chronological steps but for this study they are condensed into 4 steps (Hampden-Turner, 1990; Trompenaars & Hampden-Turner, 2012).

- *Processing (add ...ing):* this refers to getting rid of nouns and converting values to present participle by adding "ing". Such as, "competition versus cooperation" becomes "competing versus cooperating" and "universalism versus particularism" becomes "universalising versus particularising". The significance of this step is to get rid of "hard edges" and turn "things" into "processes". These processes are dynamic and has a freedom to mingle in a way that things can not.

- *Contextualising (draw picture and frame):* Contextualising or framing dilemmas is to make one dilemma context/frame for the other. Important to note here is that *"each value is contained within and constrained by its opposite*

" (Hampden-Turner, 1990, p. 122). Figure 4.4 illustrates an example of contextualising a pair of dilemmas.

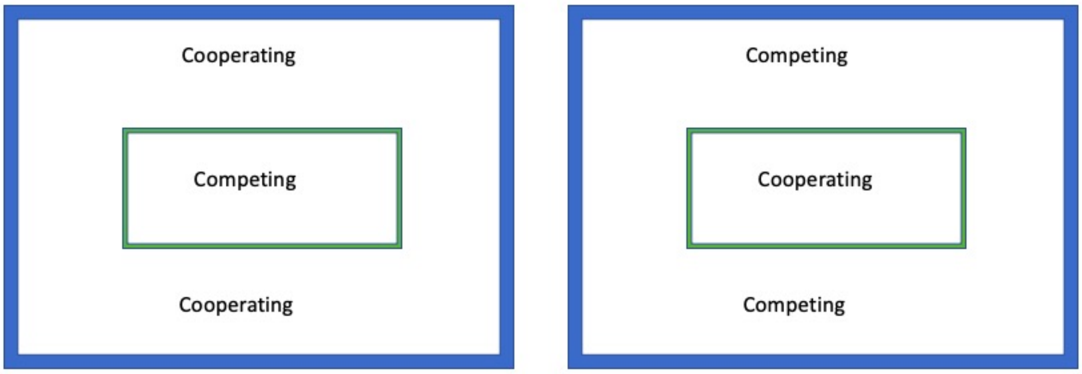

Figure 4.4: Text-Context: Framing/Contextualising dilemmas

Arguably, how a supplier competes with other suppliers is related to how well the supplier has cooperated with the customers, or how well employees cooperate internally is related to how well their company competes with its competitors.

- *Sequencing (first A then B):* Hampden-Turner (1990) argues that the contrasting values pretends to be so oppositional because they are presented at the same time. Time is a factor that can mediate these contrasts by presenting value A before value B to create context for value B. Furthermore, Jaques (1982) points out that timing is a critical part of strategy. For example, one can not cooperate and compete at the same time, alternatively one can cooperate initially to develop product and later compete in market or have project groups to compete to develop best solutions.

- *Synergizing (A through B and vice versa):* synergy is derived from the Greek word "syn-ergo", which means "work together". Synergy is achieved when values work together, which is an indication of a good reconciliation because when values work together they are *"mutually facilitating and enhancing"* (Trompenaars & Hampden-Turner, 2012, p. 257).

(VI) Define action points and implement the new design
Often the steps above results in innovative solutions. Now, the next step is to define action points both in terms of behaviour and concrete managerial steps that can help achieve the reconciliation. This step is very contextual and depends completely upon a particular organisation itself. Since the focus on the study is the startups and a single startup, hence only general points of actions can be recommended.

Once the steps and action have been decided it is time for managing the implementation of new design and monitor effectiveness of solutions and make appropriate design changes when necessary. It is to be kept in mind that, during this process itself the managers will face more dilemmas.

4.6 Ensuring Quality

According to Yin (2014) and Gray (2014) reliability and validity of a qualitative study is a sign of its quality. Reliability is the extent to which a result from a study can be replicated under same conditions, and validity is an indication of soundness of a research, in essence the degree to which the results reflect what it was supposed to measure. There are three types of validity that has to be taken into consideration for a qualitative case study: internal validity, external validity and construct validity. Internal validity is a measure of how well the study is conducted and is influenced by factors such as, history attrition, maturation, measurement, instrument/task sensitivity, statistical regression, subject variability, interaction, size of subject population and time given for the data collection or experimental treatment (Campbell & Stanley, 2015). Whereas external validity is the extent to which the results can be generalised. Campbell and Stanley (2015) indicates that factors such as sampling bias, interaction and multiple treatments or measurements influence that external validity of the results. Lastly construct validity is the quality of the conceptualisation or operationalisation of the relevant concept used in the case study (Gibbert et al., 2008).

To ensure the *reliability* of the study, two recommendations were followed as advised by Yin (2014). First, a *a case study protocol* was followed throughout (The case study protocol can be found in the Appendix B.). The main reason to make a case study protocol was to make sure that methods are applied consistently and standardise the conditions of research to a reasonable degree. Second, a *case study database* was developed. It consisted of two separate collections. One for everything related to the empirical data such as an excel sheet with interview details, notes, audio/video recording etc and the other one for the report and other documents such as reports, articles, and research papers. These all were categorised based on characteristics such as articles related to innovation, Schumpeter, Entrepreneurs and Crisis etc. and were stored electronically in dedicated folders.

Gibbert et al. (2008) suggests that *Internal validity* concerns can be addressed by three strategies: formulation of research framework, pattern matching and theory triangulation. In the context of this research a clear research framework has been formulated (3.2) and theory triangulation is done where Schumpeter's views on innovation are blended with the dilemma theory and connected with the national culture. Pattern matching was not possible because no prior scientific studies have been done to investigate the effect of COVID-19 crisis on startups in India through a dilemmas lens. In fact there are very few studies looking at the crisis through a dilemma lens.

External validity in the context of case study design is subject of debate. It refers to the *generalisability* of the findings. It is important to distinguish between two types of generalisability; statistical and analytical generalisability Yin (2014). Statistical generalisation is irrelevant to case studies, because it is intended to make an inference about a population and at the same time the notion of "sampling units" is not applicable to the case study. Rather, a case study seeks to attain analytical generalisability, which does not seek to make inference about the population. Findings of the study should be able to corroborate, modify, reject, advance the theories referred to while designing the case study or alternatively discovery of new concepts from the study (Yin, 2014). Since study characteristics are very contextual to hi-tech Indian startups, the study can be generalised for the studies on the startups in India. However, when it comes to the startup context around the world, it may not be generalisable.

Construct validity was addressed through the use of multiple sources or evidence including interviews, direct observation of participants and documentation such as news, government & consultancy firm reports, a literature review of relevant topics, and several participant validations were carried out (Yin, 2014).

4.7 Ethical Considerations

An informed consent procedure was carried out prior to each interview. During the informed consent procedure, the respondent was informed with the necessary information about the research purpose, why the respondents were selected for the interview, and how the data will be treated (see case study protocol in Appendix B). Also, voluntary participation was emphasised, such that the informant would be enabled to terminate participation at any time. In addition, permission of the respondents was obtained for audio or video recording of the interview. Permission to disclose respondent's characteristics were taken during the conversations (Table 8.2). Also, the dilemmas of the individual organisation was not plotted as the document as this thesis will eventually be a public document.

5

Results

"A crisis is a terrible thing to waste." - Paul Romer

This chapter presents the results and consists of three sections. The first section describes the biggest challenges that the innovative startups are dealing with due to the COVID-19 crisis. This section is further divided into subsections explaining challenges related to various themes, including challenges related to technology, the business process, leadership and productivity. The second section in this chapter presents the major dilemmas faced by these startups and how they are dealing with it. This chapter also provides a reconciliation of these dilemmas. Finally, section three describes the opportunities arising from the crisis, its key learnings and best practices.

5.1 Biggest Challenges and Survival Strategies

5.1.1 Technology Related Challenges

The COVID-19 crisis forced everyone, who can, to work from home. At the beginning of this study it was assumed that, due to a sudden change in the working style, startups will face significant technological challenges. However, after conducting the pilot study it was found out that hi-tech startups are in a much better position to deal with the crisis than presumably other firms. This is further confirmed by the findings of this study. Most of the startups mentioned that they do not face any *major* technological challenges themselves with the reason being the level of technology adoption among the startups. The respondent from

Instamojo emphasised that the "startup culture is very tech friendly and people working in startups do not have any issue adapting to this new way of working" (respondent 5). In fact, most of the startups already practised working from home even before the COVID-19 crisis. The only difference is that, back then working from home was optional and voluntary, but now it turned to being involuntary. In spite of their tech-savviness it is found they faced some minor technical challenges. Internally there were some typical and minor issues, including internet connectivity; particularly with some employees who moved to their hometowns. One has to take into consideration that most of the startup clusters are in the big cities such as Bangalore, Delhi, Mumbai, Hyderabad and Ahmedabad. During the lockdown many people went back to their villages and hometowns in order to be with their families and/or parents. The aforementioned big cities attracts talents from around the country and the infrastructure is much better than those of smaller cities and villages. Hence, internet speed can be of issue in rural and smaller towns in India. However, it was seen that after the initial days of lockdown the employees have adjusted and found ways to make sure they were able to attend online meetings and be productive.

Another challenge that emerged was that whenever physical access to the critical infrastructure was required, such as a server or workshop/labs, startups faced some difficulties. The respondent from Mobiotics stated that "there are certain team members who have a dependency on the devices and labs in the office. So we lost access to that for a fairly large amount of time." (respondent 11). Startups did not have any control over this situation as there were strict lockdowns and offices were required to be closed. Only after the restrictions were slowly relaxed, a limited number of employees were allowed to be physically present in the office. Hence, those startups operating through cloud computing with no dependency on critical physical infrastructure were largely at an advantage compared to others.

In terms of technological challenges pertaining business, it was interesting to observe that B2B businesses do not face a lot of 'external' technical challenges. However, in the B2C business space there are significant challenges due to the fact that the "end customer is technologically backward" (respondent 4). For instance, the respondent from SFarmsIndia (respondent 6), which is India's first digital agricultural land marketplace, has farmers as their main clients who are typically digitally illiterate. He points out that often the farmers do not have enough digital knowledge to even sign up themselves. Therefore, they have set up a phone call support in order to help them to sign up, and at times to even sign up for them.

5.1.2 Leadership Challenges

Making decisions and negotiating virtually

> *"Our biggest challenge is not technology, or getting work done or getting product to the market. The biggest challenge is not communication in the industry, our biggest challenge is that our revenue regeneration guys or the sales guys are not able to do what they would have done if the situation was different. In sales you need to be able to judge a customer and that is difficult. Also the follow up on this is not instant (connecting with relevant people in the organisation)".* (respondent 2)

The above quote illustrates one of the biggest concerns among the leaders, which involves virtual negotiations. This is notable given that the startups are hi-tech and have to large extent their operations running digitally, already before the pandemic. The respondents reported that they were finding it difficult to make decisions and 'judge people' virtually as one cannot observe attitude, body language and expressions. The respondent from MoEngage points out that when one visits a client for the first time and one sees some artefacts in their potential client's office it can give an impression about the client and their style and preferences. He exemplified this through mentioning that if one notices that the "client is a fan of Rohit Sharma (a famous Indian cricketer) then I want to give a Rohit Sharma autograph just to make him feel special. Right now you do not have second level information. I can't influence that person now. It really influences the relationship building and getting a million dollar deal done, now you can't do that on the phone" (respondent 1).

Numerous respondents further asserted that negotiations are currently, due to the pandemic, largely carried out virtually, however final closing and signing of deals have been heavily affected. That is, their clients are insisting on postponing this until physical meetings are allowed again. Yet, there have also been few respondents who mentioned that their clients have signed deals digitally.

For instance, the respondent from Verloop emphasised that all the decisions and business-deals (with the customer) are not affected, since they are influenced by current emerging and pressing demands of customers. This contrasting observation can be explained due to the startup's product and services. Verloop provides support automation software (building bots for organisations) and businesses have realised the need for more automation support, since their employees cannot physically work from the office. At call centres for example, "60% of all the queries that they get are repetitive questions and these are those questions that an agent does not need to see and respond. So this can be handled by a bot" (respondent 14).

Not all involved startups were facing this specific challenge. Respondents from startups InventIndia Innovation and Instamojo did not view virtual negotiation and business as an issue. InventIndia Innovation's main clients reside outside India and have (loyal) clients approaching for their service repeatedly, such that most likely mutual trust had already been established previously. With Instamojo the respondent explicitly mentioned that he has been making decisions online and closing deals long before the COVID-19 crisis. The respondent from InventIndia Innovation (respondent 7) feels comfortable negotiating virtually but mentioned that, due to the nature of the business, getting a feel of their design studio is important for their 'new' international customers, which is not possible right now. This building of trust is of importance for 'new' international customers in this business, since project can take around 6 months to 2 years to complete.

Given the aforementioned results we can observe three major points. First, in those businesses where the demand is very high the decisions are being made virtually and where there is a room for postponing the decision customers want to postpone and meet physically to sign the deal. Second, previous experience is very helpful in decision-making and negotiating virtually. At the same time, virtually dealing with old clients is much easier than interacting with potentially 'new' clients. Third; the issue of "trusting" and "judging" people. Managers have previously relied upon the attitudes and behaviour of people to judge if they could be trusted. Findings from the desk search support this; consensus among most experts shows that 70 to 93 percent of all communication is nonverbal (Advaney, 2017). During video conferencing several people may switch off their cameras and even when the camera is option the wider environment with artefacts are not properly visible or it is erased with a virtual background. These findings emphasise that business relies on certain specific information that can be severely impacted due to physical and meeting restrictions as invoked by a pandemic.

In national cultures such as in India it is even more important to read these non-verbal signs. The reason being the combination of particularistic, diffused and affective culture in India. And in addition to this, there is a tradition of exchanging gifts and showing emotions (tones/ language, facial expressions, social attractiveness). The knowledge about the likes and dislikes of a particular person therefore plays an influential role in decision-making in such cultures, as the entire negotiation is typically focused on individuals rather than propositions being discussed (Trompenaars & Hampden-Turner, 2012, p. 99).

An other finding, which has not been presented yet, involves how already existing contracts are being impacted. Individuals oriented towards a particularistic culture such as India readily modify contracts depending upon the evolving situation (Trompenaars & Hampden-Turner, 2012, p. 99). Now, due to the pandemic this has become further accentuated. For instance, the respondent from Mobiotics (respondent 11) mentioned that he was approached by one of his clients for a discount as the client reported being heavily affected by the COVID-19 crisis. The respondent reported dealing with this by giving a discount and telling the client that "since you have asked I will not disappoint you". In exchange the client promised to bring more business in the future. This reflects of prioritising to maintaining personal relationships with the clients with the prospect of having an even better business relationship in times ahead.

Managing teams remotely

Another challenge in the area of leadership involves employee engagement and retention. The startup culture in India follows that 'it does not matter how and when the work is being completed, as long as it will be completed' which also allows working from outside the office. However, in the current situation of COVID-19, employees are now unable to visit office, unless regulations relax and allow or facilitate going to the office. Under these circumstances, it has been found that the respondents find it challenging to manage and motivate their team(s).

Several startups pointed out that their employees are exposed to various factors while working at home, which could harbour significant consequences for both the organisation as well as the employee's well-being. The respondent from 366Pi illustrates the issues as following:

> *"understand that our homes are not ready for a home office environment(...) and also you have to look at the demography at home [indicating towards multiple people of multiple generations living at home]". The interns are also living in hostels, in shared accommodations; there is a risk of distraction, data leaking etc and you end up losing more than what you can actually gain from.* (366Pi, respondent 10)

In addition, managing remotely has also increased the dependency on leadership. As a result, several startups mentioned that the workload of senior managers have significantly increased as they have to allocate more time to engagement and check-in with their employees. They end up working more hours than they usually do, thereby having a negative impact on work-life balance. The respondent from Sumeru Enterprise Tiger (respondent 3) illustrates that, "as a result supervisory work increases 10 times in remote working models. It has increased a lot for me." Along with the employees, leaders are also under pressure and they wonder if they are doing the right thing. Startups have few defined procedures and routines in comparison to bigger firms. For instance, one respondent pointed out that lack of clarity in terms of responsibilities has become more pressing given the current context.

There is one outlier in this study that did not recognise the aforementioned remote working and management issues, which is Beagle Security. They are a cybersecurity software firm. The respondent stated that he finds it more easy to manage the team from home virtually (respondent 8). The respondent further explained that that there is less pressure on management:

> *"We have an enterprise gaming environment, we do not track hours but what we believe is that they can work on the task that they like"* (Beagle Security, respondent 8)

This startup has a 'decentralised gamified work environment' which involves that they have moved their communication channel to a gaming communication platform called Discord. This is a service that provides both voice and chat channels. It does not mean that there is no oversight or management of the employees. With the same tool they can track communication, output and the employee's behaviour.

Beagle Security also emphasised that they value "freedom with responsibility" and invest in making sure that the individual goals of the employees align with company goals. They do this by their unique working style. They have a pool of jobs/tasks (with equal workload) and team members can choose to work on a task of their choice, hence ensuring intrinsic motivation from the team member. Additionally, the successful completion of a task is often attached with rewards such as splitting the financial bonus to individual team members or the whole team going on trips, etc. With these incentives attached, team members have full freedom to help each other to make sure the tasks are finished on time. When there is a monetary reward it is split based upon the number of tasks completed. If someone wants to have a larger share of the reward, they have to finish more tasks while maintaining the requested quality. In addition to this, they also have different "levels" similar to that of games, where employees are promoted or demoted up and down the levels based upon performance[1]. Upon further inquiring with the respondent it was noted that there have been very few instances when anyone was demoted a level down. What can be taken away from this unique example is that this gamified environment makes sure that employees commit to the task of their choice, the task might be finished faster, it stimulates teamwork and individual responsibility, and at the same time both team and individual can receive incentives (i.e. rewards).

Problems with new recruits

The crisis resulted massive lay-offs and increases in unemployment rates globally, however several startups in this study reported of actually hiring new employees. This comes with the challenge of how to introduce new recruits to he organisation, in a meaningful but digital manner. The biggest problem concern for the respondents is to introduce them to the organisation's culture, to trust in their capabilities, and the huge amount of attention and guidance that they require during their introduction period. One respondent explains this as following:

> *I have a team member whom I have never met, because he joined after the lock-down started. I never got a chance to even sit and talk with him. The only connection I have is the remote one. It is a challenge because I need to understand how he works, what are his strengths and weaknesses, how can we help him get better, and how can we get results from him that we want, not [the results] what he wants. You have no*

[1] This should not be confused with the typical promotion or demotion where there are rewards or penalties. It is more like a game.

> *idea about a new team member.* (Sumeru Enterprise Tiger, respondent 3)

With regard to dealing with interns, the respondent from 366Pi (respondent 10) pointed out two massive challenges with interns: first, not having the interns as the office leads to challenges in educating the interns into the organisation culture and the ways of working; second, the interns are typically residing in accommodations that are distracting and prone to problems such as data leaks, which are potential threats to the organisation.

Startups anticipate that the aforementioned challenge will become a major problem. Currently, startups had not figured out anything concrete in order to deal with the challenge of integrating new recruits into the organisation. They are attempting to remedy it by organising a video conference for introduction, virtual workout and yoga sessions, and tasking managers to allocate time to check-in and assist the interns. This is one of the avenues where startups need to come up with innovative ideas as many of them are planning to continue to work remotely.

5.1.3 Finance and Business Process Related Challenges

Financial challenges
The findings demonstrate three prominent financial challenges. First, customers are delaying the payments. Second, the startup's customers are requesting different terms of payments such as asking for discounts or paying differently than what was initially agreed upon. Both of these results in a lack of cash-flow in the short term, which has been reported by several startups. In addition to this, the third challenge is to attract funding during the ongoing crisis. Several respondents pointed out that the first two challenges are common to many startups around the country. The desk search similarly reported this; it was found that around 92% of the tech startups are facing revenue decline since COVID-19 and 65% of hi-tech startups are facing a significant impact on funding (NASSCOM, 2020). However, the third challenge (attracting funding) is not a challenge ascribed by all interviewed startups. For instance, SFarmsIndia who operates in the agri-tech sector has suddenly witnessed a boom of calls for funding from venture capitalists (VCs) and (angel) investors, and also interest from the government (respondent 6). Similarly, Verloop also secured funding during the pandemic, which largely relates to their service of providing support automation software (such as bots)

which has has increased in demand. Such automation software are a substitute to the repetitive tasks which are usually done manually. However, due to lockdown people cannot travel to the offices, hence the importance of support automation software has been found to be more pronounced.

Internal stakeholder communication is a challenge.
When it comes to the usual business processes communication is key. However, the COVID-19 crisis has limited the ability of individuals to (spontaneously) communicate with other team members at their own convenience. Several startups have mentioned that they struggled to connect with people, because they are not immediately accessible when they need them. Startups smaller in size reported relatively less difficulties with internal communication than their larger counterparts.

> *"Previously if I had to talk with other teams - in case I am stuck in an issue or have to immediately refer to them for some information - it was easier, because people were more approachable. But now it is not the case. It is not that we are not in touch; it has just become harder to reach the right people at the right time (...) so this becomes a bit of a challenge."* (MoEngage, respondent 1)

The respondent from one startup with around 150 employees narrated how they maintain their internal communication channel while working remote: "one nice thing was that people were very particular about communication since lockdown started, people made sure that they are over-communicating, but they are never under-communicating" (Instamojo, respondent 5). Furthermore, Beagle Security (respondent 8) pointed out that before using Discord they were utilising Slack (a chatting communication platform) which they found to be rather overwhelming, hence they opted the a game-player tool Discord. Discord provides both chat and voice channels. The CEO of Beagle Security also has an open channel where anyone can drop-in anytime.

Supply chain disruptions

Supply chain disruptions were not an issue to the majority of the startups, as they are hi-tech software based companies. Nevertheless this challenge was reported among three startups: InnovoSoft Technologies, Meesho and RevFin. The former two startups deal with tangible products and e-commerce, and faced significant supply chain disruptions. This disruption was reportedly due to the lockdown and fear of people to contract the disease. The respondent from InnovoSoft Technologies (respondent 4) mentioned that their manufacturing and assembling happens in two different states of India. Although they received a lot of orders in the beginning of this pandemic; due to the lockdown people could not even get out of their houses, and later there were restrictions on inter-state mobility. This harboured financial consequences for the startup:

> *"Many countries which were still not under lockdown still wanted our products, but we could not deliver them. So we had to give up the orders. "* (InnovoSoft Technologies, respondent 4)

After lockdown, the business drastically went down and they even had to pay back advance payments that they received from various clients. Before the lockdown they had high demands, but after the lockdown the demand from their contractors and distributors sharply declined to almost zero.

Meesho faced similar challenges as they also could not deliver products from one region to another. The respondent from Meesho (respondent 13) pointed out that a major hub of textile and clothing were shut down and they had huge dependency on these locations. The suppliers in these locations had various issues and insufficient number of active staff who could fulfil the orders. Hence, they had to evaluate alternate locations from where they could source and deliver to their customers. There were also issues on the demand side, the respondent pointed out that they are facing difficulties in selling 'non-essential' goods. Some categories such as essential items and health care related products have disproportionate high demand, but some categories such as wedding wear, jeans and party-wear have gone down. This is mostly because the social gatherings (weddings and other celebrations) and outings of the public were either prohibited or severely restricted (in gathering size).

RevFin is a Fin-tech startup and its respondent pointed out that they are facing disruption in demand and supply of their services (respondent 2). RevFin finances e-rickshaw (electric three wheeler vehicle for shared mobility), e-scooter and e-loaders (lately added more categories of loans). Most of their customers were geographically concentrated in the eastern part of India.

> *"Most of the customers are daily wage workers; they were hardest hit. Also the location of certain markets had a double burden of pandemic and a cyclone."* (RevFin, respondent 2)

During the COVID-19 crisis there was also a cyclone which increased burden on their customers. As a result, they had difficulty in paying back loans. Furthermore, RevFin contacted 1000 customers to take an interest free loan of 2100 INR to help them in this crisis, but only 15 of them took a loan. This shows the lack of demand, although people need money; especially daily wage earners. This can be due to the uncertainty of paying back the loan, because usually the non-payment of debts also have consequences.

Disruption in planned activities
Several startups mentioned that many planned activities had to be delayed or scrapped entirely, such as expansion to other cities, and development of new products and services. However, some witnessed a significant increase in the adoption of their existing technology or product, as illustrated in the below quote. This is evident as the majority of the startups have seen a sharp increase in the number of leads coming to them.

> *"Whole innovation aspect has [gone literally] double down right now, because the adoption [request of their current offered services] has increased"* (Verloop, respondent 14)

5.1.4 Mixed reactions on productivity

There has been mixed reactions on overall productivity. Out of the fifteen interviewed startups, four startups mentioned that their productivity is higher than before COVID times, six felt that it has gone down and four reported that the overall productivity remained almost similar[1]. The above can be found illustrated

[1]Respondent from SFarmsIndia, which is a digital agricultural land market place, did not mention anything about productivity explicitly. However, two points were raised by him: first, although the work culture has changed it has not affected the business and; second, they used to have 5 people in field and 5 at office but now the people in the field cannot work.

in the following responses.

> *"We have built more products, catered to more costumes, produced more IP then ever, and we had most productive months than ever". (366Pi, respondent 10)*

> *"If you ask me from an overall productivity perspective I think from the development and tech side there is no significant change, they are still able to perform their duties and the output is more or less the same as it was earlier." (Mobiotics, respondent 11)*

> *"... productivity is reduced, I am sitting beside my bed, working, and people watching TV." (Yulu, respondent 12)*

Many startups are actively using some type of mechanisms such as software, such as DeskTime, in order to track the productivity and keep analytical accounts of their employees. One respondent pointed out that working from home was a cultural shift, and people misuse the opportunity to work from home. Several others also showed concern about working from home and felt urged to enforcing mechanisms. These mechanisms vary in what they track: they track KPIs, communications, working/screen hours, tasks, output and behaviour with other team members. Startups gradually learned and adjusted with the new situation:

> *"Initial stage the productivity was low as people were trying to figure out an increment in a sinusoidal way, and then we saw another level of dip due to home issues, etc. Then we had to put some external measures/mechanisms to monitor."* (366Pi, respondent 10).

Another interesting observation was pointed out by RevFin. The respondent pointed out the existence of contrasting views on level of productivity - from the perspective of the top management and that of the employees. The respondent shared that it was found that the top management assumes that the productivity is low, however, employees were of an impression that they have been more productive. The respondent argued that this could be of various reasons, namely being euphoric of completing long pending works, and due to increased involvement in household chores. This finding is worth highlighting as Indian culture is more 'diffused' rather than 'specific'. Such that in a more 'diffused' culture the private and business issues are interpenetrated (Trompenaars & Hampden-Turner, 2012, p. 124). This corresponds to the respondent's statement, such that the 'private work' such as household chores done at home are subconsciously being counted in as doing "actual work" and employees therefore experience themselves as being productive. Leaders however typically measure productivity through the Key Performance Indicators (KPIs) and therefore RevFin's management can observe that objective productivity has gone down.

5.2 Major Dilemmas Faced by the Innovative Startups

During the process of decision-making organisations are faced with a number of dilemmas. This section presents the most important and frequent reported dilemmas by the respondents and the results from their reconciliations[1].

(I) Hi-tech versus Hi-touch

Nearly all startups faced the tension of hi-tech versus hi-touch dilemma. However, it was expressed in various forms such as: tension between digital interaction and physical interaction; physical work space and virtual work space; and technology and people. *On the one hand*, during COVID-19 times - because of limited physical interaction - people are forced to work from home, so they have been interacting virtually. Leaders see the advantages of working virtually as it saves a significant amount of fixed costs, as well as commuting time and energy. At the same time, they see many inefficiencies and want to invest more in technology rather than people. *On the other hand*, working physically from the office is desired as it is one of the main spaces for social interactions where people discuss ideas and innovate. And the benefit of people are their relationship and negotiation capacities, which are lacking in technological inventions (e.g. robots, machines) such that investment in people is desired.

This dilemmas is captured below in Figure 5.1. In working out the dilemma one can observe that if value of "hi-tech" is taken to an extreme - without including the component of "hi-touch" - one ends up having an *"automated society"*. Whereas, if the value of "hi-touch" is taken to an extreme, with including the "hi-tech" factor, we will end up having an *"analogue society"*. While a compromise

[1] See Chapter 4, Research Design to read the methodological details on dilemma reconciliation.

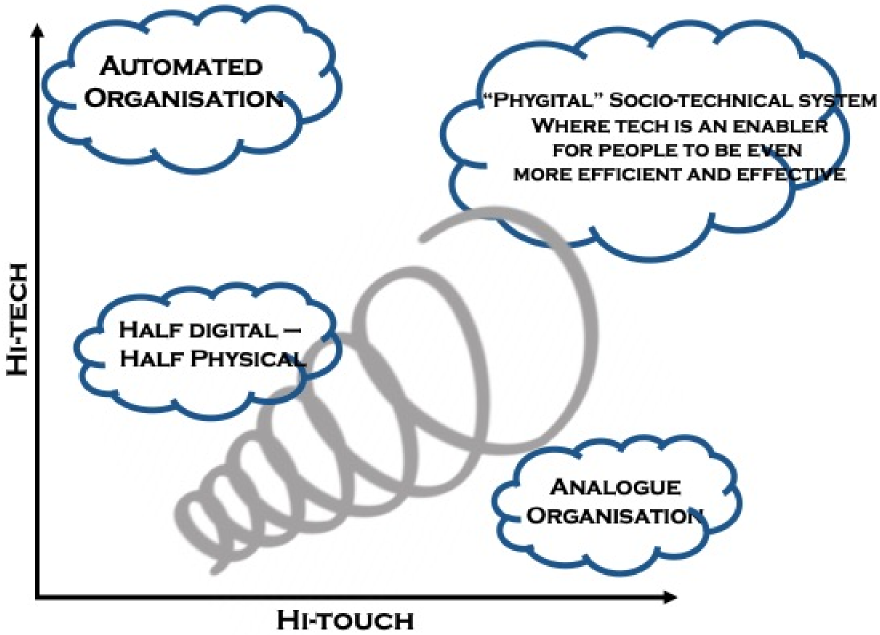

Figure 5.1: Hi-tech versus Hi-Touch

would be to have a *"half digital and half analogue"* socio-technical system; this can be both in-efficient and undesired depending upon the context, thereby having less of both the values. However, the ultimate aim should be of reconciliation: where one has high levels of both the values included in their work environment and can reap the benefits of positives of both the contrasting values. One reconcilition could be to train people in a way so that they can make even better use of technology. That is, technology as an enabler for people to be even more efficient and effective in the current "phygital socio-technical system"[1]. This may require training or workshops on how to best work from home, training people to better use the emerging technologies and existing ones, and sharing and practising best practices on how to virtually negotiate and make decisions.

The startups investigated for this study seemed to be all over the dilemma space[2]. Although most of them did not have any major technological challenge. Most of them seemed to be compromising where they had cut costs on both tech and people, many did not have adequate training working from home, or they

[1]Phygital means physical combined with digital.
[2]Dilemma space refers to the space enclosed by X and Y axes, see Figure 4.3 on page 61

had problems negotiating with clients virtually and problems with new recruits. However, Beagle Security seems to have tackled this through implementing a gamification working environment, where they used tech to engage people and reported being more productive then before.

(II) Decision Dilemma in a crisis

During COVID times, leaders face enormous amounts of pressure due to the changing dynamics of the business environment and uncertainty ahead. These times require tough decisions to be made, but how the leaders decides how to proceed ahead also hides a dilemma in itself. Since all these decisions are directly concerning people, i.e their employees, should they decide by adopting a ‘command-and-control’ approach or should they consult the other team members affected by this decision following a ’consultative management’.

On the one hand, if the leaders decide without consulting the rest, they might be perceived as *"autocratic leader"*; this is a situation where one person decides the course of action. It is desirable in crisis times - where the decision needs to be made fast - for having a clear chain of communication and command where the instruction is top-down. However if taken to an extreme, this can be harsh and insensitive towards the people who are going to execute the orders. *Whereas on the other hand*, deciding by involving everyone in the decision making without being authoritative will lead to *"lost democracy"*. This asserts that although everyone’s opinion might be important, this type of decision-making to an extreme takes time, creates confusion, and is not the best option during the times of crisis. The compromise is *"managing from the middle"*: where the leader is neither authoritative nor democratic. Current tough times demand the leader to be both authoritative as well as democratic. This dilemmas is depicted in Figure 5.2. Hence a synergy is needed between these two contrasting values to navigate through tough times. To this end, one reconciliation would be *"servant leadership"*. A servant leader is authoritative, but at the same time gives a sense of involvement to the employees. This makes the employees even more accountable and instills even more trust in the leaders. A servant leader just asks a simple question: "What can I do so that you can do your work to the best of your capability" or "What can the organisation do for employees so that they face minimum challenges during this pandemic"?

Most of the interviewed startups’ decisions were made top-down. Although

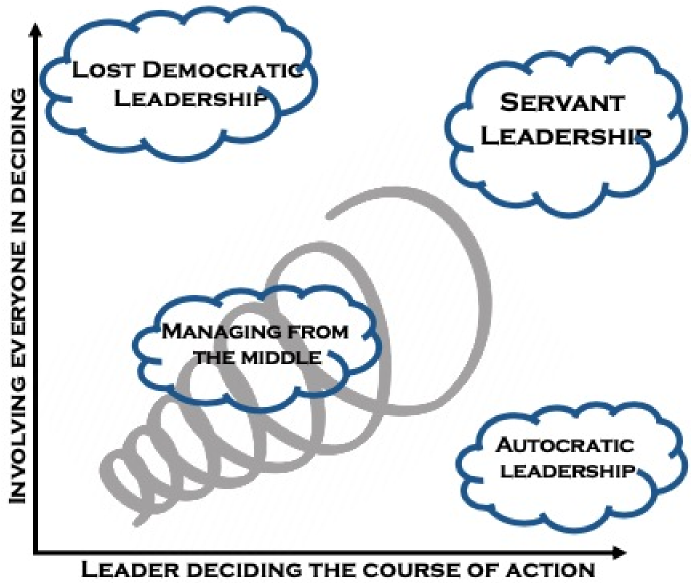

Figure 5.2: Manage democratically versus autocratically

the startup culture is comparatively flatter than bigger organisations, the decisions were made by the top management and subsequently pushed down to the employees. After the decisions were made, and people started working remotely, several startups mentioned that the leaders reached out to their employees to ask if they were facing any problems while working from home. The respondent from LegalWiz (respondent 9) gave an example where he personally had to deliver computer hardware to one of his employees in the lockdown (to facilitate working from home), in which he had to take special permission from the authorities to travel in the lock down. Although the decision was top down, he simultaneously showed signs of servant leadership. Hence, it is seen that leaders tried to reach out to the employees to help them, but it was rather a reactive decision than a proactive one. Notably, the size of the startups also matters. Some startups are bigger in size and taking everyone's personal opinion would not be ideal, but with smaller team sizes the leaders can talk with most people. However, there are ways to engage employees digitally/electronically where leaders can ask employees for their inputs such as a survey.

(III) Efficiency/Optimisation versus Resilience

Should leaders focus on achieving a higher degree of optimisation or instead on being more resilient? *On the one end of the spectrum* is perfect optimisation, which basically means having no "waste", lean, and 100% efficiency. *Whereas on the other end of the spectrum* is a very resilient organisation, which means literally having "waste" and building up inventory of resources. Opting for any of these values to its extreme has its consequences. Several leaders are facing this dilemma as they want to be both resilient and at the same time desire to achieve a high level of optimisation. They need to reconcile the dilemmas in order to deal with this crisis and also have a sustainable post-crisis future.

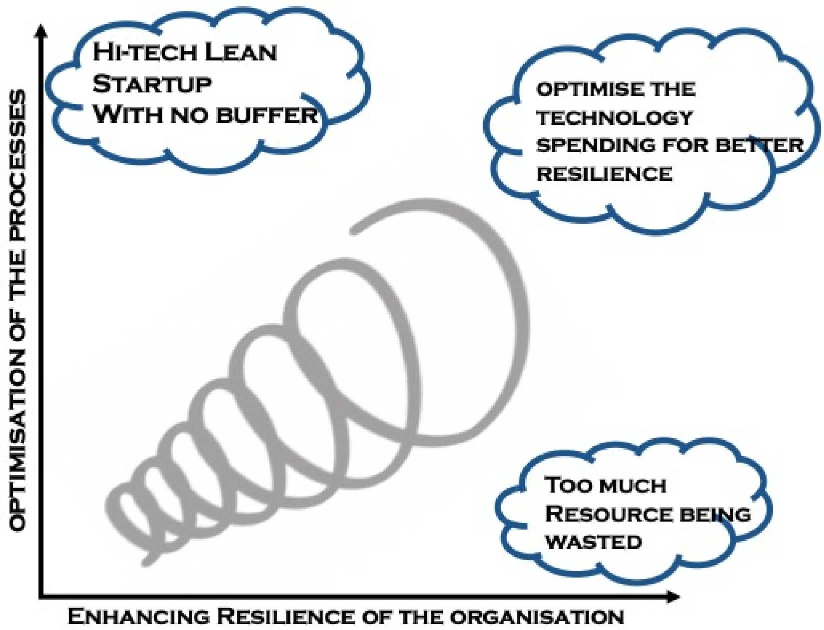

Figure 5.3: Optimisation versus Resilience

Almost all startups investigated were facing this dilemma. This dilemmas is depicted in Figure 5.3. This dilemma was especially evident where startups contradicted themselves, numerous times, over the course of the interviews. Most of them seemed to be more oriented towards building resilience at this point of time. They had been tech-intensive, lean, and agile in their operation, but lacked resilience. The lack of this resilience exposed vulnerabilities. Cash flow and disruption in the supply chain were some of the issues. In order to be more resilient startups have started to save more reserved cash, started looking at alternate suppliers, and at diversifying the geographical presence, customer base and their product portfolio.

It would be ideal for these innovative startups to ask themselves a question, "how can their efficiency/lean operations make them more resilient" because their present state is more oriented towards efficiency and yet they want to be more resilient. Surprisingly, through the desk search a recent article was found, published in the Wall Street Journal, which discussed the same dilemma (Deloitte, 2020). Deloitte (2020) pointed out that, "continually optimizing technology spending can serve businesses well during both crises and boom times, helping companies realize savings, reduce technical debt, and transform business models without sacrificing capabilities or risking quality." Hence, the reconciliation is to *"optimise the technology spending for better resilience"*.

(IV) Inside-out approach versus Outside-in approach

This is was also a major dilemma in the crisis and appeared in multiple forms such as, shall the product be pushed in the market or let the market pull decide the product, taking the lead versus wait and watch, and planning and doing versus checking and acting, etc.

The Inside-out approach is very much based on the Resource Based View (RBV), which emphasises the importance of the internal strength and capabilities of the organisation. Whereas the outside-in approach is more externally controlled and customer oriented. Hence, inside-out approach is about creating demand and outside-in is about responding quickly to the demands of the markets and customer needs. In reality, all organisations need both of them, but they tend to have inclination towards one over another.

Most of the startups facing this challenge have been more outside-in oriented or have reconciled this dilemma. On the one hand they are closely observing the changing customer needs and behaviours and then providing solutions. Many startups have delayed their expansion and innovative activities as they see that the adoption of their tech is higher than before. Whilst on the other hand, it is seen that startups are proactively exploring and pivoting into new market space or even creating new market space based on their capabilities.

Tushman and O'Reilly (1996) call these types of organisations as an *ambidextrous organisation*. Organisational ambidexterity is the ability to simultaneously pursue both incremental and discontinuous innovation...from hosting multiple contradictory structures, processes, and cultures within the same firm" (Tushman & O'Reilly III, 1996, p. 24). This in fact a reconciliation of inside-out and outside-in perspectives. This dilemma is depicted in Figure 5.4.

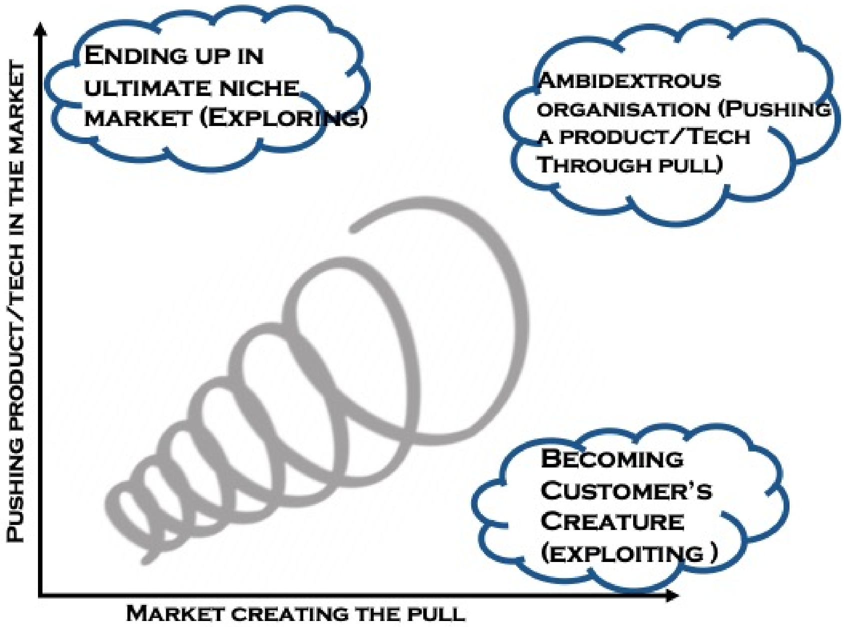

Figure 5.4: Inside-out versus Outside-in

(V) People Orientation versus Task/Result orientation

All the startups investigated were task focused and result oriented. However, they had a realisation once they started missing interaction with colleagues and faced problems while working remotely. This dilemma manifested in various forms, such as: concerned with the output versus concerned with people; flexible working schedule/conditions versus rigid and strict working conditions; full freedom to the employees versus micromanagement; surveillance/monitoring employees versus lenient on work schedule; checking people if they are doing their work versus let them do their work; work - life balance; surveillance/remote monitoring versus flexibility; strict monitoring versus lenient rules for working from home and; employee satisfaction versus customer satisfaction.

One thing was clear; that before the COVID-19 crisis the startups were very

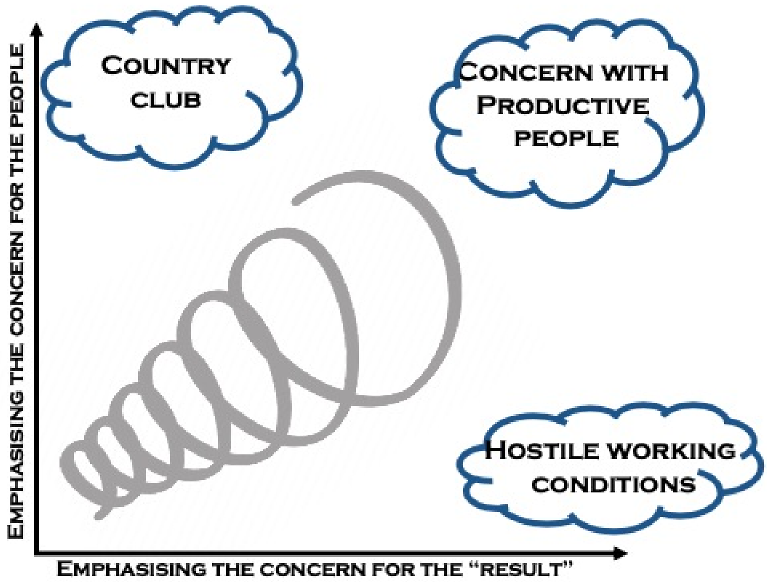

Figure 5.5: People Orientation versus Task/Result Orientation

task oriented. However, it was surprising to see that the majority of startup leaders were satisfied as long as the tasks were done. The employees from most of the startups had very flexible working hours (wherever relevant) and they could finish the task at their own convenience within the given/agreed time frame. During the COVID-19 crisis, many startups used monitoring mechanisms to make sure that the tasks were completed, but employees remained with enough freedom to still work at their own pace. Several respondents also mentioned that the interaction with the employees have increased and they feel more in need of supervising the employees. They asserted that they wanted to stay on top of crucial matters, but in the process they are at risk of ending up doing micromanaging.

The reaction on productivity was mixed as well: some had higher or same productivity whereas other startups had lower productivity compared with pre-COVID times. This lower productivity is due to a multitude of factors, including "forced" work from home, lack of social activities, and as one of the respondent (respondent 10) pointed out; that Indian households are not ready for work from home due to demographics at home (multiple generations under one roof), as well as the wider living environment. Focusing solely on concerns of the people without any concern for the task will make the organisation a *'country club'* and the organisation only concerned about tasks and achieving results without concern for its people will make the atmosphere as a *'hostile work environment'*. This dilemma is captured in Figure 5.5.

Reconciling this dilemma requires leaders to be servant leaders, especially in these difficult times. The leaders can give flexibility to decide the employees how they want to complete the task, but once decided the leaders can be authoritative and strict in its implementation. Hence, being flexible in charting the course, but strict in following it. The innovative startups in India that were interviewed in this study are reconciling this dilemma, though passively, where they are *'concerned with the productive people'*; giving them enough flexibility and means to complete the tasks. Another reason why they are able to reconcile this dilemma is because most of them were partially used to work voluntarily from home.

(VI) Continuity/Endure versus Change/Transform

On the one hand startups desired to continue focusing on doing their best in competing in the market space, whilst on the other hand - due to the changing demands of customers - they also need to adapt and look beyond their core market space. This particular dilemma also appeared in various forms, such as should they continue more vertical integration versus should they start outsourcing and focus on one sector with core competency versus diversification.

On the one hand, if the path of continuity is followed to an extreme the organisation ends up in joining different continuities and might not be able to adapt to the changing markets. On the other hand, if the value of change/transformation is taken to an extreme without continuity, the organisation will end up losing focus and its core competency and capabilities. A reconciliation of these is the *transforming by cross-fertilising continuities*, where the organisation created new fields of endeavours. This dilemma is depicted in Figure 5.6. The startups have successfully reconciled this dilemma by pivoting successfully in these difficult times around their core competencies. In the past, organisations such as Fujifilm, who with its core competency in knowledge of chemicals and photographic film, noticed that their traditional business is slowly dying. They successfully pivoted towards cosmetics and medical diagnosis imaging system, which required the same core technology and chemicals.

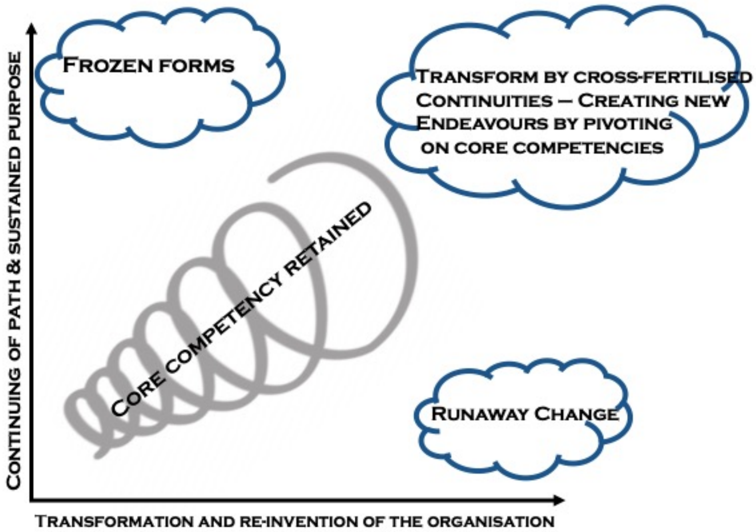

Figure 5.6: Continuity versus Transform

(VII) Long-term versus Short-term orientation

This dilemma was also one of the most recurring dilemmas among the startups. The crisis has forced them to "firefight", for short-term survival. At this point, most of the startups were found to be predominantly focusing on the short-term flexible market-based innovations. However, after the initial months of the crisis they have slowly started formulating long-term strategies based upon their experience with this crisis.

One respondent (respondent 10) pointed out that, at this point they do not have a long term recovery plan, they are "thinking about a day at a time". This resonates with the theory of effectuation that supports the logic that during a crisis a better strategy is to not make a long-term detailed planning, but acting as the circumstances evolve. However, the opposite logic is the causal logic, which emphasises detailed planning in ahead. In reality we need both while dealing with this crisis.

Hence the dilemma is the focus on long term planning versus short term response to the emerging situation. With a high degree of uncertainty involved, focus on long term strategy without short term tactics might lead to bankruptcy in the crisis, and focus on only short term tactics without long term strategy is not a sustainable business. Under these circumstances a synergy is required between

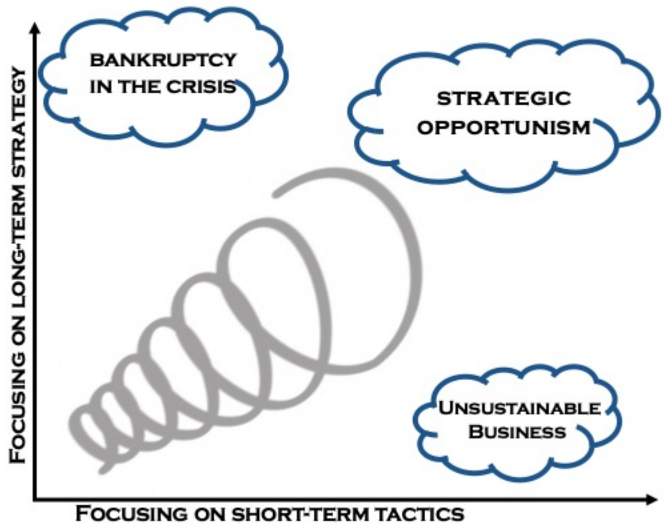

Figure 5.7: Long term strategy versus Short term tactics

'planned strategy' and 'emergent strategy', which involves 'crafting strategy' as the situation unfolds (Mintzberg et al., 1987). Therefore, one reconciliation could be *'strategic opportunism'*. It is the "ability to remain focused on long-term objectives while staying flexible enough to solve day-to-day problems and recognise new opportunities" (Isenberg, 1987, p. 1). This dilemma is captured in Figure 5.7.

The startups are currently pivoting and making adaptations based on current market demands. At the same time, several startups are planning on transforming these demand based short-term solutions to long term customer needs, hence showing signs of reconciliation. In fact it is not uncommon among tech startups to release a "minimum viable solution/product" and transform this continuously (through innovations and adaptations) over time such that it addresses the long term challenge of the customers.

In the context of long term and short term thinking it is also worthwhile to mention the importance of 'scenario planning' in uncertain times. This is even more important in a country such as India where the dynamics of the business environment can change very quickly. It has been seen how quickly the decision of complete lockdown was taken by the prime minister Shri Narendra Modi. All the operations just froze within a matter of hours. Furthermore, the COVID-19 situation itself is creating uncertainty regarding how our workplace, working style, interaction style and even mobility will look like in the near future. Therefore, discussing alternative versions of the future and planning for them in detail should also be a logical next step for organisations. This will ensure that in case of such sudden happening the organisation is ready to anticipate. This is more akin 'causal logic', which emphasises on extensive pre-planning.

5.3 Opportunities from the Crisis - *'Sweet are the uses of adversity'*

5.3.1 New Emerging Opportunities and the Story of Transformation

In this section, the emerging opportunities from the COVID-19 crisis will be presented. Multiple examples from the study are used to illustrate these emerging opportunities. The following paragraphs will show how innovative startups are pivoting their business, entering new markets, and are preparing for a more resilient post-crisis organisation.

Innovative startups are pivoting their business (models)
There are speculations that the customers will revert back to their pre-corona needs and behaviours and so will do the firms will to their 'old' business models. However, at the same time experts also indicate that the 'new normal' is here to stay and hence firms will find a new equilibrium to settle at (Seetharaman, 2020). The analysis suggests that the entrepreneurs have started embracing this 'new normal' and believe that this will continue in the near future. The biggest driver of the firms towards this new equilibrium is *digitalisation*.

Digitalisation has been 'forced' on the Indian population as physical mobility is restricted. Interestingly, people have largely embraced digitalisation and digital technologies in whatever ways they can - even in the rural areas. This has changed their ways of interacting, consumption behaviour, and needs. The desk search picked up a report from Statista (2020), which states that the internet and digital adoption in India has accelerated. In the year 2020 alone, the number of online shoppers will increase from 190 million to 590 million and by 2027 the number of internet users will go up from 670 million to 914 million (idem). These changing needs and behaviours of customers have resulted in new opportunities. Almost all the startups investigated for this study have adjusted or are in the process of adjusting their business models. They have done this in various ways, such as making changes in their value propositions, sales models and financial models, use of different distribution channels, etc. to cater to these changing needs.

The following are some examples of how some of the startups have noticed changes in the behaviour and needs, and how they are trying to pivot themselves. A respondent from Instamojo, which provides a payment gateway & e-Commerce platform for MSMEs pointed out the increased adoption of their platform, referring to the increased digitalisation among traditional physical store owners:

> *"Previously people usually used non-digital mode, there was no need for digital payments. But now it is a necessity. Many people are coming up. Someone who was never online is coming up online. There is an increase in their numbers."* (Instamojo, respondent 5)

They have also seen new categories of customers coming up, such as cafes and newspaper vendors. Instamojo already has more than a million customers. The respondent informed that they do not have a dependency on a certain set of customers. However, there are a certain set of customers who are using their platform more than ever to sustain their business by increasing their online presence. At the same time, there are a certain set of customers, mostly in the hospitality and travel industry, where the payment collection volume has gone down and inactivity has been noticed. More people are going online and hence they have adjusted their marketing strategies and are now offering new products and services. The respondent pointed out that they have introduced mojoCommerce and mojoCapital (provides instant loans for MSMEs) although these products were not specifically introduced for COVID-19, but COVID-19 has visibly amplified its need.

The respondent from Sumeru Enterprise Tiger, who provides Software products to Banking, financial services, and insurance (BFSI) sector, elucidates how they have promoted their product to their clients with a different value proposition. Traditionally, the BFSI sector used to collect debts physically where a client could be visited by someone at their offices or call during the client's office time. Visiting and calling was not a problem; it was the norm. Now because of COVID-19 restrictions the BFSI people can not send anyone to anyone's office to collect or talk about the debts, and now there are no such mechanisms since people are depending on working from home. He further mentioned that they always had a digital product which was "social distance ready", but was never marketed or promoted in that way:

> *"We are selling the same product, but we are presenting it differently. Previously, when we used to promote our product in marketing we would say that digital collection or mobile ready collection solution, which will help you in segmentation, allotment accounting everything, but now we say SOCIAL DISTANCE READY DIGITAL COLLECTION SOLUTION"* (Sumeru Enterprise Tiger, respondent 3)

This shows how, with the changing needs of their customers, this startup has innovated their sales model and value proposition.

Some industries have seen a very positive outlook because of COVID-19 crisis and among them is the agriculture sector. The reason for the attractiveness of this is very contextual to India. The reason pertain: the migrant labourers returning to their villages, people living in the cities who owned agricultural lands in villages and suddenly realising the importance of long ignored agriculture land, government's acknowledgement of the importance of the agriculture (and agri-tech) sector together with incentives provided by the government, and after a long time the monsoon is very good and at the right time in India. This unique combination of these factors are a perfect recipe for the attractiveness of the agricultural sector at this point. The respondent from SFarmsIndia (respondent 6) emphasised that the "buyers tendency" has increased. According to the respondent,

> *"our business is growing two-folds. In February I used to get 10-15 daily sign-ups but now we get 40-45 sign-ups daily. Previously we were getting 5 listings, but now we are getting 10-15 listings and the number of transactions are increasing per day, it is 5-6 per day previously it was 1-2"*. (SFarmsIndia, respondent 6)

How they are trying to capitalise over this opportunity is by providing end-to-end service, with a new value proposition. Previously, it was limited to being a market place just for buying and selling. They have started a new initiative, what they call, *"land fraction trading"*. This service is the end-to-end service to take care of the whole complex process of buying and selling agricultural land.

Why is this valuable and attractive to the clients is due to facors including: strict restrictions on the movement, hence people cannot travel without special permission; the villages can often be in remote areas and the buyers might not want to travel to the location due to their non-availability or discomfort (lack of infrastructure like roads); buyers and sellers might not what to pay hefty commissions to the agents/brokers; and the bureaucratic documentation involved in the process. This whole process is being taken care of by SFarmsIndia. Now with this new innovative disintermediation service the buyers and sellers can buy and sell their land instantly. Such services have not existed ever before in the buying and selling land in India.

Since businesses are increasingly getting connected with the internet this has increased the risk for cyber security threats. Although people are taking this seriously, many businesses do not have enough money to get all the protections from a service provider. The respondent from Beagle Security who provides cyber security software products points out how they have changed their revenue model:

> *" (...) now they [clients] come with money constraints, like I have to do this project in this amount can you help with that? What they say is that we will estimate the real amount and they pay it later, pay in instalments or add some features later. Or instead of paying 40% in advance, pay 20-30 % in advance or after one month or after completing first work. We do this to retain customers."*

In this way by adjusting their revenue model they not only have started customising the solutions for the clients, but also trying to gain trust and retain the customers.

In the professional service space, LegalWiz (respondent 9) has been providing startups, MSMEs and entrepreneurs legal services since the last five years. In India the professional service sector has been a very traditional face-to-face business. In the end of March - early April they noticed that there was a big slack in their business. Their sales dropped dramatically, because people did not want to start a new business. In order to revive their sales, they are extensively promoting their business online and through various channels. Their main aim was to show potential clients that they can trust them by references, reviews, and referrals. They successfully incorporated trust with technology through their branding initiatives and value proposition:

"so we published a lot of content, did a lot of webinars, made sure that the presence is felt. As a result a lot of media started chasing us, interviewed us for our business models etc. Because of that the business soared (...) In the month of June the sales were high again. (...) 1% of all the new companies that get incorporated in India happens to be LegalWiz portal companies". (LegalWiz, respondent 9)

LegalWiz is now witnessing a surge in registration of new business during the COVID-19 crisis. This shows of changes in customer behaviours. More people are open now to digital services even in professional services, such as legal services, which has previously never been the case. Further, as the respondent from LegalWiz pointed out there was a dip into new company registration during the initial day in COVID-19 crisis, but after a while the entrepreneurs become active again establishing new businesses. However, it is not clear if this surge was due to the efforts of this single startup or it was due to other factors, such as: entrepreneurs finding new solutions for COVID-19 crisis and want to register themselves as a new company; or many people have lost their job and want to endeavour into new ventures for livelihood; or it can also be the case that recently government has invited companies and entrepreneurs to innovate for the crisis (often with incentives attached to it) to promote the StartUp India Campaign; or it can be a combination of several of these factors.

In the mobility space the need and behaviours of the customers have also changed. Yulu (respondent 12) which is an urban mobility/micro-mobility service provider has also successfully transformed their business model and value proposition. According to the respondent Yulu's main ideology was "first and last-mile connectivity". So it was mainly popular among the daily office commuters for going to and from apartments/offices to bus stops and metro stops. After the COVID-19 crisis the tech-parks in Bangalore were closed and people started working from home. People stopped going to offices and this resulted in their bikes being unused. However, during the lock down the government allowed essential services. This is where they realised the potential of tapping into new market space and transformed their services to cater essential service provider companies (the companies included big online grocery stores, delivery services, online vegetable/fruit store and government etc). These essential services providers needed workforce and resources to deliver essential items, such as food and medicines, etc. They usually depended on the gig labour force and had not employed delivery personnel. As a result of COVID-19 the gig workers were too scared of carrying out the delivery and therefore the essential services providers did not have enough workforce to carry out their operations. Yulu saw this as an opportunity as they have a lot of field staff. They partnered with these essential services providers and provided them with their work force and vehicles. The essential service providers provided a pass, which is a special permission to get out on the streets during the lockdown.

Apart from this, as the lockdown is slowly getting eased they have noticed that people have started using the bikes for buying groceries, leisure purposes and even travelling to offices. Now, it might be a case that their bikes are not always available for people to use, so they have also started providing monthly subscriptions now with battery swapping service on demand. In addition to this, they have started partnering with the shops and supermarkets for battery swapping. Which gives an extra income to the shopkeepers and a place for customers to swap the battery, hence creating a win-win solution for all. This way Yulu has successfully pivoted their business model and value proposition and started catering essential services. By delivering people essential services during lockdown they not only created trust among the population but also entered a new market space where new opportunities are emerging.

As seen from the aforementioned examples, transformation requires dynamic capabilities and agility to identify new opportunities, to adapt and innovate existing product and services and partner with other players in the ecosystem to deliver more and new value with the changing demands for customers.

Startups have entered (entering) into new market space

As noted previously, several startups have entered into new market spaces. They have evaluated that their existing products and services with adaptation can cater to another market space and have successfully expanded to new areas when they did not exist previously. In the following paragraphs various examples are presented on how innovative startups are tapping into new markets.

MoEngage, which is a customer engagement platform, has marketing automation tools. Their main focus before COVID were e-commerce companies and the BFSI sector companies. During this crisis they noticed that many people were spending more time playing video games. So they entered into the video game industry for sending push notifications for marketing for their clients. They never had this focus, but now it is one of their main focus areas and they plan to continue with it.

RevFin, which gives loans to financially excluded sections (classes) of society, had as their main customers, before COVID-19 crisis, daily-wage earners who took loans to finance the purchase of their e-rickshaws and e-loaders. Due to COVID-19 they noticed that a huge number of people lost their jobs. They saw this as an opportunity and tapped into this new huge market of customer segments. RevFin started contacting those organisations that had to lay off employees so that the information could reach out to the laid off employees that in these difficult times they can still have access to some money for survival. They have decided to continue with this segment after COVID-19 as well.

Sumeru Enterprise Tiger who previously provided only enterprise solutions to big organisations in the BFSI industry has now started serving MSMEs as well. MSMEs are one of the hardest hit sectors and they realised that smaller companies also need help so they have developed a product/solution specifically for them.

Innovosoft Technologies and 366Pi both served diverse industries providing them with software solutions. They both have noticed that their dynamic capabilities can serve the exponentially growing ed-tech industry in India. Innovosoft Technologies already had an ed-tech solution, but for past few years it was not in demand such that they had sidelined it from their main business. However, with the recent boom in online education from home they have re-introduced it to their main business portfolio. 366Pi on the other hand, has also followed the trend and has developed an ed-tech platform.

Yulu as, described above in the previous subsection, has entered into the delivery of essential services. They were never into the delivery market space. And Meesho, which is an e-commerce platform, has entered into the groceries business. They are closely monitoring the demands and needs of customers to identify new market spaces. Lastly, the bot-making startup Verloop has started catering to government institutions such as the Indian Embassy in Canada and Govt of Goa (COVID-bots for them). Previously, government institutions were never their focus.

Opportunity to build a more resilient post-crisis organisation

The COVID-19 has been 'a moment of truth' for many startups and offered incentive to take a step back and re-evaluate. They have not only realised the shortcomings, but also opportunities to save cost, be more efficient and resilient in the (post) crisis era. This is very crucial to remain competitive in the coming future. As one respondent summarises:

> *"we are much more efficient and productive than being physically present. (...) We have been able to finish a lot of work that has been lagging for a long time because of day-to-day work and interactions. So for us it has worked for the better".* (Inventindia Innovations, respondent 7)

One of the realisations that several startups harboured is that an organisation does not necessarily need to have big office spaces. At the same time, employees do not need to be in the office in order to always be productive and deliver results. With proper training and technological tools they can significantly reduce the fixed cost related to infrastructure and office space. Therefore, several startups have decided to give options to their employees to work from home and only be physically available if it is required. Several startups also mentioned that whatever was achieved through business travels are being achieved without travel. Things are moving on. These re-evaluation will result in realignment of budgets in most of the startups.

This crisis has also brought forward a golden opportunity to make old customers loyal, acquire new customers, and create a better impression among the potential customers. Ten out of the fifteen interviewed startups had received more leads than pre-COVID times. This shows that their service is needed as customer needs and behaviours are changing. If they are able to acquire more customers they will be in a better position after the recovery. Many startups have used various mechanisms to retain customers and acquire new ones. Some have given them discounts for their usual services, reaching out to the old clients for referrals and testimonials, and some have given higher levels of serviceability to the clients, etc. Such mechanisms in these times are crucial to instil trust in the clients. One of the respondents mentioned that,

> *"(...) because clients also know that is a pandemic situation they might not even question you, but when you become agile and you are still*

holding your client meetings and still ensuring deliverable, the kind of recommendations and the kind of feedback that you get from the same clients - because you have been delivering in these times - is exponentially different, because we stood by then at a time when it was not expected". (Inventindia Innovations, respondent 7)

One more interesting observation was that leaders are noticing and are appreciating people who are usually not visible. The appreciation can mean a lot to people who usually are not in the limelight. This motivates employees to do even better, for example:

> *"Some folks who have worked hard but because of multiple reasons never came in the forefront they are outshining right now."* (Meesho, respondent 13)

Other respondents also pointed out that they have started getting attention from people who usually did not prioritise them before.

5.3.2 Key Learnings & Best Practices

This section presents the key learnings and best practices as identified during the interviews, which are composed into an overview in list-format here below.

1. **Diversification is important:** several startups pointed out that they have a concentration in terms of customers-base or dependency on certain geographies. They have realised that in times of crisis diversified product portfolios and geographically distributed supply chain networks and customers can reduce the risk during survival. Hence, many startups have started diversifying in different industries, have started looking at customer segments that they never catered to, and in order to make their supply chain resilient they have started looking at alternative partners/suppliers in different geographies.

2. **Ability to adapt can be a crucial factor in crisis:** most of the startups pointed out that one needs to be agile. This means, the startups should be proactive to identify the trends and changing customer behaviours. One respondent pointed out that in this context being agile means to be opportunistic and flexible with an ability to go back to the start and bounce back

(respondent 7). Agility has always helped startups; not only in good times but also in crisis. To this end, business opportunities are always there; one has to just adapt the business model to the situation. Pertaining to characteristics of flexibility and responsiveness, the startups tend to be in a better position to adapt to sudden changes in comparison to bigger organisations. In fact, all the startups investigated have shown signs of adaptations and agility of varying degrees.

3. **Firms should be ready to seize opportunities in the new market space:** with the COVID-19 crisis the startups have also realised that with their current dynamic capabilities they can enter into new industries and cater new customer segments. It again goes back to their agility, flexibility and ability to quickly adapt and respond. Most of them were quick in identifying this possibility and seized it. This has led to better exposure and bigger customer base. With entering into new markets and catering new customer segments a whole new window of opportunity has opened for innovation and further expansion.

4. **Importance of people management is emphasised in the crisis:** all the startups investigated are 'task oriented'. They have put a lot of emphasis on achievement of results. Now during the COVID-19 many have realised that it is equally important to be 'people oriented'. With the remote working norms during the COVID-19. leaders have also understood the need to personally pay attention to individual employees; to inspire and mentor. This is possible if the size of the startups is small, but with bigger startups they need to have a HR department in place to take care of the needs of people. To this end, when the dependency on leaders and the engagement of leaders have increased a lot it is important to avoid micromanagement. People tend to micromanage when they do not trust people with assigned tasks. Many of the startups are monitoring the activities of their employees using software. One startup (respondent 8) observed that if they let their employees do their work without micromanagement they produce more. Hence, truthfulness, transparency, openness and freedom with responsibility is the key to instil trust in people. Furthermore, one startup respondent pointed out that they have realised that they did not value people when they were in front - and suddenly they realised the human value

when they are not there. People in a very communitarian country like India miss physical interaction with colleagues and have therefore noticed mental pressure among employees. They admit that employee engagement is going to be one of the toughest challenges ahead if they need to continue working from home. Under these circumstances, a gamified working environment can potentially be very helpful as seen with one startup. Lastly, it is noticed that remote working is very flexible, however people work in teams to accomplish the task. Hence, 'team players' will be more in demand and their importance is emphasised during remote working and completing the task. Thus a team will need people with so-called 'Belbin Team Roles'.

5. **Digitalisation and adoption of digital technologies has accelerated:** the respondent from Biziga (respondent 15) pointed out that "we Indians are not good in change, but adaptation rate is very high". What the respondent meant was that if some changes are forced in a country like India people embrace change very quickly. The typical physical activities, such as: studying at school physically, visiting clients/partners and examining a vegetable or fruit before buying, etc. have suddenly stopped. People are doing these activities virtually with adaptations using the internet. Statista (2020) estimated that by the end of this year (2020) alone, the number of online shoppers will increase from 190 million to 590 million. This has opened up immense possibilities for innovation and business opportunities, which innovative startups are successfully exploiting. However, at the same time this is also revealing the ugly truth of the huge digital divide in the population. These benefits of virtually sourcing products and services is very much enjoyed by people in the urban areas, whereas the rural areas feel this as a burden due to the lower level of digital literacy and relatively underdeveloped infrastructure. Just to give a context here, around 70% of the population of India lives in rural areas. However, they are rapidly catching up as COVID-19 crisis has forced them to go digital as well. One factor that is helping in the rapid adoption is that India has the cheapest internet for one gigabyte of data and has over half a billion smartphone users. To cater this huge population organisations need to innovate to make even simpler solutions for people.

6. **Work can be done from home:** most of the startups noted that while

working from home they experienced same or a higher level of productivity than pre-COVID era. This COVID-19 was a sudden change 'forced' to the working culture of the startups, and after working for a while they have come to realise that work can be done from home without hampering productivity. It was a common consensus among the respondents that working from home might be the norm, at least partially, and they are in the process of considering making a work from home policy. The respondent for Instamojo (respondent 5) which has around 150 employees said, "we are looking at some more innovative ways to start going back to office. For example, on Monday the product team will be in the office, Tuesday marketing team, etc. something like that. So that the teams will meet each other. But you are always free to be in the office. And maybe once or twice a month we will have a full team catch-up". Furthermore, it was also revealed that some startups might want smaller office space, though a better and more welcoming one, or hire more employees without expanding the office space. Those activities that can be individually accomplished and do not need access to any critical physical infrastructure can be done remotely. At the same time, wherever teamwork is required and teams want to be physically present, they can come to the offices. Several startups have pointed out that this will drastically reduce their fixed cost associated with infrastructure in the cities like Bangalore, where office rents and its maintenance are very high.

7. **Prepare for the next crisis:** like every crisis this crisis will also pass. It is the nature of this economic system that has been created that "boom and burst" come in cycles. Therefore, it is important to prepare for the next coming crisis. To use this experience, it is important to learn from it and make a more efficient and resilient organisation such that the next crisis has minimum negative impact. This crisis, which is a pandemic combined with an economic crisis, is such an extraordinary event in history that it will have long lasting implications. This requires both short-term thinking for survival in the present as well as long-term strategic thinking. Although the emphasis on the short-term thinking is more pronounced startups have also started making long-term strategies. First, several startups have mentioned the need to have enough cash reserve for at least a considerable period of time, ranging from three months to at least a year without any sale.

They have started building up separate cash reserves already so that they face minimum financial problems. Second, they have started diversifying their product/service portfolio and supply chain. Third, at the same time many are actively engaging themselves to expose themselves and make sure people observe their presence. This has led them to have acquired a larger customer base and good exposure as ten out of fifteen startups explicitly mentioned that they are getting more leads. Furthermore, startups are gaining valuable experience of managing the economic and pandemic crisis; this experience has not only brought up hidden problems in their business models but also helped them to identify and pivot towards potential future markets. The only thing they need to do is to convert these short-term survival techniques to long-term sustainable strategies. Interestingly, most of the startups investigated were found to be on this path.

6

Discussion

This section puts into perspective and contextualises the study findings. The findings can be interpreted as having two aspects. The first is related to how the 'old' ways of doing business are being replaced by new ones, which is innovating in the crisis. This can be interpreted through the notions of creative destruction and creative accumulation. The second aspect of this study considers the cultural context in India. Individuals are influenced by culture, which consists of a set of artefacts, values, norms and basic assumptions. These collectively justify an entrepreneur's decisions.

Aside from these two aspects it is also important to concentrate the discussion on the identified and reconciled dilemmas. The dilemmas are universal, but the way how people deal with the dilemmas are very much influenced by their value preferences. In this context, this chapter also reflects on the dilemmas. This section will close with presenting the strengths and weaknesses of this study and providing directions for future research.

6.1 Creative Destruction and Creative Accumulation in the COVID-19 Crisis

Nothing is permanent so is this pandemic. However, we have been forced to reconsider the way we commute, interact, and consume. COVID-19 has forced us to change our behaviour; and behavioural change stays for a while. With this change, the existing business models of businesses and market structures are challenged. Many of the present models are not relevant anymore or are counterproductive. This has left the entrepreneurs no other choice than to adapt and innovate. Under these circumstances the established firms find it difficult to adapt (Foster, 1986), whereas it evident from this study's analysis that these startups in India are innovating. The study demonstrates that during the COVID-19 crisis innovation and adaptation has been realised pertaining to both creative destruction and creative accumulation.

Scholars have previously argued that the creative destruction is mainly associated with smaller and newly formed firms, whereas creative accumulation is rather ascribed to the large incumbent firms that seek new solutions through formal research exploiting their pre-existing capability (Berggren et al., 2011; Cefis & Orsenigo, 2001; Granstrand et al., 1997; Pavitt, 1986; Schumpeter, 1934, 1942). However, findings of this study show that a blend of both creative destruction and creative accumulation is at play among the startups in successfully navigating through this crisis. That is, these startups are *creatively destroying renewing (destroying) themselves with their accumulated capabilities.*

Unlike larger organisations, the innovative startups investigated did not have their own dedicated R&D teams. They relied on collaborations (partnering) and applied knowledge borrowed or available to them. This also resonates with the findings of Filippetti et al. (2009), which points out that in the previous financial crisis of 2007-2008 the *'new and smaller firms'* relied on collaboration with other similar firms to innovate and navigate through the crisis. These Indian startups engaged extensively in exploratory activities and tapped into new markets. Parallel to this, they have redesigned their existing products and services, came up with innovative products/ services, new delivery channels, and business models. Although all of the startups did not come up with completely novel path-breaking innovations in their industries, they did come up with many incremental innovations and novel business models within their own contexts. If carefully observed; they have pivoted to a new market or product based on their core capabilities, which they have acquired over the years. Several examples are presented in the previous section on how firms are innovating and pivoting during this crisis. So it is evident that startups are innovating, owing to both creative destruction as well as creative accumulation.

It can be observed that COVID-19 has definitely destroyed the 'old' ways of working and interacting, hence the destruction part is very well executed by this crisis, though at the same time we also see how people have adopted 'new' ways of working from home, and interacting. It is seen that they already have the core technology, however the COVID-19 crisis brought forward inefficiencies in processes and emphasised the need to use these technologies and various innovation forms. For instance, the business travels have stopped, but it has not completely stopped people from conducting the same meeting virtually. In fact, many organisations, including some of the startups in this study, are realising same results without travelling. In addition, they are saving cost of expensive travels and polluting less. People are attending webinars instead of seminars, attending virtual conferences and fairs rather than being physically present. The only aspect where leaders from startups can be found struggling is when they have to negotiate with new people to make crucial decisions and close deals. They miss examining the environment and body language of their counterparts which is very crucial for 'judging the people'. This is one place where innovation is required to create a mechanism such that they can make crucial decisions virtually with their clients.

Another observation is the COVID-19 crisis segregating the whole range of products into essential and non-essential products. The delivery of only essential products were allowed by central and state governments during the lock down. Some startups viewed this as an opportunity, and they either started selling essential items on their platform and/or have started delivering them. They will continue doing so after the pandemic is over. Another opportunity was found in the education sector. The education of children at schools became interrupted across India, but they found ways and switched to teaching remotely. However, it is not possible to impart online education in all parts of India due to differences in infrastructure. Nevertheless, the industry, academia, and government have come together to solve this issue. This is usually not the case in countries such as India to witness a swift triple-helix collaboration and opened space for innovation. This rise in online education has made the already existing ed-tech startups bigger, but at the same time startups are entering into the same race. Probably, when the equilibrium is attained then another 'shock' might occur, which may stimulate another wave of creative destruction to disturb this equilibrium in order to find new and better ways.

In other service sectors such as a call centres, there are typically many agents answering phone calls. Now because of this pandemic they cannot commute to the office and due to the nature of their job they cannot work from home. This can be addressed through innovation since the predominant queries received by these agents are repetitive and hence can be answered through a bot. This is how certain industries are evolving; where the tech players are slowly taking over the manual jobs. Similarly, the professional service sector, which has worked in a very orthodox way for a very long time, is also witnessing digitalisation and the emergence of new players. This sector is huge in India, and it is not possible at this point for an online player to take over the market. An online player requires finding a niche, get a fair share of the market, and innovate in that space. Furthermore, these online digital substitutes of service professionals are relatively much cheaper and yields a different value proposition. Thus, if they start attracting clients and will continue to improve their products and service then over time they might challenge big dominant incumbent players. In the terminology of Clayton Christensen this can be yet another 'disruptive innovation' (Christensen, 2013).

The crisis has also busted some myths in context of India; that one needs to have an office to work. Interestingly, although it might appear counterintuitive, productivity of most startups was reported to be either the same or higher than before the pandemic. The norm of work from home will not only reduce the costs related to infrastructure, but also gives these innovative startups access to the huge talent pool distributed around the country. Generally, all the employees are based in their offices. Therefore, a comprehensive work from home policy is required ensuring that people are not only comfortable working from home if required, but are also having interactions with colleagues from time to time. Most startups are in agreement that they will be, or are, working on more comprehensive policy. A hybrid of a physical and digital workplace will be ideal for organisations that were always used to operate from an office space. However, other organisations, which can or will completely move to remote working will need to find different ways to interact with employees in-person.

6.2 The Influence of National Culture on the Indian Entrepreneurs

The national culture in India is predominantly particular (following exceptions), communitarian, diffused, affective, ascribed, short-termed, and outer-directed (Trompenaars & Hampden-Turner, 2012) (the scores of some countries found in Appendix A). This is also reflected through the decisions made by the interviewed startup leaders. The following paragraphs focus on the interpretation and contextualisation of the cultural dimensions (and their attributes) that are at play here.

Universalism versus Particularism

Unlike most western cultures where 'deal is a deal', in a particular culture a relationship evolves and a trustworthy person is a person who honours changing circumstances (Trompenaars & Hampden-Turner, 2012, p. 62). To instil this trustworthiness, leaders of the startups interviewed have favoured some clients by modifying contracts, over others, just because they had a 'particular' request or relation with them. Furthermore, they have predominantly tried to be universalistic in their outlook by trying to standardise their products and services, and some have even reconciled the dilemma between universalism and particularism through deploying "mass-customisation". This involves having a basic standardised service/product and then it is customised per requested by a "particular" client. For example - LegalWiz usually has very standardised service packages, but during COVID-19 they have adapted with the demand from the clients where they offered a combination of a standardised service with an add-on.

Individualism versus Communitarianism

Like elsewhere these startups are struggling with the lack of engagement among the employees. Being a predominantly communitarian nation (Trompenaars & Hampden-Turner, 2012), in India the startups encourage the individual to work for the interest of the *team*. However, it was also observed that the individual freedom and responsibility were emphasised. This is due to the fact that they are mostly task focused and result oriented. Most of the startups have reconciled these contrasting values where they usually delegate specific tasks with clear objectives so that individuals need to take accountability to complete the overall task as a team. For example the startup Beagle security pools tasks and offers rewards for best team and team players.

Neutral versus Affective

Being an affective culture (Trompenaars & Hampden-Turner, 2012), the respondents showed emotion and made several decisions based on emotion. The respondent form Mobiotics (respondent 11) mentioned that their employees are too scared to come to office, and therefore they anticipate that they might not come to office until October. At the same time almost all startups reported being actively emotionally supporting their colleagues. Since talking about mental health still remains a taboo in India, many might not speak up when they are facing mental health problems. Hence, the leaders need to make sure that for the well-being of their employees that they provide enough psychological safety and encourage people to show vulnerabilities and emotions - a culture where 'it is cool to be emotional'.

Specific versus Diffuse

Culture in India is also diffused and the personal and professional relations, not only with clients but also with colleagues, are intertwined (Trompenaars & Hampden-Turner, 2012). It is also observed that with the old clients it is easier to get along. A diffused orientation of entrepreneurs helps them to better get along with their clients and colleagues virtually. For example, the startup 366Pi has a business model where they only work with friends-like partners. They did not had any issue trusting or making decisions virtually with them. The diffused orientation is also observed in the management style of these startups. A high level of personal involvement can be observed from the (high) individual engagement with the leaders on various tasks. A negative connotation of this can be called 'evasive or micromanagement'.

Achievement versus Ascription

Status are predominantly ascribed rather than achieved in India (Trompenaars & Hampden-Turner, 2012). This is also reflected on the how decisions were made. In most of the startups the decisions were top-down formulated and implemented. Some strict steps were taken from the top management without considering the opinion of sub-ordinates. Some respondents also highlighted the practice of micromanagement at their startups. This also indicated the ascribed nature of "being the leader". Some however also showed the signs of being a "servant leader" (which is a reconciliation of these contrasting values), for example the respondent from LegalWiz made sure that he is providing all means to an employee by delivering essential equipment even in the lockdown after taking special permission from the authorities to travel.

Time orientation - Long-term versus Short-term orientation
The dilemmas of long term versus short term thinking is a big dilemma faced by almost all the startups. Indians are relatively short-term oriented (Trompenaars & Hampden-Turner, 2012). In the short-term they have pivoted successfully, and for time-being they have formulated a business model around it. However, it would be interesting to see in the long term how many of them will build successful sustainable strategies around these pivots. The opportunities are promising, and therefore all of them have shown interest to continue with these newly developed or adapted products and/or services. So if this short-term survival technique is aligned to the long-term then these startups can successfully reconcile this dilemma.

Internal direction versus External direction
People from India are predominantly externally controlled (Trompenaars & Hampden-Turner, 2012). The analysis shows that many of the startups are just waiting for the events to unfold and then make strategies. Some are also looking at particular categories of products if their demand is increasing or decreasing. They aim to push the products when the demand arises in order to be reactive. This is also more an outside-in approach where the market forces and customer demands influence the strategy. Hence products are pulled by the market demands. However, some of them are also proactively creating demands in the market and simultaneously the market is pulling the products itself. For example, the startup Yulu is tapping into new markets and new offerings. Hence, pushing through the pull as described in the previous section.

6.3 Reflection on the dilemmas of the crisis

All the dilemmas mentioned in this study are not unique to only hi-tech innovative startups in India. In fact, they have appeared over and over again; both in smaller and larger organisations across the world[1]. Two of the dilemmas mentioned in this study also resemble the *paradoxes* pointed out by Richardson (1995). These are: manage people and production, and manage democratically and autocratically.

[1] This is based on the world's largest database of dilemmas of more than 45000 dilemmas at THT Consulting

The manner in which they deal with it depends on the organisational culture and national culture (Trompenaars & Hampden-Turner, 2012). The reconciliation of the dilemmas are very important. There is a plethora of evidence that those leaders and organisations who actively reconcile dilemmas are more successful than the one who do not (Peters & Waterman, 1982; Trompenaars & Hampden-Turner, 2001). Failing to reconcile dilemmas will ultimately end up in a vicious cycle. Therefore, it is important to reconcile the dilemmas instead of avoiding them or confronting them.

While dealing with uncertain situations, managers do get influenced by their personal biases and every leader might not agree with one's managers' opinion. For instance, taking an example of one of the elicited dilemmas in this study: long-term orientation versus short-term orientation. There are leaders who might prefer to 'firefight' in the situation to survive and ignore to take a long term perspective. On the other hand there might be leaders who might agree that taking a long-term perspective is more important as the crisis will pass. Instead of focusing on one over another, leaders can reflect on how - through their short-term 'firefighting' - they can make sure that the long-term competitive advantage is strengthened. Therefore, incorporating both contrasting views. These contrasting views are even more evident in more diverse organisation with leaders having different nationalities as different cultures have different opinions, sometimes even contrasting ones. This does not necessarily mean that one opinion is better than another.

Another point that needs to be discussed here is when the position of an organisation is plotted on the *dilemmas space*. The position gives an indication about to which side the organisation is more inclined to on the continuum of contrasting values. Taking that as a departure point the organisation can work to encompass the opposing value. To illustrate this point with an example from this study, let us take an example of *people orientation versus task orientation'*. Let us assume if an organisation is already more oriented towards people rather than tasks. To reconcile the dilemma of *people orientation versus task orientation'*: this particular organisation should use its concern with people as a strength and then acquire more of the opposite value. They need to think of how being more concerned with people can help them to be more task oriented. Further, they need to reflect on what behavioural and organisational changes are required to realise the benefits. On the other hand, if an organisation is more task/result oriented and desires to be more people oriented, then they need to reflect on how being more concerned with results can help them in being more people oriented. Therefore, what decided the point of departure in reconciling the dilemma is the organisation's own strengths. At the same time it is not only the leader's task to reconcile, it requires the involvement of the whole organisation.

6.4 Strengths and Limitations of the study

The strength of this study lies predominantly in its in-depth qualitative case study approach where the underlying assumptions and tensions of leaders were captured. It makes us understand why something is a challenge or a dilemma in the context of startups and the COVID-19 crisis. Another strength of this study is that it reconciles the elicited dilemmas and the entrepreneurs can implement them within their own contexts.

COVID-19's novelty limits having empirical findings and knowledge to contrast and compare the study findings. Additionally, since this study follows a qualitative case study design the findings of this study are presented and discussed within the context of India. These is always a question of generalisability of the findings of the case study to the business contexts around the world. However, the startups in India are in many ways similar to that of rest of the world (e.g. flat hierarchy, task focused, agile, etc). Additionally, they fit in the same generic startup definition. Therefore, one may assume that the findings can be *'potentially'* relevant to the broader context than the current study.

No study is without limitations. In a qualitative study there are chances of misinterpretation of the data. This study was about discovering the underlying tensions in the interviewed startups. There is a chance that all the tensions were not elicited. Capturing all the dilemmas through conversation requires years of experience. Also, the dilemmas had to be elicited on spot and immediately after the interviews. It was noticed that, it was difficult to elicit the more hidden dilemmas days after listening again (second or third time) to the interviews, although they were relatively easy to spot during the conversation itself.

India is a country where the communitarian and ascription attributes of national culture dominate individualistic and achievement cultures and the concept of 'face' is a very integral part of the society. 'Face' is basically, social standing, reputation, influence, dignity, and honour in front of others and society. Leaders do not want to 'lose face' in front of others. Hence, while asking questions about their challenges, problems faced and how are they dealing with them, there might be chances that the respondents may want to 'save face' of themselves and their startups. As a result there is a probability of answering more in accordance with social norms rather than being 'brutally honest'. However, precautions were taken to avoid this bias. The chances of this bias is minimised, because the author is an Indian national with awareness of the Indian business ecosystem and is trained & licensed in cross-cultural communication and management.

6.5 Guidelines for Future Research

This research was an exploratory research and involved qualitative (case study) methods in the context of Indian startups. It would be worthwhile to conduct quantitative research that will focus on investigating the performance and growth of startups in the COVID-19 crisis. Similarly, another study with a wider or a different scope could be conducted for attaining higher level of generalisability. Furthermore, this study was intended to see the impact of COVID-19 on startups in India, this could also be expanded to the larger organisation and see if there is any transformational activities.

This study pointed out that there is a difficulty in making decisions virtually and managing larger virtual teams. A more in-depth investigation could be carried out to investigate what factors are important to instil trust among people to have a seamless virtual operation. At the same time, work from home, at least partially, is slowly becoming a norm, how can employers make sure that the employees are engaged and productive? The problem with new recruits stood out without any solution on how to integrate them better in the organisation culture. This study also found out that there were mixed reactions on the productivity level of employees. Hence one may be intrigued to focus on what are the factors that are influencing the productivity among the organisations around the world, and what interventions can help enhance the overall productivity of an organisation. A study investigating this could be very helpful for the startups who usually do not have a dedicated HR department to take care of the employees. It is observed that one organisation has found a solution to optimise the managing of their team members by implementing a 'decentralised gaming environment'. Their employees were more productive than before and better engaged, so how can gamification help in building a more innovative remote working environment/culture can be worth further investigating.

Often innovative ideas emerge during small talks at the coffee machine where people have been traditionally interacting. Will it still be the same with virtual coffee breaks, or if not, how can organisations make sure that the flow of innovative ideas do not get throttled due to less physical interaction? In light of this, it is worth exploring how will innovation management look like if the team goes fully remotely. This points out towards the culture of innovation. Therefore, a study on how a culture of innovation be incorporated into remote working culture, would be very valuable for the near future.

It has also been observed that many startups are adapting their business models in various ways. It would be interesting to see what new business models are emerging out of this crisis and whether there is any pattern among these new business models. At the same time, this triggers the question as to whether startups been able to capitalises on these adapted business models after the crisis, i.e. have they made their short-term COVID-19 solutions into a long-term viable business?

Since the implications of this crisis are going to impact organisations for long-term, it would also be worthwhile to investigate the future. Numerous trend researchers and futurists are trying to anticipate and forecast the future. Among them futurist Gerd Leonhard in his book *Technology versus Humanity* points out some major megashifts that are shaping the future. These include: Digitisation, Mobilisation, Screenification, Disintermediation, Transformation, Intelligisation, Platformification, Automation, Virtualisation, Anticipation and Robotisation. It would be interesting to see how has the crisis impacted the megatrends and megashifts. Is the future closer than it appears?

7

Conclusion

This study captured how innovative startups in India are responding to the COVID-19 crisis and how it is stimulating creative destruction. Towards this purpose, Schumpeterian innovation theory has been combined with dilemma theory and Trompenaar's seven dimensions of national cultural differences model. A qualitative case study approach was used to carry out this investigation. This involved the collection of both primary and secondary data through desk search and conducting 15 in-depth semi-structured interviews with leaders from innovative startups in India.

This study reveals insightful contributions that can be deployed to the further understanding of innovation and transformation of startups during the COVID-19 crisis. Findings revealed that the startups are undergoing major transformations. They are successfully pivoting to new business models and new markets based upon their core capabilities. This transformation pertains to synthesising of both creative destruction and creative accumulation. Several technological, leadership and operational challenges were identified and in total seven dilemmas were discovered and reconciled. Furthermore, this study contributed to the field by identifying and formulating several key learning points. The reconciled dilemmas together with these learning points provides further understanding and knowledge on entrepreneurial practices. The major findings of this study can be found elaborated and concluded here below.

One major finding is that the startups in this study were evolving and innovating through a blend of creative destruction and creative accumulation. That is, they are in many ways destroying the old ways of doing business and adapting to new ways based on their acquired capabilities. In addition to this, they are also actively exploring opportunities and tapping into new markets where they were previously absent. Furthermore, another major result can be found in how their decision-making is influenced culturally. Their decision-making behaviour revealed that they are community oriented, particularistic, have a diffused outlook, tend to ascribed status, are more inclined towards short-term orientation, and are very affective and externally controlled. This is very much in line with the national culture of India as per Trompenaars' seven dimensions of national culture model.

One part of this study focused on identifying challenges that startups harboured from the COVID-19 crisis. From this the following can be concluded. The biggest challenges were mostly related to leadership and business processes. They included challenges in making decisions and negotiating virtually, managing teams remotely, as well as problems with new recruits not knowing the ways of working, low cash flow, internal communication and instant access to key team members, supply chain disruptions, and disruptions in planned activities and innovation. There were mixed responses on the level of productivity among the employees of the various interviewed startups.

The second part of this study focused on finding and reconciling dilemmas. In total there were seven dilemmas faced by the startups, these included: Hi-tech versus Hi-touch; decision dilemmas; Optimisation versus Resilience; Inside-out thinking versus Outside-in thinking; People Orientation versus Task/Result orientation; Continuity versus Transform and; Long term strategy versus Short term tactics. Not all dilemmas were being actively reconciled by the startups, and some leaders/startups were able to better reconcile the dilemmas than others. Along with the dilemmas and challenges, this crisis also opened up a window of opportunity. The startups are pivoting their business (models) to cater the need of changing customer needs and behaviours, they have entered or have plans to enter into new market spaces, and this crisis also brought an opportunity to reflect and work on building a more post-crisis resilient organisation.

The experience of tackling this crisis has also been a learning experience to the leaders. The key learnings that can be taken from this study, in terms of navigating through the COVID-19 crisis in India, are the importance of diversification of the business portfolio and supply chain, adaptability, readiness for seizing opportunities in new market spaces, people management, digitalisation and adoption of digital technologies, that work can be done from home, and lastly, organisations can transformed their unique lessons from the pandemic into increased preparedness for future crisis's. Future research can focus on several interesting points for further study, which include further investigating what new business models emerge out of the crisis, to what extent short-term solutions due to COVID-19 have been transformed into long-term plans and viable businesses, and whether the crisis accelerated the megatrends and megashifts that are shaping our future.

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8

Appendices

8.1 Appendix A: Scores of countries on cultural dimensions

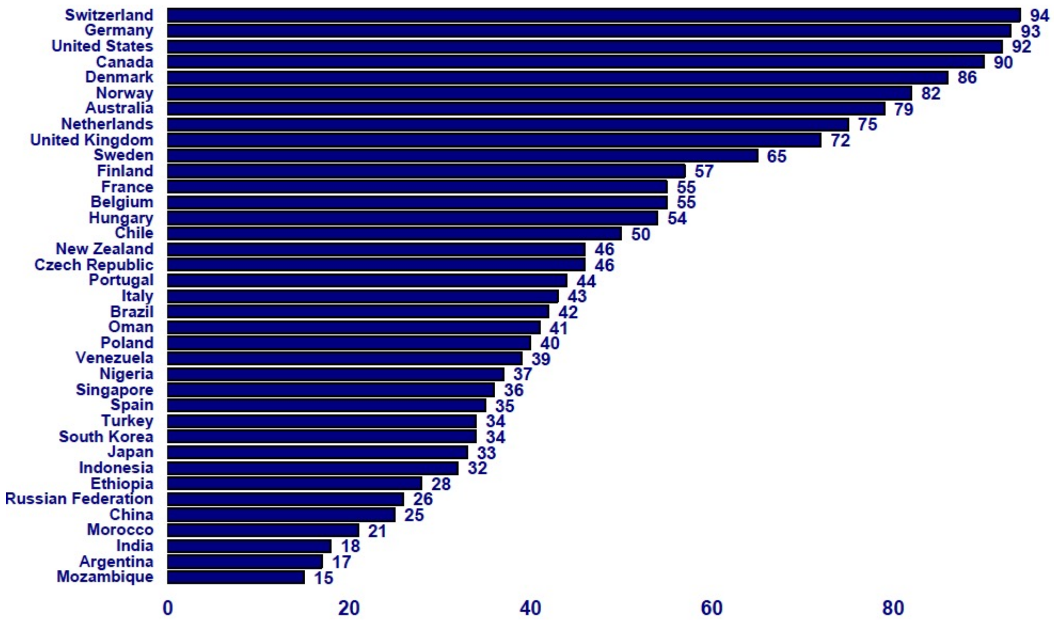

Figure 8.1: Scores of some countries on the Universalism – Particularism continuum. Higher the score the more universalistics people of the country is. (Trompenaars & Hampden-Turner, 2020)

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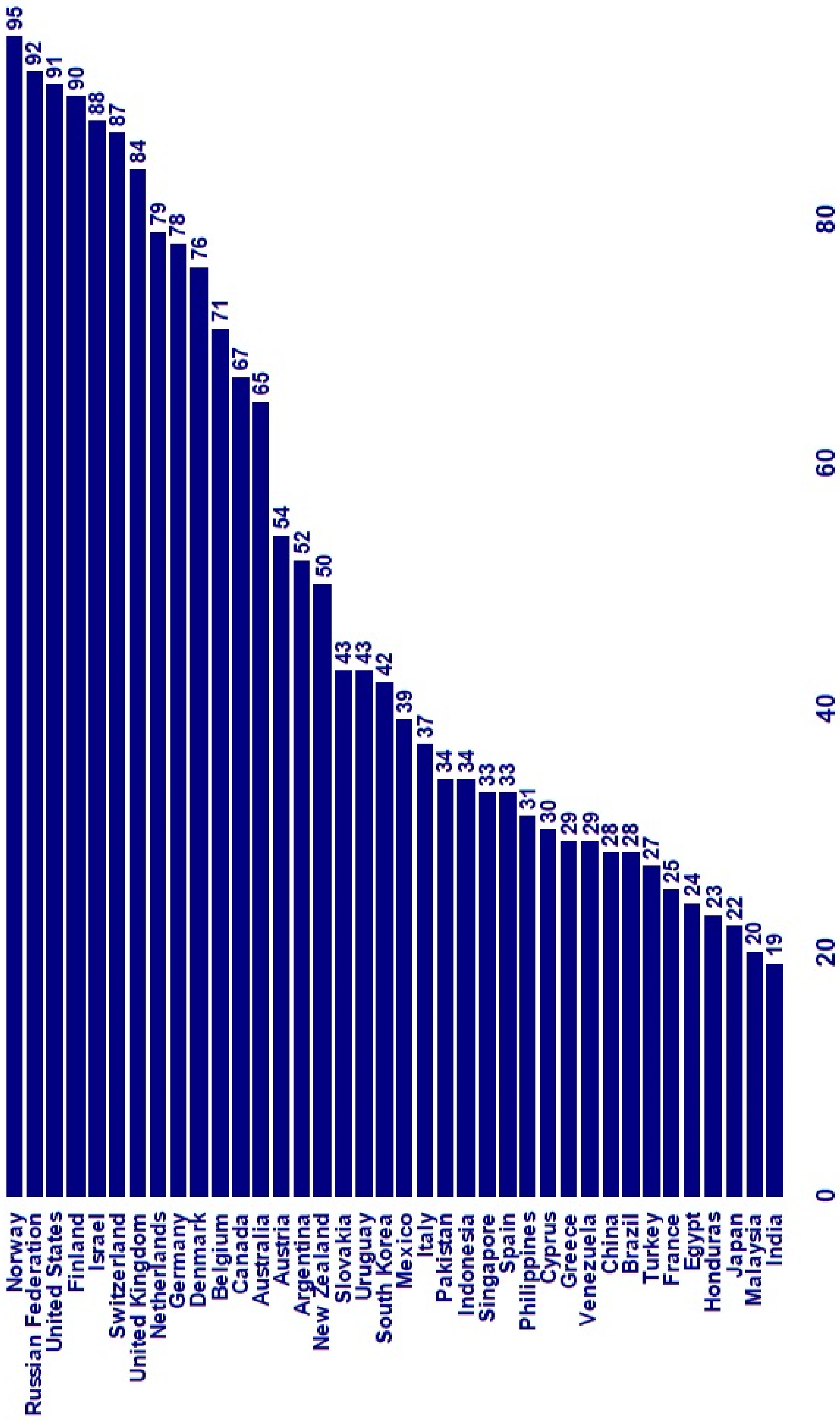

Figure 8.2: Scores of some countries on the Individualism – Communitarianism continuum. Higher the score the more individualistic people of the country is. (Trompenaars & Hampden-Turner, 2020)

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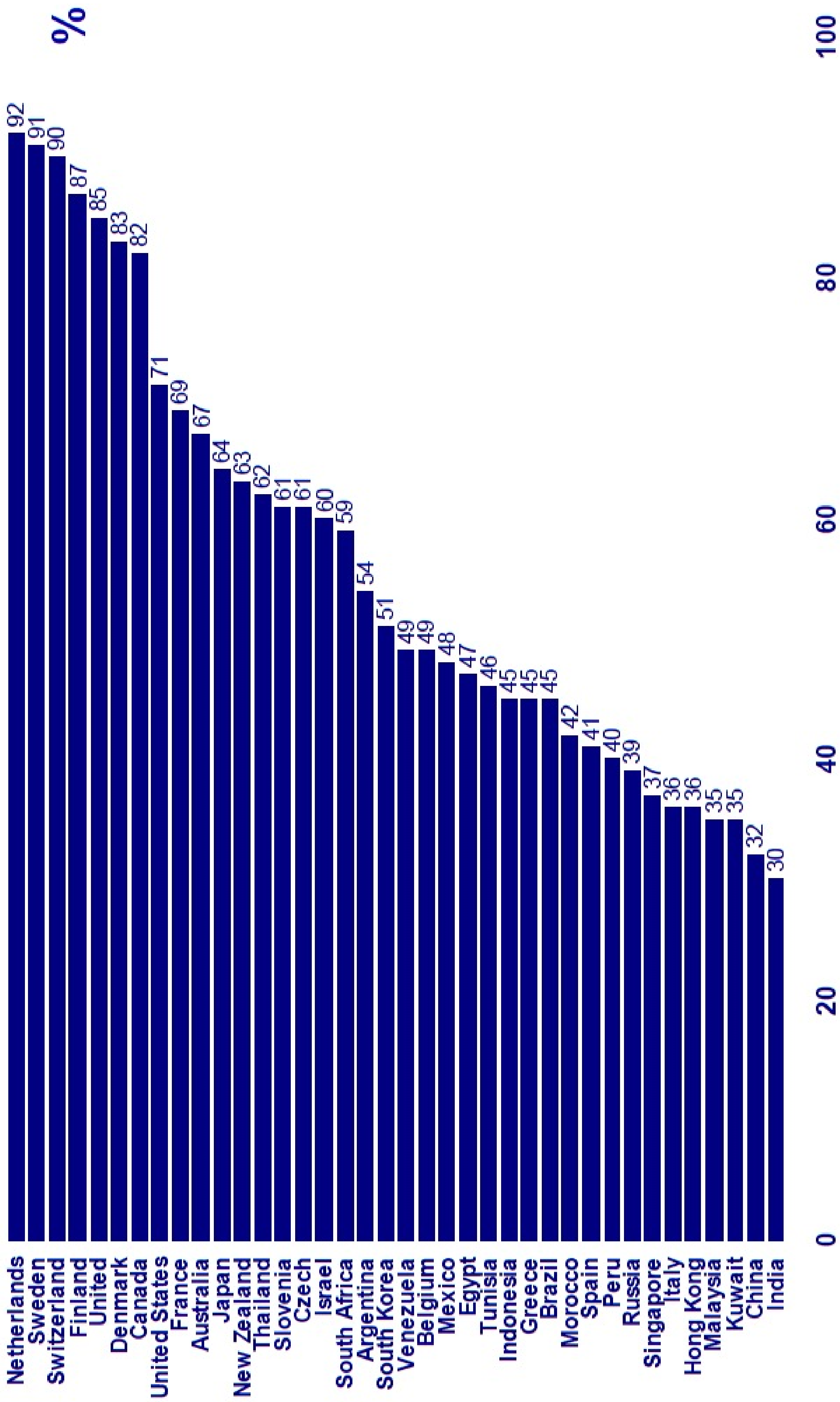

Figure 8.3: Scores of some countries on the Specific - Diffuse continuum. Higher the score the more specific the people of the country is. (Trompenaars & Hampden-Turner, 2020)

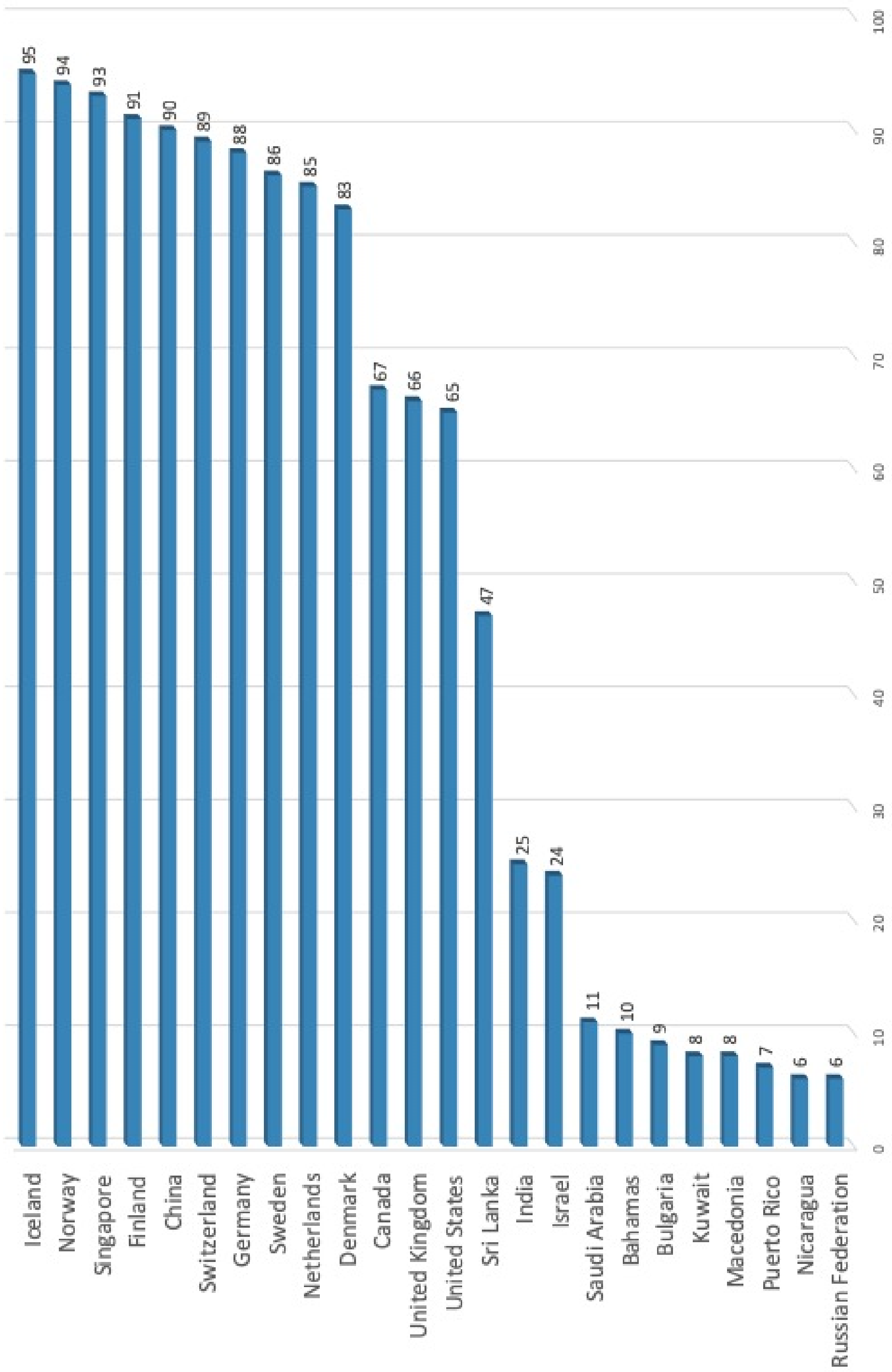

Figure 8.4: Scores of some countries on the Neutral - Affective continuum. Higher the score the more neutral the people of the country is. Created by author based on the data from Trompenaars and Hampden-Turner (2020)

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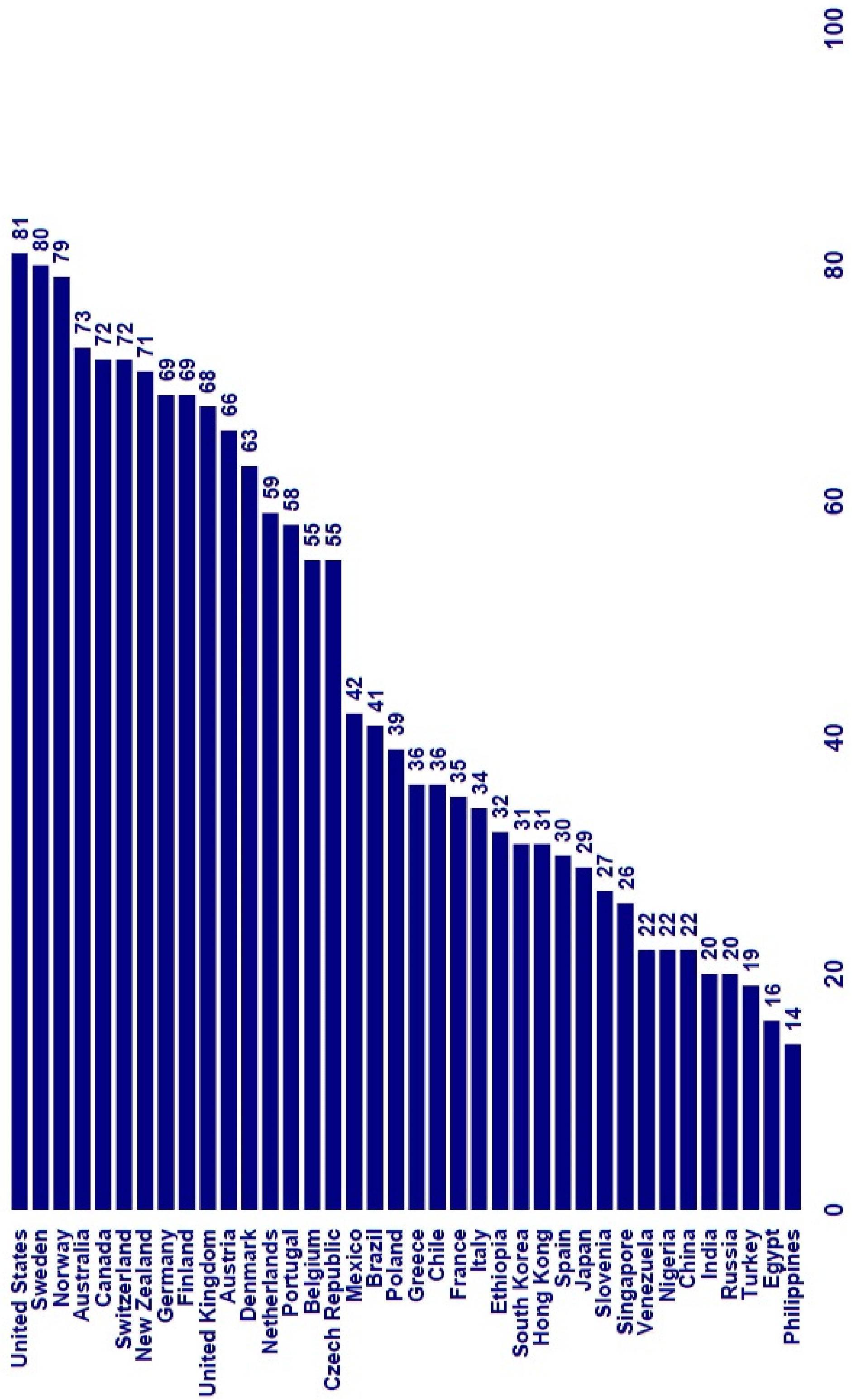

Figure 8.5: Scores of some countries on the Achievement - Ascription continuum. Higher the score the more achievement oriented people of country the is. (Trompenaars & Hampden-Turner, 2020)

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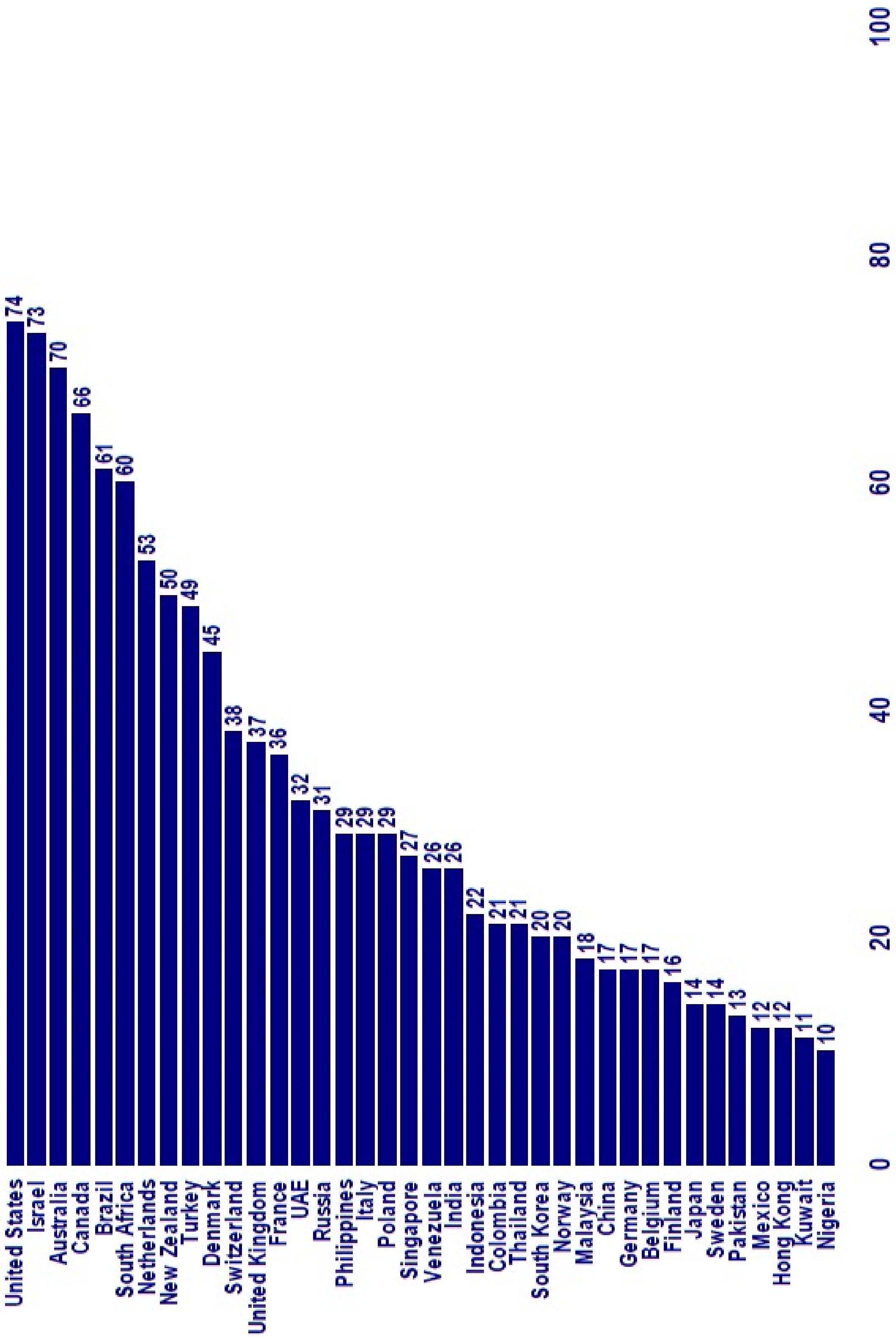

Figure 8.6: Scores of some countries on the Internal - External continuum. Higher the score the more internally oriented the people of country is. (Trompenaars & Hampden-Turner, 2020)

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8.2 Appendix B: Case Study protocol

8.2.1 An Overview of the Case Study

Aim/Objective: This thesis aims to capture the impact of COVID-19 pandemic startups and to accumulate knowledge of best entrepreneurial practices to support startups through the crisis.
Main RQ: How are the innovative startups in India responding to the COVID-19 crisis and how is this crisis stimulating creative destruction among innovative startups in India?
Sub-RQ:

1. What are the biggest challenges innovative startups in India are facing amidst the COVID-19 crisis and how does it impact their day-to-day business and innovation?

2. What dilemmas are innovative startups in India facing while responding to the COVID-19 crisis and how are they responding to these dilemmas?

3. Up until now, what opportunities and key learnings have emerged out of the COVID-19 crisis and to what extent are these being exploited and incorporated by innovative startups in their innovation practices?

Research Design: Case Study : The Context - India; The Phenomena - COVID-19 crisis and; The Unit of Analysis: Startups in India.

Important Literature/Theory: Schumpeter's innovation theory, Dilemma Theory, Dilemma Reconciliation Process (DRP), National and corporate culture, Case study methodology

8.2.2 Interview Guide and data collection procedure

Informed consent; anonymous; interviews over audio and video call

Consent before the interview

Record this consent process using a digital recorder (if participant has consented to this)

[Oral information giving stage]

Hello, I am Chandraprabha Jha (Chandu). I am writing my master's thesis and I wondered if you'd be interested in being involved.
I am currently a Master's student at the University of Gothenburg (Handelshögskolan) in the program MSc. Innovation & Industrial Management. My research is on the effect of COVID-19 crisis on innovative startups in India. Can I tell you more about the study? [Await confirmation]
In my study, I want to investigate what challenges and dilemmas are these startups facing and how are they dealing with them. At the same time I want to identify the best practices and key learnings while managing the crisis. It is very exploratory in nature. In these challenging situations managers often face competing options while making decisions. I want to capture these competing choices and try to reconcile these competing challenges.
If you choose to be a part of this project, here is what will happen:
I will have a conversation with you for about 45-60 minutes, where I will ask a range of questions about present challenges faced by your organisation, how you are dealing with it and some followup questions. The answers you give will form the basis of my master's thesis.
I will store your information/data safely and confidently and will keep the research data for until the thesis presentation/defence. This research is anonymous, which means that in any publications your name will not be used, unless you would like to be identified. [Or: I will use your name in my publications – is that ok with you?]
You don't have to agree to take part; you can ask me any questions you want before or throughout; you can also withdraw at any stage without giving a reason.
With your permission, I would like to make an audio recording of our discussion to make sure I'm getting an accurate record of your thoughts and insights.
If he/she does not agree [Instead of recording, I can take notes in my notebook. I may want to re-contact you to clarify information you gave me in your interview. In that case, I will ask you if you have time to answer some more questions.]
The project may/will be published in a thesis website or academic journal. A copy of my thesis will be deposited both in print and online in the University archives.
If you have any complaints or concerns please feel free to contact me in the first

instance. My email address is chandraprabhajha@outlook.com .
Do you have any questions?
[Oral consent seeking stage, after participant has had sufficient time to think about whether s/he wants to take part]
Are you happy to take part?
Ok, thanks, in that case let's start.
[After interview]
Is there anything else that you would like to say about anything discussed today?
Thank you very much for your time. At any point if you would like to revisit your participation in this study, do not hesitate to contact me. Just to confirm, you have agreed/declined (depending on the decision made while reviewing this option in the consent form) that you may be re-contacted at a later date to clarify or further explore some of the responses you provided here today. I have learned a lot from our conversation and appreciate gaining your perspective on these topics.

Invitation on LinkedIn/Email template
Dear Name/Sir/Madam,
Thank you for connecting with me (if LinkedIn). I am a final year Innovation Management master's student (Handelshögskolan, Sweden) and currently I am finalising my studies with my master's thesis. Through my thesis, I am trying to investigate the effects COVID-19 crisis on startups in India.
As a decision maker/leader who is closely working with the day today operations of your organisation you are in an ideal position to give me valuable first hand information from your own perspective.
I would greatly appreciate an opportunity to have a conversation with you for around 45-50 minutes of your time about how your organisation is responding to the corona crisis. Would you like to have a conversation about it (preferable within next 2 weeks)? If you have any questions please do not hesitate to ask.
I would be really grateful to you for this kind gesture! Have a nice day ahead.

Kind regards,
Chandu

Later a reminder email or message on LinkedIn, if not responded within 2 weeks.

Hi ,
Just a small reminder, and to reiterate that I am very keen to learn about your experiences in the [industry] with COVID-19. Hope we can talk soon!
Kind regards,
Chandu

Respondents for the Interviews

Table 8.1: Respondents from the pilot study

Respondent	**Respondent's function and location**	**Mode of communication**
1	Business Analyst at a hi-tech startup *(Bangalore)*	Phone
2	Production Manager at a low-tech manufacturing startup(*Delhi*)	Video
3	Chartered Accountant (in interaction with a number of of startups and entrepreneurs)*(Rajkot)*	Phone
4	Assistance Vice President handling SME loans department at one of the largest private bank in India (*Ranchi*)	Video

Table 8.2: Characteristics of Interviews for the case study

Respon. No.	Startup name (foundation year)	Sector/Expertise	Location	Mode of communication	Length (min)
1	MoEngage (2014)	Customer Engagement Platform	Bangalore	Phone	67
2	RevFin (2018)	Financial Services (Fintech)	New Delhi	Phone	64
3	Sumeru Enterprise Tiger (2016)	Software Product	Bangalore	Phone	82
4	InnovoSoft Technologies (2016)	Various sectors (Hi-tech manufacturing, Solution provider, Ed-tech etc)	Thivandrum	Phone	96
5	Instamojo (2012)	Social Commerce, Mobile Commerce, Payments, MSME	Bangalore	Phone	37
6	SFarmsIndia (2018)	Digital Agricultural Land Marketplace	Hyderabad	Skype	49
7	Inventindia Innovations (2011)	Product Design and Development	Ahmadabad	Zoom	37
8	Beagle Security (2016)	Cyber Security software product	Trivandrum	Zoom	62
9	LegalWiz (2015)	Professional services for small businesses, start-up entrepreneurs and individuals (main focus on legal services)	Ahmadabad	Zoom	49
10	366Pi (2013)	IT Consulting and Solutions	Ranchi	Phone	56
11	Mobiotics (2011)	Over The Top (OTT) Media Services	Bangalore	Zoom	34
12	Yulu (2017)	Urban Mobility/ Micro-mobility service provider	Bangalore	Zoom	55
13	Meesho (2015)	Platform for E-commerce	Bangalore	Zoom	37
14	Verloop (2016)	Support Automation Platform	Bangalore	Zoom	57
15	Biziga (2012)	Digital Business Simulations	New Delhi	Zoom	#

Data Collection Questions for Interviews

1. What is your role in your organisation? How have ways of working changed in your organisation because of Covid-19?

2. What are the biggest challenges you are facing currently in your organisation because of COVID-19 crisis? Collect data related to:

   (a) Technological challenges? Digital transformation? How is it creating a problem for your organisation? What actions have you or your organisation taken to tackle this challenge? How can this be solved? What needs to change (behaviour/tech) in order to realise the business benefits? In the process of solving the problem is there any problem that is going to be created? Why do you then still want this solution?
   (b) Business process related? (same followup questions)
   (c) Leadership challenges?
   (d) Employees and work environment? (same followup questions)
   (e) Customers/partners? (same followup questions)

3. How have the needs and behaviours of their most important customers changed? How are you managing it?

4. What key learnings have you identified tackling this challenge?

5. What are you doing to work towards a rapid recovery?

6. Does your organisation identify possibilities/opportunities that could ultimately emerge from the crisis? Has any opportunity been created? Do you see your organisation innovating with new opportunities emerging or adapting to this crisis? (Define innovation)

7. Can you give an example?

8. Is there any specific trend or technology your company is specifically looking forward to?

9. Was there any problem at your organisation that this crisis has solved /brought forward? Collect data related to:

   (a) Technology? How?
   (b) Business process
   (c) Employee and work environment?
   (d) Customers/partners?

10. How is your organisation preparing for the near future?
11. What are the biggest challenges facing your organisation do you see ahead?
12. How are other players (competitors) in your industry in India dealing with this crisis?
13. Who is the "hero" in dealing with the crisis? How have they emerged to be a hero?
14. What have they done differently? (benchmark their digital channels against those of their competition)
15. What can be the best practice (imagine you are a superhero)?

8.2.3 Guide for the case study report

1. Introduction
2. Background
3. Case
4. Research Design
5. Results
6. Discussion
7. Conclusion
8. Appendices