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PHD THESIS

**HOW ENTREPRENEURSHIP
ECOSYSTEM AFFECTS STARTUP
PROCESS AND SUCCESS**

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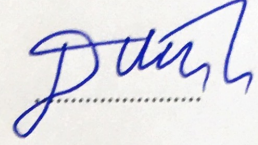
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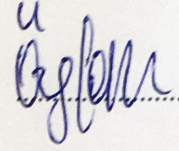
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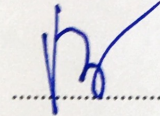
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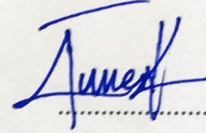
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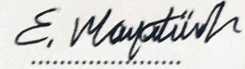
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ABSTRACT

HOW ENTREPRENEURSHIP ECOSYSTEM AFFECTS STARTUP PROCESS AND SUCCESS

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Entrepreneurship ecosystem, which is composed of cultural attributes (CA), social attributes (SA), and material attributes (MA), can enable and disable the success or failure of entrepreneurs by affecting their choices on creating radical or incremental innovation. However, the literature provides a very little understanding on this entrepreneurial process by highlighting diverse paths of developing radical and incremental innovation. The purpose of current study is to explore how different configuration of entrepreneurial ecosystem domains – CA, SA, MA – affect the type of innovation among entrepreneurs by leading them to explore or exploit commercial opportunities along the relevant risks of legitimacy versus competition. After an elaborate review of literature, the study attempts to understand the process by conducting a qualitative study by applying content analysis method. The findings drawn from semi-structured qualitative study (SSQS) of 30 entrepreneurs reveal that some of the domains in entrepreneurship ecosystem such as network, worker talent, support services (accelerators) and open market have a direct impact in entrepreneurial success and these domains are nested with type of innovation and risks.

Keywords: Entrepreneurs, entrepreneurship ecosystem, legitimacy, competition, startups

ÖZ

GİRİŞİMCİLİK EKOSİSTEMİ GİRİŞİMCİLERİN GELİŞİMİNİ VE BAŞARISINI NASIL ETKİLER

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Kültürel, sosyal ve materyal olmak üzere üç ana kısımdan oluşan girişimcilik ekosistemi girişimcilerin radikal veya artırimsal inovasyon yapma kararlarına etki ederek girişimcileri başarıya veya başarısızlığa götürmede önemli rol oynamaktadır. Literatür girişimcilik süreçlerini incelerken bu sürecin radikal ve artırimsal inovasyon ile ilişkisine çok az değinmektedir. Bu çalışmanın temel amacı; girişimcilik ekosistemindeki elemanların meşruiyet ve rekabet riskleri karşısında ticari fırsatları işleme ve keşfetme yoluyla girişimcinin inovasyon seviyesini ve bu durumun başarıya olan etkisini nasıl etkilediğini araştırmaktadır. Bu çalışma kapsamlı bir literatür araştırmasını takiben içerik analizi metotunu temel alarak kalitatif bir araştırma yöntemi kullanmakta ve süreci anlamayı amaçlamaktadır. 30 girişimci ile yapılan yarı-yapılandırılmış kalitatif araştırma sonucunda elde edilen bulgular; girişimcilik ekosistemindeki iş ağlarının, insan kaynaklarının, destek servislerinin (hızlandırıcılar) ve pazar yapısının girişimcilerin başarılı olmasında doğrudan bir rol oynadığını göstermekte ve bu elemanların inovasyon tipi ve girişimcilerin karşılaştığı risklerle doğrudan ilişkili olduğunu göstermektedir.

Anahtar sözcükler: Girişimci, girişimcilik ekosistemi, meşruiyet, rekabet, startup

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Fatma Hacıoğlu
İzmir, 2020

TEXT OF OATH

I declare and honestly confirm that my study, titled “HOW ENTREPRENEURSHIP ECOSYSTEM AFFECTS STARTUP PROCESS AND SUCCESS?” and presented as a PhD Thesis has been written without applying to any assistance inconsistent with scientific ethics and traditions. I declare, to the best of my knowledge and belief, that all content and ideas drawn directly or indirectly from external sources are indicated in the text and listed in the list of references.

Fatma Hacıoğlu

Signature

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22 June 2020

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LIST OF ABBREVIATIONS

CA	: Cultural Attributes.
MA	: Material Attributes.
OECD	: Organization for Economic Co-operation and Development.
SA	: Social Attributes.
SSQS	: Semi-structured Qualitative Study.
USA	: United States of America.
WEF	: World Economic Forum.

INTRODUCTION

Entrepreneurship and their innovative approach are important as all the organizations and businesses look for differentiation in order to compete and survive economically. Specifically, startups have been spotted as the source of innovation in the last decades and their innovations carry a great importance as they lead to job creation and thus economic growth (Baumol, 2002; Kirchoff and Spencer, 2008). Many government and non-governmental institutions have started initiatives to support innovative entrepreneurship activities by giving incentives and financial aims to create entrepreneurship ecosystems to boost economies at macro levels. Moreover, many researches have been conducted to find the rightest way for an innovative idea to become successful in the market. Many domains and attributes of entrepreneurship ecosystems have been defined as indispensable elements of creating successful entrepreneurs. However the literature provides a limited knowledge on how these diverse ecosystem variables affect entrepreneurs' innovation path (radical versus incremental) and how it can lead them to be successful even though they have created a very innovative product or service.

The current study attempts to address the raised questions by taking an entrepreneurial ecosystem perspective. Entrepreneurial ecosystem has been defined as “a set of networked institutions [...] with the objective of aiding the entrepreneur to go through all the stages of the process of new venture development” (Isenberg, 2011) and frequently used to lead entrepreneurs to overcome obstacles by getting support of ecosystems that consist of many different domains or pillars such as policy, finance, culture, supports, human capital and markets, etc.

The study proposes that ecosystem domains do not only affect the success of entrepreneurs and affect the degree of innovation too. Moreover, these domains provide them the necessary toolbox in order to follow different paths of innovations successfully. For instance, if they choose more radically innovation, a supportive ecosystem can help entrepreneurs to fight against the risk of radically innovative such as legitimacy problem (by providing the necessary networks, connections, technological infrastructure etc.). Whereas, if they choose to follow an incrementally

innovative path, they may face with the risk of competition. Therefore, the current study proposes that it does not necessarily mean that more radically innovative innovations can be more successful than incremental ones since both types of innovation involve risks: risk of legitimacy for radical versus risk for competition for incremental. The different tension and risk of being radically and incrementally innovative can be relieved by using the right mix of resources and tools provided by entrepreneurial ecosystem.

Following the entrepreneurial ecosystem perspective, the study attempts to address the following research questions:

RQ1: What is the impact of entrepreneurial ecosystem domains on the type of innovation among entrepreneurs?

RQ2: Which characteristics of entrepreneurial ecosystem domains lead an entrepreneur to explore commercial opportunities? Which characteristics of entrepreneurial ecosystem domains lead an entrepreneur to exploit commercial opportunities? Is there any difference between the characteristics of adopting exploration versus exploitation approach?

RQ3: Which type of risk does an entrepreneur take when s/he adopts exploration approach? Which type of risk does an entrepreneur take when s/he adopts exploitation approach? Is there any difference between the risks of adopting exploration versus exploitation approach?

RQ4: What is the role of individual level variables on the adoption of exploration versus exploitation?

The study contributes to the literature in terms of attempting to find a causality between entrepreneurial ecosystem domains and entrepreneurial success. It also tries to understand whether there is a right pattern of resources and tools for radically and incrementally innovative entrepreneurs that leads to success during entrepreneurial process. The study also aims to understand entrepreneurial process and success from the point view of holistic perspective by searching dynamics of startup ecosystems and attempting to associate being radically innovative and confronting with the risk of legitimation and being incrementally innovative and confronting with the risk of competition on the contrary side. It is believed that this study will also contribute to practitioners that work in entrepreneurship ecosystems in terms of understanding the

role of different actors and pillars and their effect on entrepreneurial success. It is possible to develop policies at country level to boost economic activity of entrepreneurs after understanding the gaps in the ecosystems.

The study is organized in three sections. The first chapter reviews existing researches and theories about entrepreneurship and entrepreneurial success, innovation and innovativeness and entrepreneurship ecosystem and its domains by checking out economic, political, cultural and regional development researches and it follows by discussing ten core cultural, social and material attributes of entrepreneurship ecosystem (Spigel, 2015). Later, success of new companies within a specific entrepreneurship ecosystem is handled within the frame of degree of innovation and entrepreneurial success. Second chapter presents research methodology and explain how the study was conducted and last chapter is finalized with findings and conclusion about the study.

1. CHAPTER: A CONCEPTUAL FRAMEWORK

1.1. Entrepreneurship and Entrepreneurial Success

Entrepreneurship as a term has been first used by Richard Cantillon in 1775, he explained his analysis about entrepreneurs in the society and defined entrepreneurs as “responsible for the production, circulation, and exchange of goods in the economy in an attempt to meet the demands of property owners (Cantillon, 1931).” His statements about entrepreneurs shaped around temporary revenue channels and risk-taking characteristics of entrepreneurs. Later in 1800s, Jean Baptiste Say explained the role the entrepreneur in developing a financial value by exchanging the goods between different parts of society in order to create profit (Say, 1836). Knight (1921) defines entrepreneur as an actor who creates profit in a situation of high risk and uncertainty and he thinks that entrepreneur gains the profit as a gift for bearing the risk that other people do not want to take.

Schumpeter evaluated the term within the scope of innovation for the first time in literature and mentioned about the capabilities of an entrepreneur for observing and exploiting an opportunity by saying that “entrepreneurs as individuals who exploit market opportunity through technical and/or organizational innovation” (Schumpeter, 1965). He also explains entrepreneurship construct as a dynamic process rather than a stable and permanent structure; thus “creative destruction” that is led by entrepreneurs create new markets and expand the economy. Similar to Schumpeter, Drucker (1985) also defined entrepreneur and entrepreneurship within the scope of opportunity seeking by indicating that “the entrepreneur always searches for change, responds to it, and exploits it as an opportunity.” While many researchers have focused on characteristics of entrepreneurs and innovation in order to define entrepreneurship, Krizner (1983) linked entrepreneurship with market needs and entrepreneur’s ability to observe and fill this market need in order to create profit. He says that combination of existence of errors in the market and “alertness for opportunities” as an entrepreneur characteristic creates high profitable businesses.

Gartner (1990) framed entrepreneurship around eight different domains and evaluated non-profit organizations under the frame of entrepreneurship. These domains are the entrepreneur, innovation, organization creation, creating value, profit

or non-profit, growth, uniqueness, and the owner-manager. Kuratko (2009) made a broader definition by including essentials for an entrepreneurial initiative;

“Entrepreneurship is a dynamic process of vision, change, and creation. It requires an application of energy and passion towards the creation and implementation of new ideas and creative solutions. Essential ingredients include the willingness to take calculated risks, formulate an effective venture team, marshal the needed resources, build a solid business plan, and, finally, the vision to recognize opportunity where others see chaos, contradiction, and confusion.”

The entrepreneur is the person who takes initiative to gather resources, manage a venture and assume the risk of doing so (Kuratko, 2018). He often emphasizes the difference between a manager and entrepreneur by risk propensity and certain characteristics that lead to start a business.

Taking risks to found new businesses and gain profit also bring a high potential for failure. Many researches have been conducted that attempts to understand the criteria of entrepreneurial success and failure. As we can see in the definitions of entrepreneurship above, it is a process that is generally made with the motivation of profit. Thus, it will not be wrong to say that entrepreneurial success is directly linked with profit and financial growth (Say, 1836; Schumpeter, 1965; Krizner, 1983, Gartner, 1990). However, in recent literature, entrepreneurial success is handled at the level of firm and entrepreneur under two main group as monetary and non-monetary success criteria (Angel & Jenkins, 2018). Many firms have motivation for creating jobs or fulfilling social and environmental goals (Di Domenico, Haugh & Tracey, 2010). Personal satisfaction and motivations are also explained as entrepreneurial success factors (Fisher et al., 2014).

However, main approach in the literature evaluates the issue in terms of monetary success at the level of firm. Many studies identify that entrepreneurial success directly links with sales growth and profitability (Crane and Sohl, 2004; Steffens et al., 2009). Ardichvili et al. (1998) stated assets, employment, market share, physical output, profits and sales as entrepreneurial success factors. Dafna (2008)

deduces that if a company has permanent trade activities even with a low profit, this means an entrepreneurial success. In the last decades, technology or innovation based startups can start making profit after a long time because of their business model, thus startup success is also defined under getting investment (KPMG, 2013) or growing user statistics; sales metrics such as Return on Advertising Spending, Average Revenue per User and Revenue Run Rate and customer metrics such as Customer Acquisition Cost and gross margin that is directly linked with economic growth (Ehrenberg, 2014). In this research, we prefer to evaluate entrepreneurial success within the scope of economic growth by checking sales, profits and customer acquisitions.

Entrepreneurship has “a unique and critical role” in economic growth of countries (Schumpeter, 1965; Leibenstein, 1968). Entrepreneurship leads to economic growth by generating new jobs, creating new channels of revenue and increasing wealth accumulation (Baumol, 1993; Audretsch 1995; Holcombe, 1998; Wennkers & Thurik, 1999). In the literature many researchers combine all the entrepreneurs under the same umbrella and assume that entrepreneurial activities have a direct impact on economic growth. Recent researches show that there is ambiguity on the issue and entrepreneurial activities should be classified according to their innovativeness levels and impact of entrepreneurship should be evaluated accordingly. Audretsch & Thurik (2000) states that countries which “shift from the managed to the entrepreneurial economy” based on innovation “have had lower levels of unemployment”.

Acs (2006) explains to clarify this ambiguity by separating entrepreneurship into two categories. “Necessity entrepreneurship” consist of only founder and few workers and generally creates no additional value economically. Whereas “opportunity entrepreneurship” is described as the activation of “an unexploited or underexploited business opportunity”, which can create a high level of economic value in the society. His research clearly shows that “necessity entrepreneurship has no effect on economic development while opportunity entrepreneurship has a positive and significant effect”. Acs (2008) links opportunity-based entrepreneurship with high impact entrepreneurship, which consists of three main pillars as innovation, capital markets and labor markets and thus combination of these pillars lead to economic growth (Acs, 2008). As we can see existence of entrepreneurial activities have a great potential to create innovation based, high impact businesses. High competition among similar firms necessitates unceasing innovation attempts in order to differentiate in the

market and thus provide a sustainable growth for the firm. So, entrepreneurs are definitely the main actors in innovation ecosystems together with other actors such as government, universities and investors (Herrera et al.,2018).

1.2. Innovation and Its Degrees

Innovation has become a popular term in every part of daily life in recent years; it is an indispensable part of company strategies that plans to survive in competitive markets at both regional and global scales. Social and cultural life also necessitate “newness” to improve the lives of people. It is very likely that innovation has many facets such as material, social and cultural innovations directly affecting and improving daily lives of everyone. However, in this research, we prefer to take the term innovation within the frame of business and entrepreneurial activities. Schumpeter (1934) mentions the ability of entrepreneurs for “creating new combinations and changes” and refers the importance of innovation-based entrepreneurship in his book “Theory of Economic Development: an inquiry into profits, capital, credit, interest rate and the economic cycle.” He mainly focuses on commercial benefits and profit-making side of creating something “totally new” in terms of capital and emphasizes the importance of innovation for economic growth. Later Freeman develops Schumpeter’s research by linking innovation with technology and explains that “technical innovation or simply innovation is used to describe the introduction and spread of new and improved products and processes in the economy and technological innovation to describe advances in knowledge” (Freeman, 1974). On the other hand, Damanpour (1996) emphasizes the change within innovation process that is made through organizations by making “new product or service, new process technology, new organization structure or administrative systems, or new plans or program”.

OECD also gives great importance and conducts researches annually about the innovation levels of countries and regions. OECD groups innovation under four types as product innovation, process innovation, marketing innovation and organizational innovation. OECD’s definition of innovation is widely used in the literature as followingly “an innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational

method in business practices, workplace organization or external relations” (OECD, 2005). Besides this broad definition of OECD, many researchers have defined innovation at the level of firms by positioning innovation “as the life blood of corporate survival and growth” (Zahra & Covin, 1994). Wong et al. (2008) evaluated newness at the level of firm and defined “Innovation ... as the effective application of processes and products new to the organization and designed to benefit it and its stakeholders”.

Drucker (1985) linked entrepreneur’s opportunity seeking activities with “the search purposefully for the sources of innovation” and he believes that finding the right sources for innovation may lead to successful entrepreneurs.

Types of innovation is another widely discussed issue in the literature since there is no consensus on the issue, the concept is generally shaped around the degree of newness for the product, service, process or business models (Garcia & Callantone, 2002). Kotsemir and Abroskin (2013) classify innovation typologies under four blocks as followingly;

- Block A “Classical” types consist of “product innovation, process innovation, service innovation, marketing innovation, organizational innovation, design innovation and supply chain innovation”,
- Block B “New” types consist of “frugal innovation, red ocean innovation, blue ocean innovation, experience innovation, value- migration innovation, business model innovation, organic innovation, etc.”,
- Block C “Innovativeness degree” type consist of “weak innovation (incremental, routine, minor, regular, non-drastic and basic innovation); medium strength innovation (architectural, niche creation,§3 modular, fusion, evolutionary, sustaining innovation); strong innovation (radical, major, breakthrough, disruptive, revolutionary, paradigm, fundamental, discrete innovation),
- Block D “Dichotomic” types consist of user-driven/supply-side innovation, open/closed innovation, product/process innovation, incremental/radical innovation, continuous/discontinuous innovation, instrumental/ultimate innovation, true/adoption innovation, original/reformulated innovation.

We can deduce that all these typologies have one main common feature which is the the concept of newness; no matter the degree of newness is low or high. All these terms have been proposed to explain the creation of newness process; they either explain the nature of newness or state the process that leads to newness.

Schumpeter (1934) states that entrepreneur must “disturb the existing equilibrium situation...” which actually means exploring by destructing the whole market for new products or services and we can say that he actually confers the process that leads to newness. On the other hand, Kirzner (2015) implies that entrepreneur needs to find a gap or opportunity in the market to fill and make profit, which actually means exploiting the existing market, Kirzner also states the process that leads to newness.

These two distinct definitions related to innovation which evolve around creating a totally new product or service (Schumpeter, 1934) and filling a gap in the market (Kirzner, 2015) actually refers to radical and incremental innovations in the recent literature by stating the process that leads to newness from the perspective of how entrepreneur acts during the process of developing innovation; exploring or exploiting (Blank and Naveh, 2019).

Entrepreneur’s decision whether to make radical or incremental innovation has an impact on business growth. Radical innovation is defined as innovations that offers high level of change in the state-of-art which actually turns out to create a new product, service or a new market (Connor, 1998). March (1991) emphasizes the “vulnerability” of radical innovations by saying that “returns from exploration are systematically less certain compared to returns from exploitation, ... the search for new ideas, markets or relations has less certain outcomes, longer time horizons, and more diffuse effects than does further development of existing of existing ones”. On the other hand, incremental innovation can be explained by only adding new features or improvements into an existing product or service in order to provide an additional value for the customer (Connor, 1998). “Refinement of an existing technology” throughout exploitation seems to be more profitable in the short run as knowledge and experience acquired in the organization make incremental innovation more rewarding however finding the right balance between exploration and exploitation carries a great importance and is perceived as a strategical decision within organizational level. This decision-making process is generally assumed as an investment opportunity that is shaped with an expectation of “probability distribution over returns” (March,1991).

1.3. Drivers of Radical versus Incremental Innovation

The decision of a firm whether to make radical or incremental innovation has been the subject of strategical management since it involves investment allocation decisions and the process may lead to firm to a very “vulnerable” situation in terms of capital (March, 1991). Radical innovation has been as the accelerator for new businesses as it leads to creation of new products, services or markets, which actually creates new opportunities to increase business growth in a faster way but with a greater risk. On the other hand, incremental innovation provides a more certain way of revenue with little changes (Jansen, van den Bosch & Volberda, 2006; Atuahene-Gima, 2005; Diego et.al., 2015).

Firm’s decisions are generally affected by top managers’ motivation for sustaining organizational efficiency or seeking more opportunities in order to create more revenue (Salavou & Lioukas, 2003). In general, researches emphasize the importance of finding the right balance between radical and incremental innovation (March, 1991; Lavie, Stettner & Tushman, 2010). What drives radical and incremental innovation in firms is another issue that is discussed very often in the literature recently (Jansen, van den Bosch & Volberda, 2006; Radas & Bozic, 2009; Engen & Holen, 2014, Fores & Camison, 2016).

Many researches defend that entrepreneurial traits, skills or attitudes are indispensable part of radical or incremental innovation as founders or managers have responsibility to lead the firm, motivate the team and take place in decision-making process (March, 1991). Another view in the literature proposes that environmental factors that are beyond entrepreneur’s character have also great impact on the type of innovation. Combination of different factors such as social network, governmental infrastructure, knowledge diffusion etc. may lead to incremental or radical innovation (Gartner, 1989). Thus, we preferred to analyze drivers of radical versus incremental innovation at two levels depending on these views in the literature as personal traits and skills of entrepreneurs and contextual factors.

1.3.1. Personality Traits and Skills

Kerr, Kerr, & Xu (2018) refers to Frank Knight's book *Risk, Uncertainty and Profit* in 1921 as the beginning point of research on personalities of entrepreneurs. Early entrepreneurship research has given a great attention to traits of entrepreneurship specifically risk-taking and avoidance of uncertainty by indicating that traits of entrepreneurship has a great role in new venture creation (Knight, 2017). McClelland (1965) proposes that entrepreneur is driven by "need for achievement" rather than motivation to gain money, he evaluates personal traits of entrepreneurs within the scope of behavioral research. Wu & Dagher (2007) researched the relation between need for achievement and persistence, which actually leads to fulfillment of business goals and they found that need for achievement has a positive effect on the realization of business goals.

Bearing uncertainty or tolerance of ambiguity is another important trait that is evaluated in the literature (Knight, 1921, Khilstrom & Lafont, 1979; Schere, 1982). Tolerance of ambiguity can be described with these questions; How entrepreneurs react during ambiguous situations in business? Do they continue or stop running their business? And do they bear uncertainty or try to do something more stable? (Kets De Vries, 1977). Many studies have shown that high tolerance for uncertainty bring success to entrepreneurs; it is also possible to say that how an entrepreneur acts in an ambiguous situation impacts the success of entrepreneurship process (Sexton&Bowman, 1985; Begley & Boyd, 1987; Koh, 1996). Lettl, Herstatt, & Gemuenden (2006) asserts that tolerance for ambiguity together "with certain set of characteristics can contribute the development of radical innovation."

Risk is another issue that is often related to entrepreneurial traits; Kerr, Kerr, & Xu (2018) classify and explain risk related issues as "Risk attitudes are described in the literature as risk preferences, risk tolerance, risk aversion, and risk propensity. All usages of the concept attempt to answer the question of whether something in an individual's personality predisposes them to take on the risky conditions of entrepreneurship and the impact of this personality trait on outcomes". Khilstrom & Lafont (1979) develops an equilibrium model that shows "willingness to bear risk" creates the difference between an entrepreneur and a laborer. Many researches

highlight the differences between a laborer and an entrepreneur or a manager and entrepreneur; and risk taking is evaluated as a trait of entrepreneur but not as a success factor (Baron and Shane, 2004; Bolton and Thompson, 2003; Kuratko and Hodgetts, 2001).

On the other hand, Brockhaus (1980) challenges the impact of risk taking on entrepreneurship success by disproving that “risk taking propensity may not be a distinguishing characteristic of entrepreneurs” with a research using Kogan-Wallach choice dilemmas questionnaire. There is still debate in the literature whether risk taking is an integral part of entrepreneurship traits and the issue is “without a conclusive theoretical position based on empirical research” (Antonite and Wordsworth, 2009). Groenewegen and Langen (2012) suggest that the trait of risk taking in an entrepreneur with relevant factors such as business plan, seed capital and unique advantages with potential customers become drivers for radical innovation.

Rotter (1966) defines locus of control in two groups as internal and external; the person who has an internal locus of control believes that they can control and succeed everything with their own skill, power and endeavor however the person who has external locus of control believes that environmental factors have also great impact on outcomes of life. The consensus has been that higher internal locus of control increase the chance of becoming an entrepreneur (Shapero 1975; Brockhaus 1982; Gartner 1985). Tsai, Hsieh, Lee, and Hsu (2008) features locus of control as a mechanism that develops entrepreneur’s competences and problem-solving skills, which actually increases entrepreneurial activities. Su Eroz (2017) analyzes the relation between locus of control and individual innovativeness and could not find any relationship.

Self-efficacy is another important trait that is widely related to entrepreneurship. Self-efficacy can be defined as a person’s confidence to his/her own competences or skills to execute his/her aims in life. Entrepreneurs with high levels of self-efficacy inclined to take more risks and they are not easy quitters, which lead to success (Bandura, 1997). Densberger (2014) also implies that entrepreneurs with high levels of self-efficacy have a greater tendency to take more risk and he emphasizes that self-efficacy is a trait that could be developed by education and that is why policy

makers should focus on improving programs to develop personality traits of entrepreneurs. Piperopoulos and Dimov (2015) also considers that there is a relation between entrepreneurial education and self-efficacy as education can strengthen potential entrepreneurs' intentions for future entrepreneurial efforts. Chen, Greene and Crick (1998) proposes that "founders have higher self-efficacy in innovation ... than did nonfounders". Jaiswal and Dhar (2015) highlights that higher self-efficacy in entrepreneurs plays a mediating role in creating an innovation climate. Hu and Zhao (2016) also indicates that self-efficacy acts as a mediator in knowledge sharing and employee innovation. Few studies show that there is a positive relationship between self-efficacy and radical innovation (Jaussi and Randel, 2014; Hsiao et.al., 2011). However, it is possible to say that there is not much research in the literature whether high self-efficacy leads to radical or incremental innovation.

Researching entrepreneurship traits one by one may not lead us to an overall understanding about which traits of personality leads people to become entrepreneurs and innovative. Big-5-Model, which is developed by Goldberg, is a widely accepted model in analyzing personality traits in the literature from a more inclusive perspective, this model has been applied to business and specifically to entrepreneurship researches. Big-5-Model aims to measure openness, conscientiousness, extraversion, agreeableness, and neuroticism. Prior research generally confirms that people who are "more open to new experiences, more conscientious, more extraverted, and less neurotic" show more tendency to become entrepreneur (Kerr, Kerr, & Xu, 2018). Filippo (2017) analyzes the effects of traits on innovative behavior from the perspective of Big-5-model and concludes that "Innovation is negatively related to neuroticism, agreeableness and positively related to extraversion, openness to experiences and conscientiousness."

Gartner (1989) has started another discussion by implying that researching the origins of entrepreneurship by trait approach is inadequate by saying that;

"In the trait approach the entrepreneur is assumed to be a particular personality type, a fixed state of existence, a describable species that one might find a picture of in a field guide, and the point of much entrepreneurship

research has been to enumerate a set of characteristics describing this entity known as the entrepreneur... (Gartner, 1989)”

He says that finding an ideal survey that will propose the right entrepreneur traits is totally meaningless. He barely emphasizes the importance of contextual factors within the frame of behavioral approaches in creating new ventures instead of the role of entrepreneurship personalities. Rauch & Frese (2007) supports Gartner’s discussion by indicating that the ability to measure the impact of entrepreneurship increases when researchers combine personality traits with “situational parameters”.

These situational parameters are generally related to environmental factors around the entrepreneur. Thomas and Mueller (2000) questioned the impact of culture on personality formation of entrepreneurs and discussed that individualism and uncertainty avoidance are evident in some cultures and it has a direct effect on increasing entrepreneurial activity. Kerr, Kerr, & Xu (2018) emphasize the importance of contextual factors by saying that “Entrepreneurship does not occur in a vacuum, and personality traits, human capital, and environment weave the context for each attempt to start and operate a new business.” They define “complex process model of entrepreneurship” and suggest that path to entrepreneurship success should be explored by including human capital, active performance of entrepreneurs, environment and personality from the perspective of national culture.

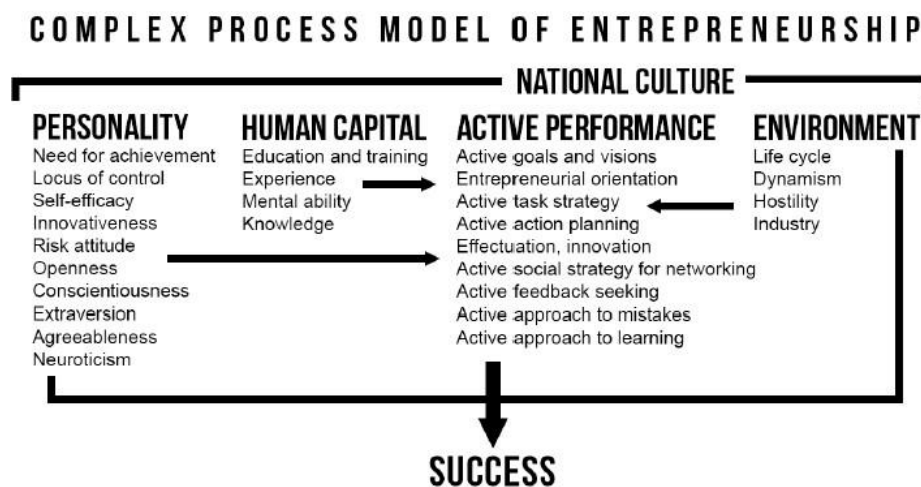


Figure 1. Kerr, Kerr and Xu (2018)

1.3.2. Contextual Factors

Marchesnay (2014) states that personal traits of an entrepreneur together with managerial skills provides sustainability to innovation process. However, personality traits can be seen as the starting point in making radical or incremental innovation as innovation is a process rather than an eureka moment. Baporikar (2014) lists contextual factors for innovation as “the individual, the team, the enterprise, processes, offerings, psychological climate, physical environment, organizational culture, market conditions and geopolitical culture”. Contextual factors that drive innovation can be handled both at individual and organizational level and also at national level. Drivers of innovation also explained within a frame of ecosystem just like entrepreneurship (Laperche and Mignon, 2018). Karaata and Hacıoğlu (2014) highlight from the literature research that innovation should be evaluated at micro and macro levels within the frame of “social, economic, political, technology policies and established networks between policy makers and implementers besides their formed institutional background.”

National innovation systems have been thought to be main drivers of both radical and incremental innovation and different innovation systems have been proposed to propel advancement in technology and provide an economic growth at national level (Guinet, 2008). National innovation system is defined as “... the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies.” (Freeman, 1987) Noronha and Cesario (2008) implied the importance of national innovations systems by saying that “a clear national trace could be identified, meaning that also national innovation systems have a clear impact on how companies act and develop their skills regarding innovation.”

Much attention has been drawn to effects of culture on innovation in the literature. Shane (1995) analyzed the impact of cultural values and preferences in the process of developing radical innovation at national levels and inferred that the more collectivist and the more uncertainty accepting societies have a greater tendency to make radical innovation. In a similar research Kalayci (2015) asserts that individualism has a positive effect on innovation while power distance, masculinity and uncertainty avoidance have no effect on innovation at the national level.

Other contextual factors that leads entrepreneurs to both radical and incremental innovation can be summed as social networks, government policies, capital and human workforce and education systems (OECD, 2007). Perin, et al. (2016) features that external social networks, which provides knowledge and technology diffusion, provides an indirect influence on radical innovation and thus organizational performance increases. Human workforce, human resources or human capital in a broader frame also thought to be an innovation driver as whole knowledge of companies are created by employees and improving knowledge that is internalized within the company throughout commercialization provide venture growth (Mariz-Perez, Teijeiro-Alvarez and Garcia-Alvarez, 2012).

On the other hand, several studies indicate that “frequently emphasized metrics of national labor, capital, government regulation, and culture” are not seen as important drivers of radical innovation. Tellis, Prabhu and Chandy (2009) explains that “internal corporate culture is an important driver of radical innovation” and other contextual factors have less impact than they are thought to have, which can be linked with globalization of the world and easy access to knowledge. It seems far better to evaluate drivers of innovation at organizational level rather than macro drivers such as national culture and government policies.

Drivers of organizational innovation is also handled within organizational culture and it is believed that it is possible to create an organizational culture that drives innovation within the company (Ekvall, 1996; Jassawalla and Sashittal, 2002; Martins and Terblanche, 2003). Social capital is also evaluated as a driver of organizational innovation; consensus has been that there is a positive and significant relation between organizational innovation and social capital (Ahn and Kim, 2017; Zheng et al., 2019) Farsi, Rezazadeh and Najmabadic (2013) advanced these researches and find that entrepreneurial orientation acts as a mediator between social capital and organizational innovation. Government policies are known to be main drivers of innovation and it is thought to be “essential for all governments to develop policies to strengthen innovation performance and outcomes”. Governments can prosper innovation climate by “empowering people to innovate” with regulations; “unleashing innovation; creating and applying knowledge, addressing global and social challenges

through innovation and improving the governance and measurement of innovation (OECD, 2010).”

There is vast amount of research and article in the literature that highlight the vital importance of innovation and entrepreneurship. Many institutions support the issue at national and global levels as economic growth is directly linked with innovation and entrepreneurship (Audretsch, 2008; Thursby, 2016). However contextual factors of innovation drivers and their impact on entrepreneurial success have not been evaluated inclusively so it is far better to analyze all these drivers of innovation within the scope of personality traits and contextual factors and their impact on entrepreneurial success together from the perspective of entrepreneurship ecosystem holistically.

1.4. Entrepreneurship Ecosystem

James Moore coined the term ecosystem for business environments in 1993 and explained “in a business ecosystem, companies co-evolve capabilities around a new innovation: they work cooperatively and competitively to support new products, satisfy customer needs, and eventually incorporate the next round of innovations”. Though Moore did not study on the domains, pillars or attributes of entrepreneurship ecosystem, he barely states the importance of different factors in an ecosystem such as finance, customer and human resources by saying that “business ecosystems condense out of the original swirl of capital, customer interest and talent generated by a new innovation, just as successful species spring form the natural resources such as sunlight, water and soil nutrients”(Moore, 1993). Later on, Van De Ven (1993) described how new firm creation increases with the support of specific industrial infrastructures in his research. He explained that institutional arrangements, public resource, financing, competent labor, proprietary R&D, manufacturing, marketing, and distribution are the most important elements in an entrepreneurship ecosystem, which actually stated as industrial infrastructure, he basically implied that “the process of entrepreneurship is a collective achievement requiring key roles from numerous entrepreneurs in both the public and private sectors”(Van de Ven, 1993). Bahrami and Evans (1995) studied entrepreneurship ecosystem by analyzing Silicon Valley case and they deduce six constituents for entrepreneurship ecosystem, which are venture capital, support infrastructure, universities and research institutions, talent pool, lead

users and entrepreneurial spirit. What is interesting in this article is the emphasize on cultural implications in an ecosystem (Bahrami and Evans, 1995).

Entrepreneurship ecosystem studies gained importance at the beginning of 2000s with policy makers' implication on entrepreneurship in terms of regional and economic growth. It became a buzzword in the last two decades and almost every government attempt to organize a systematic entrepreneurship ecosystem within their countries as it is perceived as one of the best solutions for economic development. One of the approaches that is defined for boosting economic development is creating a sustainable entrepreneurship ecosystem within a defined geographical area. This approach has been adopted by many developed and developing countries throughout the world. Regional studies gained importance within the frame of entrepreneurship ecosystem development. Neck et al. (2004) extensively researched how different pillars come together in order to create a "sustainable" ecosystem and they implied the importance of support mechanisms effects on entrepreneurship success in a specific research that is made in Boulder County, Colorado. Results show that incubator organizations, spin-offs, informal and formal networks, the physical infrastructure, and the culture of the region is strictly necessary to create a successful ecosystem. They classified an ecosystem under seven pillars such as university government, professional and support services, capital services, informal and formal networks and talent pool (Neck et al., 2004). On the other hand, Feld classified entrepreneurship ecosystem elements in more holistic way and proposed that interaction among the pillars of ecosystem is certainly necessary and it is possible to create successful ecosystems by applying certain rules to startup communities. He explained the pillars of ecosystem as strong group of entrepreneurs, mentors and advisors, a strong network access to all types of relevant resources, talent, services, capital and role of government. However, he deduced all these pillars depending on his own experiences on entrepreneurship and he did not base his researches around a theoretical background (Feld, 2012).

Daniel Isenberg, leading the Babson Entrepreneurship Ecosystem Project, defines entrepreneurship ecosystem as "a set of networked institutions [...] with the objective of aiding the entrepreneur to go through all the stages of the process of new venture development". It can be understood as a service network, where the entrepreneur is the focus of action and the measure of success" (Isenberg, 2011).

Entrepreneurship ecosystem of Isenberg has six main domains and fifty sub-domains. These six domains are policy, finance, culture, supports, human capital and markets. Isenberg explains that these domains clearly outputs what an entrepreneur needs when he/she starts business in entrepreneurial ecosystem. However, there is no research on which domain triggers the others to foster a sustainable entrepreneurial ecosystem, Isenberg (2011) also notifies that these domains lack of causality among each other, *“our diagram of the ecosystem lacks causal paths; there are no arrows indicating what causes what.... But in reality, what we conceive of as outcomes are also powerful causes. For example, the existence of one tangible, local visible success can be a powerful root ...”*.

Stam extends these researches by proposing an entrepreneurship ecosystem model, indicating that identifying pillars, domains or attributes of entrepreneurship ecosystem do not necessarily gives an output about the success of ecosystems. He uses previous literature and classifies attributes of entrepreneurship ecosystem under four concepts as framework conditions, systemic conditions, outputs, and outcomes. The framework conditions consist of the social and physical conditions while systemic conditions consist of networks of entrepreneurs, leadership, finance, talent, knowledge, and support services. Combination of these conditions with human interactions create the output of entrepreneurial activity which turns into value creation as a measurable outcome of ecosystem (Stam, 2014).

Foster and Matsushita (2014) explained that “Simply creating supportive framework conditions is insufficient” in their research supported by OECD and they tried to measure the effectiveness of pillars in different ecosystems by using questionnaires and case studies. They used eight pillars for entrepreneurship ecosystem in their research as accessible markets, human capital, funding and finance, support systems/mentors, government/regulatory framework, education and training, major universities as catalysts and cultural support (Foster and Matsushita, 2014).

1.5. Domains of Entrepreneurship Ecosystem

All these studies provide us an insight about the domains of an entrepreneurship ecosystem, and we understand that the interaction among these domains have not been studied properly yet (Isenberg, 2011). OECD has analyzed the pillars of ecosystem at a regional level and has reached to some conclusions about the musts of an ecosystem (Foster and Matsushita, 2014). Stam (2014) proposed that combination of systemic and framework conditions lead to certain outputs and outcomes that create a value within an ecosystem. However, Spigel (2017) evaluates ecosystem domains in a plainer way, which could be easier to adapt to any circumstances in any region.

Spigel (2017) explains entrepreneurship ecosystem with cultural, social and material attributes by exemplifying Calgary and Waterloo entrepreneurship ecosystems, which provides a deeper understanding about creating a successful entrepreneurship ecosystem. He improves domains with “history of entrepreneurship” as part of cultural attributes and also “open markets” as part of material attributes that add value to the creation of any ecosystem. In general, these attributes are analyzed in ten core features as cultural attitudes, histories of entrepreneurship, networks, investment capital, mentors and dealmakers, worker talent, universities, support services and facilities, policy and governance and open markets.

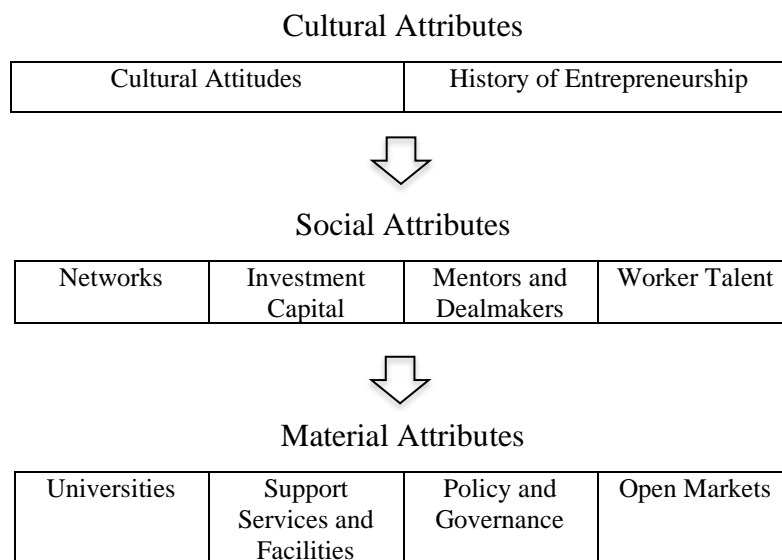


Table 1. Attributes of Entrepreneurship (Spigel, 2017)

Cultural attributes constitute of two domains; cultural attributes and histories of entrepreneurship. Spigel (2017) explains that “cultural attributes are the underlying beliefs and outlooks about entrepreneurship within a region. There are two main cultural attributes of entrepreneurial ecosystems: cultural attitudes and histories of entrepreneurship.” It is believed that cultural values and beliefs are one of the most important factors that creates a successful entrepreneurship ecosystem (Isenberg, 2011; Feld, 2012). Hofstede et. al. (2004) explains entrepreneurial activities of societies from the merit of power distance, individualism and uncertainty avoidance and implies that Western countries are more individualistic, has low power distance and uncertainty avoidance, which increase entrepreneurial intention in these regions. Jovanovic et. al. (2018) finds that cultural characteristics of in entrepreneurial ecosystem has a direct impact on creating successful ecosystems depending on Hofstede’s model of cultural dimensions.

Researches of OECD and Global Entrepreneurship Monitor (GEM) show that high rate of entrepreneurship is directly linked with positive attitude towards entrepreneurship (Mason & Brown, 2014). Boosting failure and seeing it as a very important source of experience is also a part cultural attitude in ecosystems; reflections given by society in case of failure propels entrepreneurial intentions. Feld explains that “The local community quickly absorbs the people involved into other companies. Entrepreneurs aren’t shamed when they fail; it’s quite the opposite reaction. They immediately are welcomed as advisers for other companies, entrepreneurs in residence for VC firms, and mentors or executives for accelerators (Feld, 2012)”.

Alexander and Honig (2016) improves cultural studies within the frame of entrepreneurship ecosystems and try to explain the impact of cultural attitudes at the level of religion, family and ethnic culture. Attitudes of ethnical tribes may vary even though they live in very close regions geographically and this leads to differentiation in creation of entrepreneurship ecosystems. Recent studies generally focus on creating an entrepreneurial culture by fostering infrastructures such as universities and support services, it is believed that these infrastructures have a crucial role in improving cultural domain (Shwetter, Maritz & Nguyen, 2019).

Histories of entrepreneurship is another domain that is evaluated under cultural attributes and it is explained that “examples of successful entrepreneurs within the community provide a central focus for discussing the benefits and possibilities of entrepreneurship and demonstrate that it is a potential career path for students coming out of secondary education. This helps ensure a stable supply of new entrepreneurs and further legitimizes the status of risk taking within the region’s culture (Spigel, 2017)”. Though histories of entrepreneurship have an impact on developing entrepreneurship ecosystems by providing new startup foundation indirectly, there is a debate in the literature whether existence of successful entrepreneurs as role models has a direct impact without the existence of other domains. Auken (2006) indicates that successful entrepreneurs as role models have a positive effect on the decision of people to become entrepreneurs while Novinski and Haddoud (2019) explains the impact of role models as “only joint contribution together with other drivers of entrepreneurial intentions, specifically entrepreneurial self-efficacy and attitude towards entrepreneurship”, which means histories of Entrepreneurship carry an importance only if a person has a positive attitude towards founding his/her own business.

Social attributes constitute four domains; network, investment capital, mentors and dealmakers and worker talent. A personal network can be described as a group of people who know each other and provide beneficiary activities for both sides (Cruz-Cunha, Moreira and Varajão, 2014). At business level, personal networks turn into social networks, where people create a value through relationships and interpersonal networks (Kostova and Roth, 2003). OECD (2015) defines network in “Policy Brief on Expanding Networks for Inclusive Entrepreneurship” as below;

“Entrepreneurial networks are groups of interconnected entrepreneurs, business service providers and various other relevant people who entrepreneurs can access for information and ideas for the operation of their businesses in reciprocal relationships.”

It is also emphasized that networks can provide many beneficial functions for entrepreneurs such as accessing different financial tools in the ecosystem, finding worker talent or customers and reaching to markets. There is strong evidence in the literature that investors take the decision to invest on entrepreneurs easier when they

have common contacts, which actually provides reliability and integrity (Fried and Hisrich, 1994; Shane and Stuart, 2002).

Jenssen (2001) explains that social networks carry a great importance in terms of accessing to necessary resources for entrepreneurs and she measures network intensity of entrepreneurs as weak and strong ties. This research shows us both weak and strong ties have an impact on startups, however weak ties carry a greater importance especially in initial networks. Schøtt & Cheraghi (2012) separate the network of entrepreneurs into five different subgroup which are private network (spouse, parents, other family and friends), work network (boss, colleagues, starter, business mentor), market network (collaborator, competitor, supplier, customer), international network (one from abroad, one abroad) and professional network (lawyer, accountant, bank, investor, researcher, public counselor).

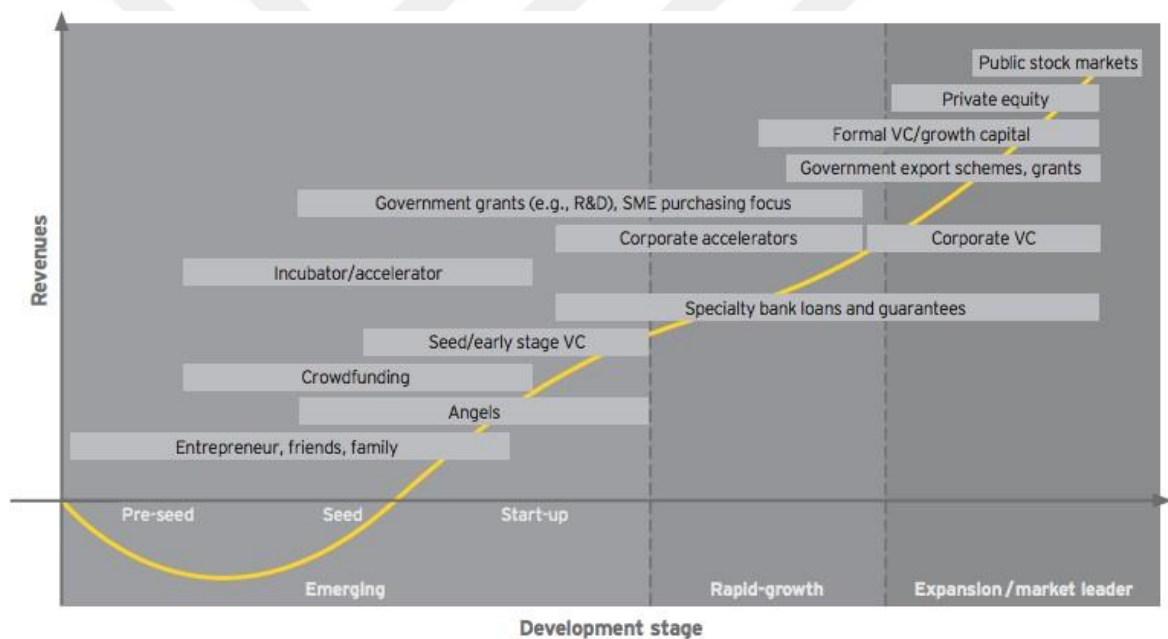


Figure 2. Taken from The EY G20 Entrepreneurship Barometer 2013

Types of investment for startups can be listed as FFF (friend, family and fools), angel investors, crowdfunding, seed/early stage venture capital, bank loans, incubator/accelerator financing, corporate venture capital, government grants, formal venture capital/growth capital, private equity and public stock markets (Schreiber and Pinelli, 2013). Angel investors and venture capitals intervene in different times of entrepreneurial process; angel investors are generally people with wealth around one million dollars; they use their own money to invest between 10.000 and 50.000 dollar.

On the other hand, venture capitalists are professional investors with funds from different institutions. Angel investors do not take part in daily management issues of startups while venture capitalists generally take part as board members (Farrell, 2013).

“Mentors and Dealmakers” is another domain under social attributes. Dealmakers and mentors are defined as experienced businesspeople who have wide social networks that can be used for the benefit of entrepreneurs; they can introduce entrepreneurs to investors, customers or service providers (Mason, 2014). Napier and Hansen (2011) believe that information sharing has a great importance in developing new ideas and innovation and thus they define dealmakers “as being central actors” in the diffusion of information. Zoller and Feldman (2012) suggest that “the local presence of dealmakers is more important for successful entrepreneurship than aggregate measures of regional entrepreneurial and investors network”. It is also thought that dealmakers have a role in strengthening entrepreneurship ecosystem and creating profitable relations between startups and investors (Napier and Hansen, 2011).

Worker talent is another domain that is evaluated within entrepreneurship ecosystem. Entrepreneurs need to hire talented and qualified workers for success (Cohen, 2006; Neck et al., 2004). WEF (2013) calls this necessity as “human capital/workforce” and shares the perspectives of businesspeople emphasizing the importance of talent. Universities are expected to be the excellent resource of talented workers (Feld, 2012). Large established companies are known as talent magnets (Feldman et al., 2005), providers of entrepreneurial trainings for their employees (Mason and Brown, 2014:9) and developers of managerial talent pool (Adams, 2011). As specific sectors cluster in entrepreneurial ecosystem, employees may leave one start-up and start their own business, which is called the ripple effect (Cohen, 2006). A similar case called “whale fall” occurs when human capital of entrepreneurial ecosystem is improved due to a corporate failure (Isenberg, 2011b).

Higher education institutions or universities are known to be a part of entrepreneurial ecosystem since universities provide entrepreneurship education and cooperate with stakeholders such as governments, business associations incubators etc. (Carvalho, Costa, Dominginhos, 2010). University based entrepreneurship

programmes foster small firms and contribute economic growth of the region (Miners and Young, 1995). Since higher education institutions aim to teach concepts of entrepreneurship to students (During, 1990), graduate and post-doctoral students are considered to play a crucial role in university spinoffs (Boh, De-Haan, Strom 2016). Rice, Feters and Greene (2010) propose resource-based view in order to understand university-based entrepreneurship ecosystem (U-BEE) where the resources are; entrepreneurial leader and an entrepreneurial champion. Researchers claim that, the entrepreneurial leader often carry a pilot project in order to “...gain visibility, attract additional talent and acquire resources” (p.179). Accordingly, the successful pilot project results in growth of the ecosystem until it becomes the part of the strategic planning.

Key success factors of U-BEE are defined as (Rice, Feters and Greene, 2010: 185-194);

1. *“Entrepreneurial vision of senior leader with commitment to build entrepreneurship ecosystem and offer financial or non-financial support*
2. *Strong administrative leaders to build relationship within or outside the university*
3. *Sustainable commitment for a long period of time which is highly related to continuous support of senior leaders*
4. *Substantial financial resources in order to reduce time spent by leaders or champions*
5. *Continuous improvements and innovation in curriculum and program*
6. *Organizational departments to focus on management of initiatives, developing curriculum and outreaching with networks or incubators.*
7. *Strong relationships in local, national and international area in order to achieve the critical mass.”*

Support services and facilities can be defined as external services for a business such as “accountants, patent lawyers, and human resource advisors” (Spigel, 2017). It is thought that support services and facilities provide cost efficient solutions for newly starters in entrepreneurship ecosystems as it is far better to outsource rather than employing a new person for each task (Saxenian, 1994). Business incubators and accelerators are also part of support services; many incubator and accelerator provide

trainings about entrepreneurship, mentorship and other services such as accountants, patent lawyers, and human resource advisors (Verma, 2004). “Incubation is a unique and highly flexible combination of business development processes, infrastructure and people, designed to nurture and grow new and small businesses by supporting them through the early stages of development and change (UKSPA, 2015). Accelerator programs for entrepreneurs also give similar services just like incubators however the difference between accelerator and incubator stem from time limitation. Feld explains that accelerators are vital tools for improving entrepreneurial ecosystems within regional scope (Feld, 2012).

Policy and governance is another domain in entrepreneurship ecosystem, which is widely discussed in the literature both at national and global levels; many institutions such as OECD and World Economic Forum (WEF) often develops and propose new policies for developing and under developing countries since it is believed that policy makers can regulate entrepreneurial activity to some extent apart from cultural and social attributes (WEF, 2013; Mason and Brown, 2014). Spigel (2017) defines policy and governance as less “material” in the sense that they do not have a physical location but instead materialize through government rules and regulations”. OECD (2019) offers policies to governments to develop technology uptake (implementing technology extension programmes); strengthening innovation (developing innovation support packages, promoting the foundation of business incubators and accelerators, creating sector-based-clusters and networks for further business development); skill development for better human resources (vocational education and training systems, management coaching) and financing tools (venture capital, incentives, credit guarantees and grants).

The last domain in Spigel’s ecosystem model is open market and he (2017) defines open market as “presence of sufficient local opportunities to enable venture creation and unimpeded access to global markets.” Schwab (2019) also implies the necessity of open markets and they measure the level of openness of each country every year by Global Competitiveness Index from a broader perspective. This Index consists of four pillars; enabling environment (Institutions, Infrastructures, ICT Adoption, Macroeconomic Stability); human capital (health and skills); market (product market, labor market, financial system, market size) and innovation ecosystem (business dynamism and innovation capability). Spigel (2017) implies that

different attributes of entrepreneurship ecosystem may create specific configurations internally and that could lead the creation of successful ecosystems and he classifies attributes of ecosystem without analyzing the interaction among themselves empirically. He also implies that not all the domains should be in existence for a successful ecosystem (Spigel, 2017). In the next part, attributes of entrepreneurship ecosystem will be discussed in terms of success or failure of new companies within the frame of Spigel's entrepreneurship ecosystem domains.

1.5.1. The Role of Cultural Attributes

Cultural attributes can be explained as “tolerance for risk and failure, preference for self-employment, success stories/role models, research culture, positive image of entrepreneurship, celebration of innovation” (Foster & Matsushita, 2014). Bahrami and Evans (1995) mentions from cultural attributes as an intangible and unmeasurable factor however as a “critical ingredient of the Silicon Valley ecosystem”. Though they term cultural aspects under “entrepreneurship spirit” how he links Californian Gold Rush to entrepreneurship spirit certainly worth attention, he states that “the culture-ingrained over time is characterized by hard work, inspiration, and by doing one thing very well. Entrepreneurs exhibit many of the qualities of the early pioneers. They are prepared to take enormous risks, innovate in areas that most say can't be done, work incredibly long hours over extended periods of time, and even suffer personal problems, all for the quest of developing a product or building an enterprise. They have passion and bring a singular focus to their projects” (Bahrami and Evans, 1995). While Bahrami handles entrepreneurship ecosystem development with historical and regional incidents, Verheul and Thurik (2001) analyzes the role of culture on entrepreneurship ecosystem from a different perspective by referencing to national size cultural attributes, he conducts Hofstede's cultural studies into entrepreneurship ecosystem researches and deduces that “national culture may influence the level of entrepreneurship”. Moreover, he thinks that symbols, rituals and heroes can be displayed via media tools, which could increase startup foundations indirectly (Verheul and Thurik, 2001).

Moreover, Feld argues how local success stories improve the growth of entrepreneurship ecosystem and identifies success stories of startups as a booster for

ecosystem growth, and every success story inspires another startup to start their own company (Feld, 2012). It is possible to see the importance of “history of entrepreneurship” and its effects on cultural attitudes on Bahrami’s Silicon Valley Case and Feld’s Boulder ecosystem analysis. Spigel (2017) also handles the effect of cultural issues on entrepreneurship ecosystem under two main attributes; cultural attitudes and history of Entrepreneurship; he discusses that positive cultural attitudes toward entrepreneurship creates more startups in certain regions and success stories promote entrepreneurship ecosystem growth (Spigel, 2015). Isenberg (2011) evaluates culture as “societal norms” and implies that culture together with entrepreneurial success stories have an impact on creating successful entrepreneurs.

Culture was considered to be beneficial and critical to the development of the local environment even if the most difficult element of an ecosystem is to be managed and replicated (Neck et al. 2004). Saxenian (1994) in particular has noted the important role of regional culture in fostering innovation and entrepreneurship, which help industrial districts evolve over time. D. Gimenez et al. (2016) find that culture and family have a positive effect on entrepreneurial activity, which actually leads to creativity and innovative behavior. Also, the results highlight the impact of Entrepreneurship at regional levels by providing employment, economic growth and innovation.

Culture can be inspected in every part of life and thinking from the perspective of entrepreneurship, it can be said that organizational and team culture is also a vital element for success as Vera and Crossan (2005) explained that organizational and also team culture, is a beneficial tool to promote innovation, if the norm of agreement is a part of the culture. Researchers propose “experimental culture” which means high tolerance to mistakes, as an enhancer of improvisation. Caldwell and O’Reilly (2003) indicates that tolerance of mistakes supports innovative behavior. As indicated by Andriopoulos and Lewis (2009), socialization, networks and culture allow employees to “think and act ambidextrously”. Benner and Tushman (2003) argued that exploratory innovations can occur in small size and decentralized networks with loose culture, while exploitative innovations occur in large and centralized organizations with strong cultures.

On the other hand, there are some recent studies showing that high technology companies are not affected by local cultures as globalization and easy access to knowledge eliminate the negative effects of local and regional cultures especially in underdeveloped and developing countries (Bailetti, 2012; Panders, 2014). However general consensus in the literature has been that cultural attributes of entrepreneurial ecosystem affect entrepreneurial success while there is less evidence on which subdomains (cultural attitudes, histories of entrepreneurship, success stories, etc.) are more dominant in creating success and radical innovation (Isenberg, 2011; Spigel, 2017).

1.5.2. The Role of Social Attributes

Social attributes are composed of four main subdomains as networks, investment capital, mentors and dealmakers and worker talent (Spigel, 2017). OECD (2015) implies the vital importance of networks by saying that “networks can have a profound impact on the development of individual entrepreneurial intentions and motivations and a major role in the ability of people to identify business opportunities, validate business ideas and access resources such as customers, business partners, suppliers and advisors”. The empirical findings show that entrepreneurial success and social networking enhances regional economic growth (Chen et. al., 2018). Jensenn (2001) finds that “social network has direct and indirect (accessing resources) effect on the degree of startup success”.

Fuerlinger et al. (2015: 5) claims “*Like any individual species in a biological ecosystem, each member of an entrepreneurship ecosystem ultimately shares the fate of the network as a whole and is influenced by its comparative strength or weakness*”. Researchers also suggest a cross sectoral network structure composed of government, business, civil society and academia, in order to gain a sustainable development (Fuerlinger et al., 2015; Wilson, 2012). Cross sectoral networks are claimed to promote synergies and new collaborations for start-ups (Fuerlinger et al., 2015). Accordingly, policy makers changed their perspective from a firm specific intervention to network developing, in order to create synergies between various stakeholders (Mason, Brown, 2014; Warwick, 2013). Besides, social interaction between individuals leads to increased knowledge stocks (Dierickx and Cool, 1989) which increase absorptive capacity

of individuals (Van Wijk et al., 2001). Absorptive capacity is related to internal networks and innovation (Jansen, 2005; Tsai, 2001; Van Wijk et al., 2001) since central departments with high absorptive capacity is recognized to have high capacity of innovative performance (Tsai, 2001). Entrepreneurs utilize their business networks to access knowledge and other resources such as human capital (Mason, Brown, 2014).

Investment capital is a “*necessary catalyst*” (Spigel, 2017) and the source of investment capital in order to create for new ventures can be from institutions such as venture capitalists, angel investors or the entrepreneur’s family and friends (Malecki, 2011). Accordingly, social networks are known to help startups to access financing, to decrease the asymmetry between the entrepreneur and investor (Shane, Cable, 2002).

Bahrami and Evans (1995) defined that one of the success factors of Silicon Valley ecosystem is venture capital. On the other hand, Isenberg (2011a) emphasize the great proportion of startups that top venture capitalists invest in, fails. From the investors’ side, it is challenging to make a decision about which young firm to fund (Lerner, 2002). According to Lerner (2002) information gaps and asymmetries between the entrepreneurs and investors is recognized to be the trigger of problems.

There is debate in the literature whether investment capital is beneficial for entrepreneurial success or not. Some research show that investment capital provides a measurable value for entrepreneurs in terms of boosting survival, profits, and employment (Bosma, Praag, Thurik and Wit, 2004; Baluku, Kikooma and Kibanja, 2016). While venture capital carries a great importance in increasing life cycle of companies by adding tangible and intangible values, it is also found that investors active attendance to management boards has negative impact on ROIs of companies (Hadley, Gloor, Woerner and Zhou, 2018). There is also significant evidence showing that “venture capital is mainly conducive to job creation in new and innovative firms and that it facilitates the process of structural change toward the new economy” (Belke, Fehn and Foster-McGregor, 2003).

Mentors and dealmakers are other important actors in entrepreneurship ecosystems. Entrepreneurs require strategic guidance support and business mentoring as a part of interactive learning (Mason and Brown, 2014). Successful entrepreneurs are also valuable mentors since they can reinvent their experience a wealth by teaching entrepreneurship, so-called ‘pracademics’ (Mason and Brown, 2014). Feld (2012)

names this mechanism as “intermediaries”, while WEF (2013) names as a “support systems”. This support system includes incubators, networks and professional services also (WEF, 2013: 7). This support system is known to increase performance of entrepreneurs (Bosma et al., 2012), increase survival rates (Lafuente, Yancy and Rialp, 2007), help entrepreneurs to improve their local social capital (Spigel, 2017). Feldman and Zoller (2012) define the dealmakers as “*individuals with valuable social capital, who have deep fiduciary ties within regional economies and act in the role of mediating relationships, making connections and facilitating new firm formation*”. Researchers emphasize the embeddedness of dealmakers and accept their existence as indicator of the regional entrepreneurial economy.

Worker talent is generally evaluated under human capital in the literature and general consensus has been that worker talent has an impact on success of companies both at starting and development phases (Isenberg, 2011; Spigel, 2015). Some research show that “specific human capital more frequently found in spin-off founders plays a key role in enhancing survival chances, while more general forms of human capital may help inexperienced entrepreneurs overcome the barrier posed by the critical early years after start-up” (Baptista, Karaöz and Mendonça, 2011). Montgomery, Johnson and Faisal (2005) explains that existence of a supportive human capital does not ensure success however they propose that financial capital increase the chance of becoming successful. In the literature, we see that all these social attributes are evaluated separately; networks are generally evaluated as important factors that lead to success while there are controversial suggestions about the impact of venture capital. Mentors and dealmakers are seen effective in part of regional development and as mediators for startup success while worker talent has been shown as one of the most important elements of entrepreneurial success. However, there is no study to our knowledge showing holistic effect of these social attributes (SA) on the success of entrepreneurs in the literature.

1.5.3. The Role of Material Attributes

Material attributes consist of universities, support mechanisms, policy and open markets; Spigel (2017) explains that “The material attributes of an ecosystem are those with a tangible presence in the region. This presence can be a physical location,

such as a university, or formalized rules like entrepreneurial policies and well-regulated markets which materialize locally.”

Spigel (2017) defines the role of universities as “institutions which both train new entrepreneurs and produce new knowledge spillovers” and implies that universities create an indirect value for entrepreneurship ecosystems. Prior research generally confirms that universities have a positive effect in startup success and innovation because of easy access to knowledge and services for startup development such as university-based incubations and accelerators (Audretsch, 2004; Mason and Brown, 2013; WEF, 2013). Siegel and Wessner (2012) find out that “start-ups with closer ties to universities achieve higher levels of performance”. Nann et.al. (2010) analyze the role of university from the perspective of networks and present that “the more links founders have with alumni of their university, the more successful their startup.” Charles and Miller (2018) featured the specific impact of Stanford University on entrepreneurship and explained that “the report on the 2011 survey, estimates that 39,900 active companies can trace their roots to Stanford. If these companies collectively formed an independent nation, its estimated economy would be the world’s 10th largest...those companies have created an estimated 5.4 million jobs and generate annual world revenues of \$2.7 trillion.” This research shows the potential of a university in being very effective in entrepreneurship ecosystem and economic growth. However some other research discuss the issue from perspective of university based entrepreneurship ecosystem and highlights that “75 % of university inventions are not licensed at all” which means tools at the universities to boost entrepreneurial activities such as Office of Technology Transfer, Incubation Centers and Technoparks are not working efficiently in terms of turning academic knowledge into entrepreneurial activities (Swamidass, 2013).

Support services and facilities include external services that entrepreneurs need such as accountants, patent lawyers, and human resource advisors, incubators and accelerators (Spigel, 2017). General consensus is that the impact of support services is evaluated as positive in the literature; they support regional development, entrepreneurship success and innovation to some extent (Spigel, 2011; Feld, 2012 Stam, 2014; Miller and Bound, 2011). Sedita, Apa and Bassetti (2017) explores that business incubation and support services effect innovation performance of new companies in a positive way and they also support the development of “internal

technical skills” and collaboration capabilities of companies within entrepreneurship ecosystem.

Miller and Bound (2011) explains the benefits of incubators and accelerators by making interviews with the users of these services, they imply the importance of founding new contacts and getting advices from mentors; *“Accelerators give founders the chance to meet people in the tech industry, both from successful startups and in larger tech businesses and get feedback on their product and company. For Seedcamp, Techstars and Springboard, this is achieved through mentoring, while in the case of Y Combinator, dinner speakers and Y Combinator partners are the most obvious exposure the teams have to people who are already founders.”* On the other hand, Fehder and Hochberg (2018) could not find any relation between startup success and accelerator program however they suggest “a role for accelerator programs in galvanizing latent regional interest in entrepreneurial activity.” Al-Mubarak, Al-Karaghoul and Busler (2010) also emphasize that business incubators have a great potential for prospering regional economic development through increasing entrepreneurial activity.

Much attention has been drawn to effective policy making of governments on entrepreneurship and its impact on economic growth and employment rates throughout developing innovation and entrepreneurship infrastructures (Belke, Fehn and Foster-McGregor, 2003). The consensus in the literature is that effective government policies, which support the improvement of entrepreneurship ecosystems have a positive effect on startup success, growth and innovation (Audretsch, 2004; Hirsch, 2005; Minniti, 2008; Dolfsma and Seo, 2013). Patanakul and Pinto (2014) explains that “enhancement of a firm's innovation behavior can result from a stronger political network” and government policies have a vital effect in creating “the sustainability of innovation behavior” from the perspective of organizations. However, there is also many studies showing that government policies, specifically too much bureaucracy and regulation, may lead to failure or retard in growth (McMullen, Bagby and Palich 2008). It is also advised that government should implement different policies for companies in different stages and sectors (Akinyemi and Adejumo, 2018).

On the other hand, there is a dilemma of individual vs. institutions concerning the motivation of policy making (Acs, Aution and Szerb, 2014). As a solution, Acs et

al. (2014) proposed 'National Systems of Entrepreneurship' approach and defined this perspective as; "*A National System of Entrepreneurship is the dynamic, institutionally embedded interaction between entrepreneurial attitudes, ability, and aspirations, by individuals, which drives the allocation of resources through the creation and operation of new ventures.*" The role of government in the creation of entrepreneurship ecosystem is discussed by Isenberg (2010) and it is suggested that some governments are misguided by taking sample of dissimilar applications of other governments. Stam (2015) emphasizes the shift in policy "*...from pushing up the quantity of entrepreneurship (e.g. new firms, self-employment) to the quality of entrepreneurship (e.g. growth and innovation-oriented entrepreneurship)*". In this vein, Stam (2015) emphasizes "entrepreneurial ecosystem approach" which focus on entrepreneur rather than enterprise, where entrepreneur occupy the central position in emergence of the system. In contrast to the 'national systems of innovation' oriented studies, actions and judgements of individuals are at the center of the process (Acs, Aution and Szerb, 2014). Focusing on entrepreneur individual defines the role of government as a feeder rather than a leading actor (Feld, 2012). According to Stam, government can adjust laws and regulations as a feeder where market failure does not necessarily justify the role of government. Besides the support of the government is emphasized by various researcher, who claim the increase in financial resources cannot result in growth of the ecosystem, without the support of policymakers (Wessner, 2005; Wessner, Shivakumar, 2002).

As Spigel (2017) stated that open market indicates the existence of opportunities in local market for new products or services and there should be an access to global market for entrepreneurs, too. The impact of open market in startup development seems to be neglected as there is less research about market conditions of startups in the literature to our knowledge. Besides Spigel's open market domain related to startups, there is economic openness term which carries a parallel meaning to open market but in macro-economic levels; the term economic openness is also known to be 'trade openness', 'economic integration', 'trade liberalization' and 'globalization' (Gräbner et.al., 2018). CBInsights (2014) explains that %42 of startups failed because of "no need in the market" in its report "Top 20 Reasons Startups Fail", though this study was made just for 101 startups in the USA, it still shows us that market potential has great importance in startup success. Andreesen (2007) has coined

the term product/market fit and explained that “in a great market -- a market with lots of real potential customers -- the market pulls product out of the startup” and he goes on “Conversely, in a terrible market, you can have the best product in the world and an absolutely killer team, and it doesn't matter -- *you're going to fail.*” It seems that the impact of open market on startup success can be followed in startup failure stories rather than academic researches.

1.6. Innovation and Entrepreneurial Success: How Does the Type of Innovation Affect Success and Failure?

Gaining competitive advantage has been one of the crucial issues of management since 1980s; there is a mainstream debate in the literature between the impact of external and internal factors on business growth and success (Grünert and Hildebrandt, 2004). According to industrial organization view, gaining competitive advantage and thus profitability is strictly connected with external factors around the company; an effective industry in the region may pull companies to create new products or services and this creates a bigger industry while newly founded companies become successful (Porter, 2008). On the other hand, from resource-based view, since internal factors of a company is hard to replicate by its competitors, companies are able to create a unique identity by preserving and improving internal competencies to obtain a competitive advantage and they may also eliminate threats coming from external factors by improving these internal competencies and skills (Barney, 1991). Amit and Schoemaker (1993) point out that companies are able to develop “isolating mechanisms” within themselves that will carry them into a unique position in the market.

Besides using internal or external factors to become successful in the market, how a company uses its internal resources is an issue that is widely studied in the literature since it is a strategic decision whether the company will use its resources to explore or exploit (March, 1991). It is thought that finding the right balance between exploration and exploitation carries a vital importance as effective use of internal resources may lead a company to profitability and growth from the perspective of resource based view (Salavou and Lioukas, 2003). Exploitative process includes existing knowledge, products, customers and markets while explorative process depends on the improvement of new knowledge or technology (Jansen, Van Den Bosch

and Volberda, 2006). Blank and Naveh (2019) find out a relation between exploration/exploitation and radical/incremental innovation and they explain that “when exploration is high, a low level of exploitation is sufficient to enable achieving radical innovation”.

Approaches about entrepreneurial ecosystems also imply the same tension between external and internal factors in business environment and success of startups are generally related with entrepreneur or environment (Neck et. al., 2004; Isenberg, 2011; Feld, 2012). Entrepreneurial success and failure factors in the literature have been researched widely (Lussier,1996; Preston, 2001; Gelderen, Thurik and Bosma, 2005). It is possible to evaluate success and failure within the same literature as the duality between success and failure helps to explain each other. CBInsights (2014) conducted a qualitative research with 101 failed startups in the USA and explained that nine out of ten startups fail in five years after its foundation and it sorted out failure reasons as “no market need (%42), run out of cash (%29), not the right team (%23), get outcompeted (%19), pricing/cost issue (%18), poor product (%17), need/lack business model (%17), poor marketing (%14), ignore customers (%14), product mis-timed (%13), lose focus (%13), disharmony on Team/Investors (%13), pivot gone back (%10), lack passion (%9), bad location (%9), no financing/investor interest (%8), legal challenges (%8), don’t use advisors/networks (%8), burnout (%8) and failure to pivot (%7)”. On the other hand, success factors in technology startups have been analyzed and it is concluded that “supply chain integration; market scope; firm age; size of founding team; financial resources; founders' marketing experience; founders' industry experience; and existence of patent protection” carry a great importance in success while “founders' research and development (R&D) experience; founders' experience with start-ups; environmental dynamism; environmental heterogeneity; and competition intensity” has no impact on success (Song et al., 2008).

There is a vast literature about success and failure factors of companies in the literature however success factors of radically innovative or incrementally innovative firms have not yet been researched in a holistic perspective (Groenewegen and Langen, 2012). Groenewegen and Langen (2012) investigate the success factors of startups with radical innovation under three main title “the uniqueness of the advantages of the

innovation, the startup organization characteristics and the person of the entrepreneur”. They measured the success by the growth in employment and revenue and find out that 75K seed capital and a good business plan are positively related to success. They also explain that “the uniqueness of the advantages of the innovation, customer pro-activeness, multiple founders and a relevant social network have a positive influence on turnover growth but not on employment growth”.

It seems that “the uniqueness of the advantages of the innovation” or radical innovation provides a competitive advantage to companies (Miles and Darrouch, 2006; Carlisle and MacMillan, 2006), however, making radical innovation brings legitimacy problem concomitantly and entrepreneurs face with the risk of rejection in the market (Kuratko et al., 2017). Legitimacy can be defined as “quality of being believable or trustworthy in the eyes of customers, partners, suppliers and investors” (Bailetti, 2012). Dibrell et al. (2007) explain legitimacy from a broader perspective and state that “legitimacy is defined as acceptance, suitability, and appeal of the startup as judged by external and internal stakeholders such as the marketplace, industry competitors and employees.” Even entrepreneurship ecosystems remain insufficient in overcoming legitimacy problem of newly founded companies “since the activities of such a venture are not widely known or well-understood, the ecosystem partners and supporters are less likely to accept and support what they are doing” (Kuratko et al., 2017).

Bailetti (2012) confers that startups should involve in legitimacy activities permanently and advices that startups should “establish presence in key markets, gain high-profile endorsements from established companies, leverage mentors and advisors to build an ecosystem around the startup, and participate in high-profile activities related to direct foreign investment”. Zimmerman and Zeitz (2002) offer four strategies in order to overcome legitimacy problem; “conformance, selection, manipulation and creation”. Conformance means adapting to environmental rules and following social and cultural rules; selection is about selecting the right environment or ecosystem in order to flourish; manipulation necessitates to change societal and cultural norms in time without disturbing general perception of society and creation involves creating new “scripts, rules, norms, values, and models” (Zimmerman and Zeitz, 2002). O’Connor (2002) also defends that “to achieve legitimacy, the accounts

of a company's founding, goals, product, and activities must mesh with belief systems and business models of the larger business and investment community: an entrepreneur's story must mesh with the existing, relevant, and accepted story lines of others”.

Another research shows us that legitimacy can be gained through both external and internal resources; however it is obvious that “strong internal startup resources, such as formal or informal family support, staff and innovative practices” are more effective in overcoming legitimacy problem and becoming successful rather than “external stakeholders” (Dibrell et al., 2007). Kuratko et al. (2017) suggest that companies with radical innovation should apply “creation strategy” in order to overcome legitimacy problem; they explain that “when launching a new venture with a radical new technology that is used to create a new market category, a creation legitimation strategy will likely provide the most valuable cost-benefit tradeoff for attaining legitimacy within an entrepreneurial ecosystem, compared to other alternatives.”

As we mentioned before, a company should be able to find a balance between exploitation and exploration activities in order to achieve financial growth (March, 1991). Exploration brings radical innovation (Blank and Naveh, 2019) and radical innovation requires many internal competencies and skills from the perspective of resource-based view (Amit and Schoemaker, 1993). Most studies show that there is an obvious relation between exploitative activities and incremental innovation, explorative activities and radical innovation (Benner and Tushman, 2003; Burgelman and Sayles, 1986). On the other hand, we also know that not all the startups try to create a radically innovative companies, some of them prefer to make incremental innovations in with existing products or services in existing markets (Neyens, Faems, and Sels, 2010). Kuratko et al. (2017) imply that “entrepreneurs that create an organization to exploit or incrementally improve on an existing technology and seek to operate within an established market category confront the lowest levels of innovation “newness” relative to other alternatives.”

When companies attempt to decrease the level of “newness”, they face with competition problem since they try to do business in a limited market with similar

products or services (Barnett, 1997). Intensity of competition increases by the entrance of new competitors into the market and therefore, prices and profitability tend to decrease (Porter, 1980). Under these circumstances, the results of incremental innovation for existing products and services in an existing market remain unsatisfactory (Lavie, Stettner and Tushman, 2010). Kuratko et al. (2017) propose that incrementally innovative companies should apply “conformance strategy” in which companies should follow societal and cultural norms in order to become successful and they clarify that “when launching a new venture with incremental technological advancements to enter an existing market category, a conformance legitimation strategy will likely provide the most valuable cost-benefit tradeoff for attaining legitimacy within an entrepreneurial ecosystem, compared to other alternatives” (Kuratko et al., 2017).

It can be noticed that there is a dilemma between exploration/exploitation versus legitimacy/competition; exploiting company that has a tendency to make incremental innovation will have a concern about increasing competition and decreasing profitability in the market and the other with radical innovation has to think about legitimacy problem and faces with failure if the population reject its product or service (Hannan and Freeman, 1986). Based on resource-based view, Clayton (1997) implies that if a newly founded company’s resources (financial, social, cultural, worker talent etc.) do not fit for the market, there is high probability for failure. By exploring different sectors, he also proposes that “creating new markets is significantly less risky and more rewarding than entering established markets against entrenched competition” (Clayton,1997). However, considering the high rate of failure among new startups, which accounts for 50% during the first five years and 66% during the first 10 in USA (Deane, 2019), creating a totally new product can be also risky for them.

Therefore, as March (1991) discussed that investing in radical or incremental innovation is a matter of management choice on how to spend a company’s budget. However, the literature provides very little understanding on how entrepreneurs take such an essential decision to make radical or incremental innovation which affects the nature of risks they have to handle in the further process.

In line with its research questions, the current study proposes that the entrepreneurial ecosystem domains – CA, SA, MA – affect the type of innovation

among entrepreneurs and attempts to explore how the different configuration of ecosystem domains lead an entrepreneur to explore or exploit commercial opportunities. Figure 3 shows that the study proposes a model that leads entrepreneurs to success among entrepreneurship ecosystem domains (CA, SA, MA), radical/incremental innovation, legitimacy/competition and personality traits of entrepreneurs.

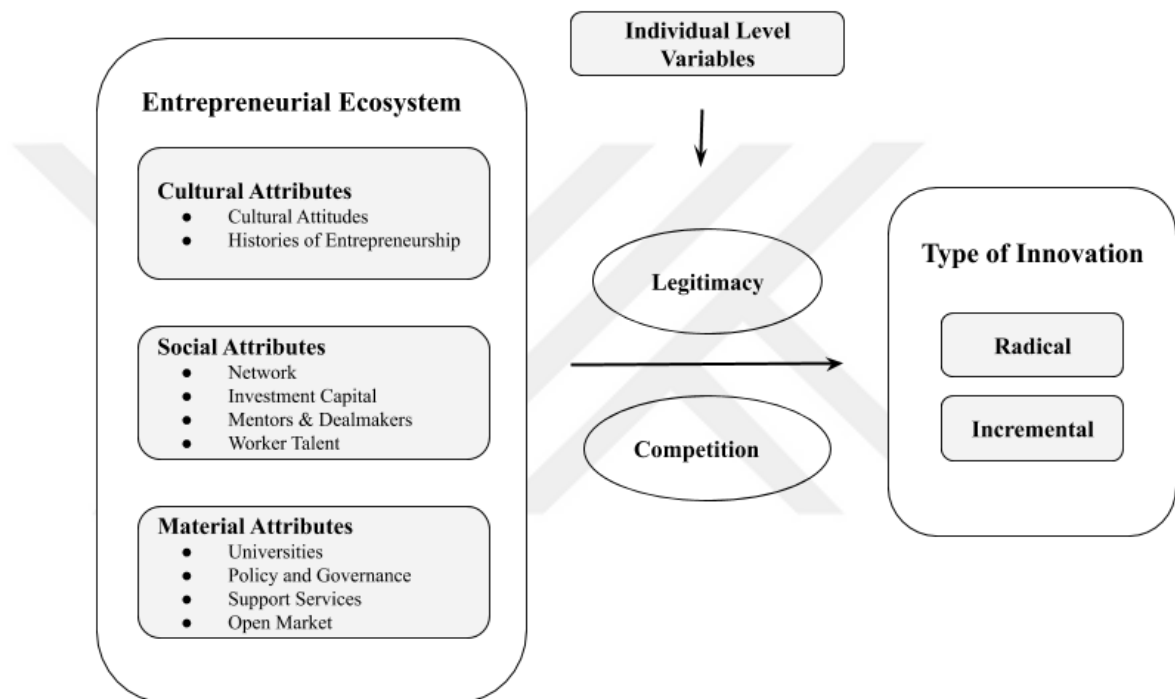


Figure 3. Proposed Research Model

The study tries to explore two paths which lead entrepreneurs to success or failure from a holistic approach by examining ecosystems domains based on the literature review. In the first path, entrepreneurs who have a tendency to make radical innovations come across with the risk of legitimacy. On the other hand, the second path directs entrepreneurs who have a tendency to make incremental innovation towards a competition problem. At that point, this study aims at explaining the impact of ecosystem domains and individual level variables on the type of innovation and type of risk among entrepreneurs. It also tries to address how all these elements interact with each other and whether these interactions lead entrepreneur to success or failure.

Therefore, the study attempts to find out how entrepreneurs radical vs.

incremental innovation process affect their legitimacy and competition in the market. The study proposes that there is a certain dilemma between radical and incremental innovation in terms of gaining legitimacy, which is a necessity in order to enter the market and gaining competitive advantage by applying a radical innovation, which may cause the rejection of product/service in the market. Moreover, the study also focuses on the relationship between personality traits of entrepreneurs and innovation type that they make. The impact of ecosystem domains on the creation of personality traits of entrepreneur will be also evaluated during the next chapter.



2. CHAPTER: RESEARCH METHODOLOGY

2.1. Research Design

This thesis aims to study the path which leads entrepreneurs to success or failure from a holistic approach by including and examining ecosystems domains (cultural, social and material attributes), type of innovation, type of risk and individual-level variables, specifically personality traits of entrepreneurs. Following the entrepreneurial ecosystem perspective, the study attempts to address the following research questions:

RQ1: What is the impact of entrepreneurial ecosystem domains (CA, SA, MA) on the type of innovation among entrepreneurs?

RQ2: Which characteristics of entrepreneurial ecosystem domains (CA, SA, MA) lead an entrepreneur to explore commercial opportunities? Which characteristics of entrepreneurial ecosystem domains (CA, SA, MA) lead an entrepreneur to exploit commercial opportunities? Is there any difference between the characteristics of adopting exploration versus exploitation approach?

RQ3: Which type of risk does an entrepreneur take when s/he adopts exploration approach? Which type of risk does an entrepreneur take when s/he adopts exploitation approach? Is there any difference between the risks of adopting exploration versus exploitation approach?

RQ4: What is the role of individual level variables on the adoption of exploration versus exploitation?

Depending on literature review and research questions, a model to explain process of startups in success path was developed. Semi-structured qualitative study (SSQS) is used as method in this research in order to reply above research questions. Semi-structured qualitative study generally involves interviews consisting of open-ended questions and the findings depend on the observations of researcher; “such studies typically involve systematic, iterative coding of verbal data, often supplemented by data in other modalities” (Ann, 2013).

2.2. Context

This study evaluates research questions from the point view of 30 entrepreneurs within the context of Turkish Startup Ecosystem, mainly İstanbul, Ankara and İzmir ecosystems. Korstjens and Moser (2017) say that researchers who use qualitative methods can “get a ‘behind the scenes’ picture of how people feel or what other forces are at work, which may not be discovered in a quantitative investigation” and imply the importance of the notion that everybody’s reality is constructed by their own social and cultural context, which actually gives us a subjectivity almost in every research area. The researcher has conducted semi-structured qualitative study by asking 39 open-ended questions to participants in order to observe entrepreneurs’ perception about innovation, entrepreneurship ecosystem throughout their startup stories within the frame of Turkish Entrepreneurship ecosystem.

2.3. Sample Selection

The sample of study was composed of 30 entrepreneurs, who have startups in Turkish ecosystem at least for three years. As Nandram and Boemans (2001) present that success means growth in revenue and employment and fast growers grow with %32 in the first three year and normal growers grow with %12 in the first three year. Thus, the startups whose foundation date back to at least three years were chosen for this study. Qualitative research does not necessitate minimum number of participants for research like in quantitative research; a unique participant related to the study might lead us to result (Mason, 2010). Furthermore Mason (2010) indicates that “mean sample size was 31” however he also states that if replies of attendees start to overlap it means research is saturated. Thus, a sample size of 30 participants correspond to the mean sample size in this research as recommended by Mason (2010). Selection was made by two criteria depending on critical success outcomes in the literature; foundation at least three years ago (Nandram&Boemans, 2001) and showing an indication of growth which means increase in employment or revenue or getting investment (Maurya, 2016).

2.4. Interview Protocol and Data Collection

Semi-structured interview was conducted in order to obtain in-depth data on the research questions of study. An interview protocol was prepared before the process.

In parallel with above research questions, literature review and recent researches on the subject were used to prepare interview questions. The researcher e-mailed to Ben Spigel and got his permission for using interview questions in his research, cultural related questions were drawn from Spigel's research. Interview guide was prepared following the suggestions by Rubin and Rubin (2011). During this process, researchers accessed academicians and other researchers in order to discuss how to design and improve interview questions. Interview questions were prepared from general to specific questions depending on the feedbacks.

Before main research was conducted, a pilot study were made with five participants in November, 2019. After making the first pilot study, interview guide was improved with the advices of entrepreneurs, mentors, investors and academicians. After that, second pilot study with the attendance of three participants was held in December, 2019. Final version of interview questions was prepared and misconceptions and misunderstandings in questions have been cleared by the researchers. A semi-structured interview with 39 open-ended questions was obtained in the end of this process. Interview questions are officially approved by the Yasar University Ethical Committee, which is attached in Appendix A. The interview has inquired about the participants' founding startup processes, their perceptions about entrepreneurship and entrepreneurship ecosystem, their success or failure stories, their personality traits related to entrepreneurship and level of newness of their product or service. Participants were given a brief information about the scope of research before the interview. At the end of the interview, participants were asked to give feedback about the study, its scope and related questions. All interviews were taped and transcribed after the interview. Each participant was given a pseudonym starting with ENT01 and lasting with ENT30 implying entrepreneur and interview number in order to protect entrepreneurs' confidentiality.

2.5. Data Analysis

In the study, the story of each entrepreneur was analyzed and interpreted by using content analysis method in order to understand the interaction among entrepreneurship ecosystem (CA, SA, MA), entrepreneur and type of innovation. The researcher carefully read and reviewed each transcript so as to conduct data analysis. Descriptive information of entrepreneurs, entrepreneurship ecosystem domains, perceptions about radical and incremental innovation and common personality traits

were determined from the literature and all these factors have been listed in Excel depending on our proposed model under four categories entrepreneurship ecosystem with subdomains, type of innovation, type of risk and personality traits. In doing so, the content analysis is used as a tool for checking both replicable and valid results from the selected text (Krippendorff, 2004). Content analysis method necessitates a theoretical framework with clear research questions and process of applying this method requires a solid discussion with findings on interviews (Riffe and Freitag 1997).

Depending on this guideline, a six-step procedure was applied in the study. First, a coding scheme was created upon the theoretical framework and proposed model of study. Then, the texts were classified under the pre-specified codes to reduce them to a manageable data set (Weber 1990) by two researchers, whose results were compared to find the inter-coder reliability coefficients in the next step (Neuendorf 2002). In the fourth and fifth steps, the researchers arrived at a consensus by discussing the disputes in their results. In the last step, in order to make the systematic and objective inferences on collected data (Naccarato and Neuendorf 1998), the researchers discussed the obtained data iteratively and report them carefully.

Table 2.
Categories, Sub-categories, coding scheme for the study

Domain	Category	Sub-Category	Explanation	Coding Scheme	Examples
Entrepreneurial Ecosystem	Cultural Attributes	Cultural Attitudes	Domain is part of entrepreneurial ecosystem	*Family attitude: Impact of family support on entrepreneur *Friends attitude: Impact of friend support on entrepreneur *Acquaintance attitude: Impact of acquaintance support on entrepreneur	*Family attitude: Starting a business by the support of family *Friend attitude: Starting a business by the support of friends *Acquaintance attitude: Starting a business by the support of friends
Entrepreneurial Ecosystem	Cultural Attributes	Histories of Entrepreneurship	Domain is part of entrepreneurial ecosystem	*Inspiring entrepreneur: A person who inspires entrepreneurs for starting business	*Inspiring entrepreneur: Experienced entrepreneurs lead and motivate new beginners to start and develop their startups
Entrepreneurial Ecosystem	Social Attributes	Network	Domain is part of entrepreneurial ecosystem	*Supportive network: Network is supportive for startup success *No Impact of Network: Network has no impact on startup success	*Supportive network: Network provides knowledge, technology, worker talent and finance. *No Impact of Network: Startup can exist and grow without network
Entrepreneurial Ecosystem	Social Attributes	Investment Capital	Domain is part of entrepreneurial ecosystem	*Supportive investment capital: Investment capital is supportive for startup success *Unsupportive investment capital: Investment capital is not supportive for startup success *No Impact of investment capital: Investment capital has no impact on startup success	*Supportive investment capital: Startup starts to grow after investment *Unsupportive investment capital: Having investment affect startup negatively because of entrepreneur-investor relation or other reasons *No Impact of investment capital: Startups are able to grow without getting investment

Table 2.
(continued)

Domain	Category	Sub-Category	Explanation	Coding Scheme	Examples
Entrepreneurial Ecosystem	Social Attributes	Mentors&dealmakers	Domain is part of entrepreneurial ecosystem	<p>*Supportive mentors&dealmakers: Mentors&dealmakers is supportive for startup success</p> <p>*Unsupportive mentors&dealmakers: Mentors&dealmakers is not supportive for startup success</p> <p>*No Impact of mentors&dealmakers: Mentors&dealmakers has no impact on startup success</p>	<p>*Supportive mentors&dealmakers: Mentors provide network and sales channels and contribute to the growth of startups indirectly</p> <p>*Unsupportive mentors&dealmakers: Developing relations with mentors&dealmakers affect startup's growth negatively</p> <p>*No Impact of mentors&dealmakers: Entrepreneurs do not interact with mentors&dealmakers, so no impact was created</p>
Entrepreneurial Ecosystem	Social Attributes	Worker Talent	Domain is part of entrepreneurial ecosystem	<p>*Supportive worker talent: Worker talent is supportive for startup success</p> <p>*Unsupportive worker talent: Worker talent is not supportive for startup success</p> <p>*No Impact of worker talent: Worker talent has no impact on startup success</p>	<p>*Supportive worker talent: Finding right worker talent contributes to the growth of startup</p> <p>*Unsupportive worker talent: Not accessing the right worker talent may lead startup to failure</p> <p>*No Impact of worker talent: Worker talent does not make any difference in the success of startup</p>

Table 2.
(continued)

Domain	Category	Sub-Category	Explanation	Coding Scheme	Examples
Entrepreneurial Ecosystem	Material Attributes	Universities	Domain is part of entrepreneurial ecosystem	*Supportive universities: Universities is supportive for startup success *Unsupportive universities: Universities is not supportive for startup success *No Impact of universities: Universities has no impact on startup success	*Supportive universities: Startups make progress by getting support from universities *Unsupportive universities: Getting support of universities does not contribute to the success of startup *No Impact of universities: Startups grow without getting any support from universities
Entrepreneurial Ecosystem	Material Attributes	Policy and Governance	Domain is part of entrepreneurial ecosystem	*Supportive policy and governance: Policy and governance is supportive for startup success *Unsupportive policy and governance: Policy and governance is not supportive for startup success *No Impact of policy and governance: Policy and governance has no impact on startup success	*Supportive policy and governance: Startups make progress by getting incentives and funds from government institutions *Unsupportive policy and governance: Getting incentives and funds affect startup's growth negatively, even causes failure *No Impact of policy and governance: Startups grow without getting any incentives or funds

Table 2.
(continued)

Domain	Category	Sub-Category	Explanation	Coding Scheme	Examples
Entrepreneurial Ecosystem	Material Attributes	Support Services	Domain is part of entrepreneurial ecosystem	*Supportive "support services": "Support services" is supportive for startup success *Unsupportive "support services": "Support services" is not supportive for startup success *No Impact of "support services": "Support services" has no impact on startup success	*Supportive "support services": Radically innovative startups use supportive services such as accelerators as a tool for overcoming legitimacy *Unsupportive "support services": Using supportive services affect startups negatively *No Impact of "support services": Startups can grow without getting any supportive services
Entrepreneurial Ecosystem	Material Attributes	Open Market	Domain is part of entrepreneurial ecosystem	*Supportive open market: Open market is supportive for startup success *Unsupportive open market: Open market is not supportive for startup success *No Impact of open market: Open market has no impact on startup success	*Supportive open market: Existence of customers and market for the product/service is positive for the growth of startup *Unsupportive open market: Non-existence of customers and market for the product/service is positive for the growth of startup *No Impact of open market: Existence or non-existence of a market does not affect success of startup

Table 2.
(continued)

Domain	Category	Sub-Category	Explanation	Coding Scheme	Examples
Innovation	Type of Innovation	Radical Innovation	Level of newness for startup product/service	<ul style="list-style-type: none"> *Radically new product/service in global market *Radically new product/service in national market *Radically new product/service in local market 	<ul style="list-style-type: none"> *Radically new product/service in global market: Startups who develop the product/service for the first time in the world *Radically new product/service in national market: Startups who develop the product/service for the first time at the national level *Radically new product/service in local market: Startups who develop the product/service for the first time at the local level

Table 2.
(continued)

Domain	Category	Sub-Category	Explanation	Coding Scheme	Examples
Innovation	Type of Innovation	Incremental Innovation	Level of newness for startup product/service	<ul style="list-style-type: none"> *The product/service that involves small newness in global market *The product/service that involves small newness in national market *The product/service that involves small newness in local market 	<ul style="list-style-type: none"> *The product/service that involves small newness in global market: Startups find a product/service and develop its missing parts by small changes to sell in global market *The product/service that involves small newness in national market: Startups find a product/service and develop its missing parts by small changes to sell in national market *The product/service that involves small newness in local market: Startups find a product/service and develop its missing parts by small changes to sell in local market

Table 2.
(continued)

Domain	Category	Sub-Category	Explanation	Coding Scheme	Examples
Risk	Type of Risk	Legitimacy	Challenge that are perceived as a risk	*Legitimacy risk: Acceptance of the startup's product/service by market actors (Dibrell, 2007)	*Legitimacy risk: When a startup develops a product/service, which is radically innovative, market/customer may not understand and accept the product/service
Risk	Type of Risk	Competition	Challenge that are perceived as a risk	*Competition risk: Existence of similar products/services and competitors in the market	*Competition risk: Developing a similar product/service in the market, which involves too much competition, create the risk of not making enough sales to grow
Individual Level Variables	Entrepreneur Traits		Trait that is perceived by entrepreneur	*Self-efficacy: A person's confidence to his/her own competences or skills to execute his/her aims in life (Bandura, 1997)	*Self-efficacy: Entrepreneurs believe that they can manage and succeed every goal by using their own capabilities
Individual Level Variables	Entrepreneur Traits		Trait that is perceived by entrepreneur	*Persistence: An entrepreneur's continued positive maintenance of entrepreneurial motivation and constantly renewed active engagement in a new business venture (Caliendo, 2020)	*Persistence: Entrepreneurs think that trying again and again brings success finally, they take the chance to fail and start again

Table 2.
(continued)

Domain	Category	Sub-Category	Explanation	Coding Scheme	Examples
Individual Level Variables	Entrepreneur Traits		Trait that is perceived by entrepreneur	*Risk-taking: Entrepreneur's willingness to bear risk (Khilstrom & Lafont, 1979)	*Risk-taking: Entrepreneurs are able to take decisions that can take them out of their comfort zone, they take the chance to lose.
Individual Level Variables	Entrepreneur Traits		Trait that is perceived by entrepreneur	*Optimism: Entrepreneur's remaining positive attitude during crisis periods	*Optimism: Entrepreneurs are able to see negative events from an optimistic eye
Individual Level Variables	Entrepreneur Traits		Trait that is perceived by entrepreneur	*Internal locus of control: Belief that an entrepreneur can control and succeed everything with his/her own skill, power and endeavor (Rotter,1966)	*Internal locus of control: Entrepreneur believes in that he/she can overcome all the problems by using his/her own skills
Individual Level Variables	Entrepreneur Traits		Trait that is perceived by entrepreneur	*External locus of control: Belief that environmental factors have also great impact on the success of entrepreneur	*External locus of control: Entrepreneur believes that whatever he/she makes environmental factors may lead the startup to failure

Table 2 presents the main categories, sub-categories, coding scheme, explanations, and examples for each dimension of research model. This process aimed to provide both qualitative and quantitative data about 30 startups. Besides, each entrepreneur has been labelled based on the frequency of occurrence of related factors or domains, we adapted Hill et al.'s (2005) frequency model for qualitative researches as they indicate labels such as "general," "typical," and "variant." The label "general" means all the participants approved the notion, only one exception can be accepted. The label "typical" is given to the notions if more than half of the participants approved and the label "variant" is given to the notions if minimum two participants approved, the label "rare" is given if only one participant approves (Hill et al., 2005). In doing so, researcher was able to figure out dominant domains in ecosystem that leads startups to success, and research model, which is determined by literature review beforehand, was revised according to recent findings.

As it is explained above, the research model of study has four main domains as entrepreneurial ecosystem, type of innovation, type of risk and entrepreneur traits (Figure 3). Drawing from interactions among these domains, the first section is relied on three basic categories as CA, SA and MA under Entrepreneurial Ecosystem. CA has two sub-categories as cultural attitudes and histories of entrepreneurship. Cultural attitudes were coded as the impact of family, friends and acquaintances on entrepreneur's starting a business or developing his/her business. Histories of entrepreneurship was codified as inspiring person, who made any impact on starting other entrepreneurs' business. SA has four sub-categories; network, investment capital, mentors&deal makers and worker talent. All the sub-categories were codified as supportive/unsupportive/no impact. MA has four sub-categories as universities, policy and governance, support services and open market. All the sub-categories were codified as supportive/unsupportive/no impact.

Second domain includes radical and incremental innovation. Type of innovation domain was designed in order to perceive level of newness for startup product/services and its interactions with other domains. Radical innovation was codified as radically new product/service in global market, radically new product/service in national market and radically new product/service in local market. On the other side, incremental innovation is often used by startup in Turkish ecosystem and it is also added as a sub-category that should be evaluated within proposed model. Incremental innovation was coded as small newness in global market, small newness in national market and small

newness in local market. Third domain includes type of risks that is faced by entrepreneurs during product/service launch and also development phase. Legitimacy risk is codified as acceptance of the startup's product/service by market actors (Dibrell, 2007). Competition risk is codified as existence of similar products/services and competitors in the market. Last main domain is individual level variables; traits of entrepreneurs were taken as the main driver under this domain. Literature review showed as there are some dominant traits most of the entrepreneur carries; self-efficacy, risk-taking, internal and external locus of control were taken from theoretical framework. After second pilot interviews, the traits of “optimism” and “persistence” were also added to coding scheme.

After the completion of coding stage, Kappa co-efficient, which ranges in between 0.00 (no agreement) to 1.00 (complete agreement), was calculated in order to assess the inter-coder reliability on seven categories. Considering the threshold value (Krippendorff 2004), the categories ranged from 0.65 (Type of Innovation), 0.72 (Type of Risk), 0.85 (Individual Level Variables) to 0.95 (Entrepreneurial Ecosystem). Since new codes were obtained during the data analysis process, these values indicate the acceptable level of agreement between researchers.

2.6. Findings & Discussion

Semi structured interviews made with 30 (thirty) entrepreneurs from Turkish ecosystem revealed many findings in terms of entrepreneurship domains, “newness” of product/service and its impact on success and risk of legitimacy and competition problems. Participants median age is 33,8. Two of them have doctorate degrees, four of them have postgraduate degrees and twenty-four of them have graduate degrees.

Pseudonym	Age	Level of Education	Dominant Trait(s)
ENT 01	29	Doctorate	Optimism
ENT 02	30	Doctorate	Persistence
ENT 03	32	Graduate	Risk-taking
ENT 04	26	Graduate	Persistence
ENT 05	40	Graduate	Locus of Control (Int.)
ENT 06	26	Graduate	Persistence
ENT 07	32	Graduate	Persistence

ENT 08	34	Postgraduate	Optimism
ENT 09	47	Graduate	Persistence
ENT 10	33	Graduate	Persistence
ENT 11	34	Postgraduate	Risk-taking
ENT 12	29	Postgraduate	Optimism
ENT 13	42	Postgraduate	Locus of Control (Int.)
ENT 14	38	Graduate	Persistence
ENT 15	35	Graduate	Persistence
ENT 16	28	Graduate	Risk-taking
ENT 17	38	Graduate	Persistence
ENT 18	41	Graduate	Persistence
ENT 19	33	Graduate	Persistence
ENT 20	33	Graduate	Risk-taking
ENT 06	42	Graduate	Self-Efficacy
ENT 07	38	Graduate	Persistence
ENT 08	32	Graduate	Persistence
ENT 09	30	Graduate	Persistence
ENT 10	38	Graduate	Reflexivity
ENT 11	24	Graduate	Adaptivity
ENT 12	33	Graduate	Persistence
ENT 13	32	Graduate	Risk-taking, Persistence
ENT 14	26	Graduate	Persistence
ENT 15	40	Graduate	Persistence

Table 3. Pseudonym List

Participants are requested to define the term “entrepreneur” from their own perspectives and we see that all the participants defined the term around certain personality traits such as being self-sufficient, tendency to take risks and having courage to go beyond, which also parallels with the findings in the literature (Khilstrom & Lafont, 1979; Groenewegen and Langen, 2012; Jaussi and Randel, 2014; Hsiao et.al., 2011). However, 18 of the participants implied the importance of persistence, they mentioned that not giving up and being ready to try again constitutes the basics of being entrepreneur. Entrepreneurial persistence is “demonstrated by an

entrepreneur’s continued positive maintenance of entrepreneurial motivation and constantly renewed active engagement in a new business venture despite counterforces or enticing alternatives” (Caliendo, Goethner and Weißenberger, 2020). We can also deduce from the interviews that entrepreneurial persistence is highly exaggerated from the point view of entrepreneurs as we understand that trait is perceived as one of the irreplaceable characteristics of becoming an entrepreneur; however, some other entrepreneurs also implied the importance of knowing where to give up. It can be said that there is a thin line between persistence and giving up; this issue may be handled in an interdisciplinary method by the support of psychology, sociology and culture.

ENT 01 defined entrepreneur as *“a person who has self-efficacy and internal locus of control with a measurable risk appetite, an entrepreneur should carry certain personality traits; he should also has capacity to fight with stress in ambiguous situations; I do not believe in that entrepreneurship is inborn, it can be certainly developed by education...”*

ENT 04 defined entrepreneur as *“a person who have the ability to solve problems with lower cost by using technology with the aim of gaining money; an entrepreneur should have the capability of developing new products or services, which will fit to the needs of market.”*

ENT 07 defined entrepreneur as *“a person who has high motivation to create value; has the ability to commercialize without acting emotional in order to fit market conditions.”*

ENT 16 explained that *“There are many chances to start one’s own business, but what makes an entrepreneur really successful is persistence to pivot your project.”*

Pseudonym	Market	Product/Service	Dominant Trait(s)
ENT 01	Fintech	Service	Radical
ENT 02	Social Media	Service	Incremental
ENT 03	Social Media	Service	Radical
ENT 04	Gaming	Product	Incremental
ENT 05	Retail	Product	Radical
ENT 06	Retail	Product	Radical
ENT 07	Sport	Product	Incremental
ENT 08	Software	Product	Radical
ENT 09	AgTech	Product	Radical

ENT 10	Gaming	Product	Incremental
ENT 11	Software	Service	Incremental
ENT 12	Defense	Product	Incremental
ENT 13	Social Media	Service	Incremental
ENT 14	Medical	Product	Incremental
ENT 15	Human Resources	Service	Radical
ENT 16	Fintech	Service	Radical
ENT 17	Entertainment	Service	Radical
ENT 18	Retail	Service	Incremental
ENT 19	Hardware	Service	Incremental
ENT 20	Retail	Product	Incremental
ENT 06	Software	Service	Incremental
ENT 07	Software	Service	Incremental
ENT 08	HealthTech	Service	Incremental
ENT 09	Fintech	Service	Radical
ENT 10	Technology	Service	Incremental
ENT 11	Software	Service	Radical
ENT 12	Medical	Product	Incremental
ENT 13	PropertyTech	Service	Incremental
ENT 14	Retail	Service	Incremental
ENT 15	Software	Product	Radical

Table 4. Sector List

12 of the participants are developing products for their customers while 18 of them develop services. Market of startups vary among Fintech, Gaming, Social Media, PropertyTech, AgTech, Sport, Retail, Medical, Software, Defense, Entertainment, HealthTech and Technology Development. 12 of the entrepreneurs explained that they think that their products/services have radical innovation while 18 of them explained that they made incremental innovation in their products/services.

On cultural attitudes side, we understand that a supportive environment in terms of cultural attitudes is effective in founding a startup among our participants similar to the findings in the literature as it is believed that cultural values and beliefs are one of the most important factors that creates a successful entrepreneurship ecosystem (Isenberg, 2011; Feld, 2012). 14 of the participants explained that they had support from

their families or friends during startup foundation phase, while 10 of the participants explained that they do not think that cultural attitudes of families, friends or acquaintances have no impact in success or growth. On other hand, participants also implied that having support or not having support carry no direct importance in starting a business. For that reason, we can say that cultural attitudes are not directly related to type of innovation or startup success.

ENT 01 explains that *“I ran out of money after a while and called my father and asked for money and he said that if you are insisting on and have faith in this business, I can always find money for you, I have faith in you...”*

ENT 03 states that *“I could not start without family support, at the beginning you should either have your own money or family support in order to start...”*

ENT 23 implies that *“I do not think having support of family carry importance from entrepreneur’s perspective. If someone wants to run his/her own business, he/she will definitely do it.”*

On the other hand, some of the participants have also stated that they could not get any support as entrepreneurship has been seen as a risky career path in their close environment. ENT 07 states that *“I did not have chance to grow up in an environment with people who are dealing with business; my close environment was generally working for officials or employees and when I started, everybody found my action as very risky because they used to get regular incomes and this actually creates a cultural mindset in terms of entrepreneurship...”*

History of entrepreneurship is the other subdomain in Spigel’s entrepreneurship ecosystem that has a high frequency in our research; half of the participants have stated that history of entrepreneurship has a positive effect on the decisions of starting a company or becoming an entrepreneur. Moreover, most of the entrepreneurs explained that success stories of other entrepreneurs motivated them in a positive way.

However, participants think that histories of entrepreneurship do not have any direct impact on starting or developing a business just like in cultural attitudes.

ENT 01 says that *“There was Ravio and Angry Birds while I was at the university; they developed mobile games with only three people and gained million dollars. I thought that if they can succeed, why not to give a try? ...”*

ENT 04 explains that *“I often do read a lot of success stories; I admire Steve Jobs and in Turkey I like the stories of Onedio and Iyzico...”*

ENT 06 states that *“All the successful entrepreneurs have a motivational impact on my decision to go on and not to give up; I met with the founder of Kodeco while I was at the University and it gave me a great desire to be successful...”*

In sum, cultural attributes seem less effective than it is thought in literature; or we can deduce that cultural attributes affect entrepreneurial success indirectly and entrepreneurs are tend to imply their own characteristics rather than their cultural support mechanisms.

In the literature business networks provide benefits in terms of getting investment, accessing to new knowledge or new customers and markets (Fried and Hirsch, 1994; Jensenn, 2001; Shane and Stuart, 2002). Our findings also prove that these benefits are highly vital in terms of being successful as twenty-nine out of thirty participants stated that having a supportive network in the ecosystem provided them with many benefits including investment, markets and customers.

ENT 02 explains that *“At the university, I had understood the importance of networks and I dealt with creating a beneficial network for my future works before I ran out my startup; having a supportive network provided me to know customers, users and buyers...Attending events and knowing new people brings sales, investment opportunities from the network.”*

ENT 07 says that *“Having a supportive network carries a vital importance in entrepreneurial success. I benefited from my network in accessing new knowledge widely; this knowledge includes new government supports, technical assistance and procurement etc.”*

ENT 09 defines that *“an actionable network together with a good worker talent will bring success with no doubt”*.

Investment capital provides benefits in terms of job creation and employment (Belke, Fehn and Foster-McGregor, 2003) and also for increasing survival rates and profits of startups (Bosma, Praag, Thurik and Wit, 2004; Baluku, Kikooma and Kibanja, 2016). Participants in our interviews generally approach the issue from a different perspective and indicate that attitude of investors is not supportive from the perspective of entrepreneurship ecosystem and it harms to the improvement of startups. 11 of the participants stated that investment capital carries no impact while 9 participants stated that investors and their attitudes directly affect their startup growth negatively.

ENT 01 says that *“investment process is evaluated too commercial in Turkey; we need more time to develop an entrepreneurial mindset. Our investors think like a*

merchant and only ask about ROIs. There is no meaning to call investors as angels; there is no good side of it.”

ENT 03 also emphasizes the negative side of investors by explaining that *“Investors want to learn when they will multiply their investments, it turns out to be a commercial process rather than creating value collectively. Decision makers in the ecosystem just try to replicate foreign ecosystems, this is totally wrong to me. I believe that Turkish ecosystem is unique; mindsets of customers, investors and entrepreneurs are all different.”* We see that there is a general consensus among Turkish startups that investors in Turkish ecosystem are harmful instead of being supportive as they approach entrepreneurship ecosystem with a very materialistic perspective; which actually irritates entrepreneurs.

It is widely believed in the literature that entrepreneurs need to hire talented and qualified workers for success, absence of talented workers may lead to failure (Cohen, 2006; Neck et al., 2004). Similar to the literature, our findings also indicate the importance of worker talent, twenty-seven out of thirty participants emphasized its importance. ENT 06 states that they faced many technical problems in developing their products and they needed highly qualified workers in order to overcome obstacles, but they could not access to the right people to work together which slowed down their product development. ENT 07 supports the idea of ENT 06 by saying that one the success indicators in entrepreneurship ecosystem is to find a competent startup team, which is actually very difficult.

ENT 03 simply states that *“We were very lucky in accessing worker talent; we hired a software developer but he had also very good at social media, which increased our company’s competency in overall; my all workers were very liable to our tasks and this brought us success...however I believe that there are two basic things that should be followed very carefully; first you should not fall in love with your startup and you should not fall in love with your team.”*

Though Napier and Hansen (2011) emphasized the importance of mentors and dealmakers by mentioning about them “as being central actors” in the diffusion of information, we could not see any dominant relation of mentors and dealmakers with startup success as 18 of the participants stated that mentors and dealmakers make no impact in startup success. However, there is also exceptional situations as only one participant (ENT10) stated that *“Two dealmakers from the ecosystem carried us through fourteen investors; I had known these dealmakers from my personal network,*

and we had a trust relationship, which was very helpful in accessing other investors”

Prior research generally confirms that universities have a positive effect in startup success and innovation because of easy access to knowledge and services for startup development such as university-based incubations and accelerators (Audretsch, 2004; Mason and Brown, 2013; WEF, 2013). However, in our study, nine participants think that universities have no impact in startup success while 9 participants also implied that universities and their way of doing business affected their startup negatively. Only twelve participants stated that universities are very supportive to entrepreneurs.

ENT 02 says that *“We succeeded many things thanks to EBİLTEM, they provided us support services that is highly needed especially at the beginning. They also gave us support in order to apply grants and we got 150.000 Turkish liras, which boosted our startup. If it weren’t them, I couldn’t succeed alone.”*

ENT 07 explains that *“Universities in our country are not capable of understanding entrepreneurial mindset; there is too much knowledge produced at the universities but turning an article in to cash is generally perceived as unethical, which is the reflection of our cultural mindset. I think universities are not understanding concept of startups.”*

ENT 04 emphasizes that *“It is nonsense that university incubators want to get share of 10-15% from their startups just because they are providing offices and other support facilities, I don’t think that university ecosystems are supportive.”*

Support services and facilities are thought to be supportive in entrepreneurship ecosystem and 21 participants explained that they have great benefits especially from accelerators in overcoming legitimacy problems.

ENT 26 explains that *“We are trying to replace human resources with artificial intelligence, there is great resistance in companies who used to work in traditional frames. However, when we are accepted to few accelerator programs, supported by private companies, our customers started to understand us, and our sales increased.”*

ENT 04 implies that *“We used our network and attended every event about our sector to compete with our rivals and supportive mechanisms in private sector helped us a lot.”*

In the world, universities carry a great importance in terms of boosting entrepreneurship ecosystems both locally and nationally; however we see that universities are not able to find the right space to elevate Turkish ecosystem in terms of supporting entrepreneurs; perception of academicians in terms of understanding commercialization of

knowledge should be changed immediately. University administrations should work hard to create an atmosphere of mutual trust as academicians and entrepreneurs in university incubations generally have doubts about the demands of universities after founding spin-offs or startups.

The consensus in the literature is that effective government policies, which support the improvement of entrepreneurship ecosystems have a positive effect on startup success, growth and innovation (Audretsch, 2004; Hirsch, 2005; Minniti, 2008; Dolfsma and Seo, 2013). However, governance and policy are found to be less supportive in the whole entrepreneurship ecosystem since government policies in Turkey carry too much bureaucracy and regulations are slow to compensate for needs of startups. 15 of the participants stated negative opinion about governmental supports while 5 of them explained that they never thought to use government supports.

ENT 01 states that government regulations and grant policies is not supportive because of too much bureaucracy; *“You never know when you will get your grant and are not able make a true financial plan by depending on these grants. If you totally trust government grants, it may certainly lead your company to bankruptcy.”*

ENT 03 explains that *“There should be new grants in our country, which is specifically designed for only startup companies; it is not true to combine SME and startup supports in one pot. There is TÜBİTAK grant for startups, but the process takes eight months, which is a duration startup generally fail.”*

ENT 04 also supports the ideas of other participants and criticize entrepreneurship policies and grant process *“You ask questions to KOSGEB experts about grants and they generally reply with a big no. I search the grant and find my own answer from the regulations. If I had trusted to expert’s replies without reading regulations, I had already given up. I think that many entrepreneurs have already given up because of similar replies from the experts.”*

Researchers implied the importance of market existence in the literature and clarified that having a good product and a great team will never be enough if there is no market need (Andreesen, 2007; Spigel, 2017; CBInsights, 2014). ENT 01 implies the importance of open market by stating that *“İzmir is a small market to sell your products that is why we prefer to sell in İstanbul as all the centers of banks are in İstanbul, which brings us to the necessity of an open market to grow.”*

ENT02 is an entrepreneur who has a successful game development company and his market is global which is different from other startups. He can be said that he

benefits from the existence of a vast market globally. We understand that game development sector remains as an outlier apart from other markets as publishers defined rules in order to publish games and this provides a direct legitimacy throughout pre-examining and pre-tests in the market, which means your product is tested in a sample group and only published if it fulfills a certain level of success factors. Therefore, your product is tested and proved to become successful beforehand in game sector. Open market domain remains as an important factor in startup success as 22 of the participants think that open market and accessing the customer carry a great importance; as most of the participants explain that they already had market knowledge before they started their businesses and they found missing gaps in related products/services in order to make incremental innovation.

Domain	Supportive	Frequency	Specifier
Cultural Attitudes	Supportive	14	Variant
History of Entrepreneurship	Supportive	15	Typical
Networks	Supportive	29	General
Investment Capital	Supportive	10	Variant
Mentors and Dealmakers	Supportive	10	Variant
Worker Talent	Supportive	27	Typical
Universities	Supportive	12	Variant
Support Services	Supportive	21	Typical
Policy and Governance	Supportive	10	Variant
Open Markets	Supportive	22	Typical

Table 5. Frequency List

It is stated in the literature that entrepreneurs have some typical traits such as risk-bearing, stress bearing, having self-efficacy and internal locus of control (Rotter, 1966; Shapero, 1975; Khilstrom& Lafont, 1979; Bandura, 1997; Kerr, Kerr, & Xu, 2018). In our interviews, almost all the participants stated the importance of risk taking and showed self-efficacy features in their story. What is more interesting in this study is that, all the participants have shown evidence of self-efficacy. It is also seen that this trait is generally improved by someone in the family who is visionary or by success

stories of other entrepreneurs.

ENT 01 states that *“We founded our company with my partner however things didn’t go well, and we lost all of our money. I am capable of stress-bearing and risk taking but my partner was unable to stand for stress and high level of risks...”*

ENT 05 explains that *“I was grown up by believing that I can succeed whatever I aim in this life; my father was dreaming my being president one day in the future, they have always told me that I can overcome every obstacle by hardworking; and I did it so...”*

General consensus on literature was that radically innovative products are rejected since customers do not understand the product or service, which actually leads to failure (Kuratko et al., 2017). ENT 06 also supports that notion and explains that they have faced with the risk of legitimacy because they have a radically innovative product, which is actually difficult to explain to potential customers. Radically innovative participants often explained that attending startup events and competitions or being accepted to an accelerator provided a gate for them to overcome legitimacy risk. On the other hand, making incremental innovation brings the risk of competition; and this study shows us that incrementally innovative participants generally have knowledge of market beforehand, they develop their products by finding missing gaps in market or product/service.

ENT 01 develops an artificial intelligence supported chatbot and says that they have a radically innovative product in Fintech; though they have faced with risk of legitimacy at the beginning, they overcome this risk after attending and winning an entrepreneurship contest in Fintech. They defend that being radically innovative impacted them positively as banks in Turkey is not familiar with this technology and this “uniqueness” of this technology provides customer for this startup. Furthermore he explains that *“being innovative for corporate companies has become a buzzword in Turkey, they use “newness” to promote their brands; just think that all big companies are coming to you, we are not looking for customers; it is just because you have this unique “newness” in the market. Winning the contest has provided us legitimacy in the market...”*

ENT 07 supports the idea of ENT01 and states that *“Our level of innovation, I mean having a radically innovative service, certainly has been supportive for us both in investment presentations and on the customer side; interest to us increased just*

because our service has radical innovations.”

ENT 04 explains that there are many competitors in gaming market *“We used our network and attended every event about our sector to compete with our rivals, and in time all the publishers began to know our name.”*

ENT 24 implies that they made incremental innovation by using open market domain *“We found a gap in the market and built our product onto that gap.”*

These findings showed that not all the ecosystem domains make impact on startup success in Turkish entrepreneurship ecosystem depending on our research model proposed at the beginning of this study. It is very obvious that some of the domains have a dominant impact on startup success, while others have no direct impact from the perspective of entrepreneurs.

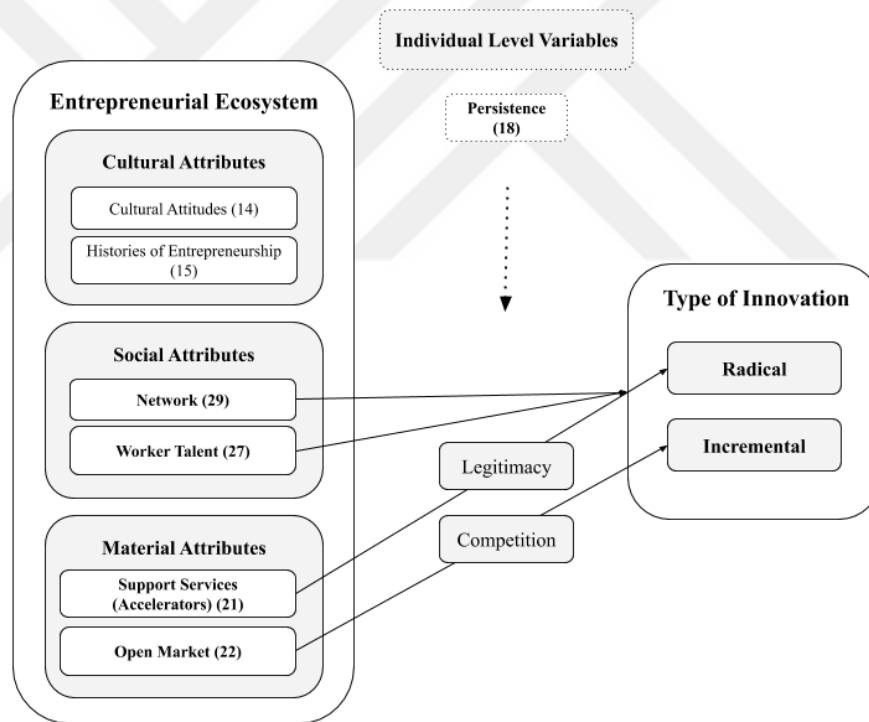


Figure 4. Revised Research Model

The results provide some descriptive evidence for influential role of SA and MA; specifically, network, worker talent, supportive services and open market related with radical and incremental innovation. It can be said that network and worker talent have a great impact on startup success from the perspective of entrepreneurs. Network and worker talent may determine type of innovation and contribute to the growth of

startup both in founding and development phases. There is an evident relation between accelerators (support services), radical innovation and legitimacy. Accelerators act as a tool for overcoming risk of legitimacy and provide a basis for startups to introduce themselves into the market. On the other hand, there is a direct relation between open market and incremental innovation as having a vast market with related product/service leads entrepreneurs to analyze the market deeply and develop incrementally new products/services, which compensate for needs of customers in a better way. Entrepreneurs' trait of persistence (18) together with optimism and risk-taking traits act as a catalysator between entrepreneurship ecosystem (dominantly SA and MA), type of innovation and type of risk.



CONCLUSION

Entrepreneurship ecosystem, which is composed of cultural attributes (CA), social attributes (SA), and material attributes (MA), can enable and disable the success or failure of entrepreneurs by affecting their choices on creating radical or incremental innovation. However, the literature provides a very little understanding on this entrepreneurial process by highlighting diverse paths of developing radical and incremental innovation.

In our study, we found out that network, worker talent, support services (accelerators basically) and open market are the most dominant domains, which have an impact on entrepreneurship success from the perspective of entrepreneurs. Moreover, there is an evident relation between support services (accelerators) and radically innovative startups in overcoming legitimacy risk, while open market is related with incrementally innovative startups in overcoming risk of competition. Trait of persistence come to the forefront as the most dominant trait that act as a catalysator between entrepreneurial ecosystem and innovation and entrepreneur take place on both sides actively as the main actor of all the research model.

This study also showed that culture has no direct impact on startup success and growth though it is often stated that support of families and friends was helpful in starting business, we understand that cultural support is not seen as a must to run a business from the perspective of entrepreneur. Policy/governance and universities are perceived as less supportive domains as universities are thought to be far from understanding entrepreneurship mindset and government policies create obstacles and delays in starting business because of too much bureaucracy. Investment capital is also perceived as an unsupportive domain because of investors' mindset about regaining their investments at once.

Though mentors&dealmakers are not mentioned by participants very often, one example indicates us that dealmakers should be positioned as mediators of accessing to investment, knowledge and technology. It is also possible to regulate the positions or titles of dealmakers formally within the level of government by applying new regulations on the issues. In Turkey, government generally try to improve startup ecosystem via university Technoparks, incubators and accelerators; however, this study shows that there is a missing gap between university facilitators and

entrepreneurs. Services of universities should also be regulated at the level of government. On the other hand, we understand that entrepreneurship ecosystem needs more success stories, which may lead to increase in tendency among young people in order to choose entrepreneurship as a career.

This study also shows that there is a lack of standard in terms of defining success in startup literature both in theory and practice. Getting game development sector as an example, it would be highly beneficial to create standard success evaluation criteria, specifically product market test, which should be conducted on customer side. Therefore, entrepreneurs can have a scientific method to understand whether their product will be successful or not. Moreover, it is very difficult to face with risk of legitimacy in case of radical innovation; academics and practitioners should work together and develop new strategies in order to overcome risk of legitimacy. Risk of competition is another problem that startups face frequently in case of incremental innovation; the risk of competition can be overcome by developing a strong and actionable network; opening to global market and targeting the right customer segment can be also beneficial in terms of eliminating the risks of competition.

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APPENDIXES

Appendix A- Ethical Committee Approval



T.C.
YAŞAR ÜNİVERSİTESİ
ETİK KOMİSYONU

Toplantı Tarihi: 13.12.2019

2019-2020 Akademik Yılı Toplantı Sayısı: 4

GÜNDEM 2:

Yaşar Üniversitesi Sosyal Bilimler Enstitüsünün 05.12.2019 tarihli ve 11158 sayılı yazısı ile sunulan, İşletme İngilizce Doktora Programı öğrencisi 12300009007 No.lu Fatma Hacıoğlu'nun yürütmekte olduğu "How entrepreneurship ecosystem affects startup process and success?" başlıklı tezin araştırması kapsamında uygulanması planlanan mülakat sorularına ilişkin Etik Komisyonu onay talebinin görüşülmesi.

GÖRÜŞME ve KARAR:

Yaşar Üniversitesi Etik Komisyonu 13.12.2019 Cuma günü, saat 10:00'da Prof. Dr. Mehmet Cemali DİNÇER başkanlığında ve üyelerin katılımlarıyla toplanmış, gündem maddesi değerlendirilmiş, aşağıdaki karar alınmıştır.

KARAR 2:

Yaşar Üniversitesi Sosyal Bilimler Enstitüsünün 05.12.2019 tarihli ve 11158 sayılı yazısı ile sunulan, İşletme İngilizce Doktora Programı öğrencisi 12300009007 No.lu Fatma Hacıoğlu'nun yürütmekte olduğu "How entrepreneurship ecosystem affects startup process and success?" başlıklı tezin araştırması kapsamında uygulanması planlanan mülakat sorularının uygunluğuna oy birliği ile karar verildi.

A A b l S H Eo

Ata TÜRKİDANI
Yazı İşleri Müdürü
T.C.
YAŞAR ÜNİVERSİTESİ
ETİK KOMİSYONU
ASLI GİBİDİR



T.C.
YAŞAR ÜNİVERSİTESİ
ETİK KOMİSYONU

Toplantı Tarihi: 13.12.2019

2019-2020 Akademik Yılı Toplantı Sayısı: 4

Prof.Dr. Mehmet Cemali DİNÇER	Başkan	
Prof.Dr. Arslan ÖRNEK	Üye	
Prof.Dr. Ali Nazım SÖZER	Üye	
Prof.Dr. Levent KANDİLLER	Üye	
Prof.Dr. Aylin GÜNEY	Üye	izinli
Prof.Dr. Ali Timur DEMİRBAŞ	Üye	
Prof.Dr. M. Erol SEZER	Üye	
Prof.Dr. Şefik GÜNGÖR	Üye	görevli
Prof.Dr. Emre ÖZGEN	Üye	
Av. Serkan AYAN	Üye	

ASLI GİBİDİR



Ata TÜRKERİNE
Yazı İşleri

Appendix B – Semi-Structured Interview Questions

Thesis questions are below.

General Information

1. Name, Surname, Age?
2. What is your education degree?
3. In which countries/cities you have lived up to now?
4. Where did you born?
5. What is your company's name? In which sector you work? When did you found it?
6. Have you ever gotten an investment? If yes, how many times and how much?
7. What is your last year revenue and yearly growth rate?
8. How many staff works recently? How many staff was working when you start first?
9. Do you have any past startup experience? Where did you work before you found your startup?

Cultural Attributes

1. Who is an entrepreneur from your perspective?
 - a. Does your entrepreneurship definition reflect/explain the startup ecosystem that you are in?
2. How you perceive the success of an Entrepreneurship? What should he/she achieve to become successful in an ecosystem? What is the basic success criteria? Do you think that these criterias are applicable to all startups?
3. Why did you become an entrepreneur? Could you please share how you decided to become an entrepreneur briefly?
4. How did your family and friends react to your decision about becoming an entrepreneurship? Were they generally positive or negative feedbacks?
5. In which stage of your startup you needed support from your close/far environment? Before founding or after founding?
6. Was there any success story that inspired you about entrepreneurship?

Social Attributes

1. Is it important to have a (business) network for entrepreneurs to succeed in the entrepreneurial environment that you are in?
 - a. What do/can these networks provide for the entrepreneur? (financing, increasing knowledge, skill, becoming aware of opportunities, reaching technology, etc.)

- b. At what stage are these networks important for an entrepreneur? (before establishing the startup, after establishing the startup, both, etc.)
2. Were there any “useful/effective” networks in your entrepreneurial environment when you just started entrepreneurship? Did you get/join them afterwards?
 - a. Who are the actors in these networks? (financiers, angel investor, mentors, etc.)
 - b. How do you define your network?
 - c. Do these actors know each other? How do you define the link/relation between them?
 - d. How could you create/join this network? (college friend environment, previously acquired business environment, social media, etc.)
3. What/Where did you reach using these networks?
 - a. Do you have a proper case for this situation? (please briefly describe)

Material Attributes

1. How do you evaluate contributions of universities/research centers to Entrepreneurship ecosystem? (E.g. Do they provide competent human resources, new technology and knowledge sources, exchange of knowledge etc.?)
 - a. Do universities take a supportive role within entrepreneurship ecosystem? How?
 - b. Is there any solid example? Can you please explain briefly?
 - c. In which stage this support is more important?
2. Do you have enough specialized support mechanisms in your ecosystem? (e.g. finance specialists, lawyers, human resources and intellectual properties rights, etc.)
3. How do you evaluate policy infrastructure (local or national) for entrepreneurship in your ecosystem?
 - a. Did you benefit governmental supports during your entrepreneurship process? If yes, was it helpful?
 - b. Do you think that laws for entrepreneurs are sufficient?
 - c. Do you think that public funding and governmental supports are sufficient?
 - d. Do you think that entrepreneurs are supported by financial policies?

- e. Do you think that bureaucratic processes support Entrepreneurship mechanisms?
4. In your ecosystem, do you have a demanding market that you can sell your product/service?
 - a. Do you sell your product/service in local/global market? What is the percentage of sales in local and global market?
 - b. How did you get/reach your first customer? (network, University, public support, etc.)
5. In which stage, material attributes carry more importance? (before or during startup founding or both?)

Interaction of Cultural, Social and Material Attributes

1. How do you evaluate startup ecosystem in your city/country?
2. Do you think that cultural, social and material attributes are integrated? If yes, in what level? Which one triggers the other? Which one is more important for entrepreneur?
3. Is there any other mechanism?

Innovativeness of Business Model/Product/Service

1. How do you define your product/service in terms of innovativeness?
2. What is your business model?
3. How did you conceive product/business model idea?
 - a. Which elements above triggered you in this process?
4. Product/Business Model:
 - a. How innovative is your product/service in global market?
 - b. How innovative is your product/service in national market?
 - c. How innovative is your product/service in local market?
5. What is innovative in your product/service?
6. What are the fundamental risks that you came across in the market about your product? Did you have any difficulty about putting across your product/service to your customers? What are the fundamental reasons for experiencing these difficulties?
7. IF THE PRODUCT/SERVICE IS INNOVATIVE, WE WILL ASK: Did you have any difficulty while you are explaining an innovative product/service to startup ecosystem shareholders?

- a. Which shareholders/actors had difficulty about understanding the potential of your product/service?
 - b. Who gave support? In which ways?
 - c. How did you make shareholders believe in your product/service? What kind of strategies you applied?
 - d. How did you sell/get investment for your product/service?
8. IF THE PRODUCT/SERVICE IS **not** INNOVATIVE, WE WILL ASK: Do you have any competitor in the market?
- a. How many competitor is there in your market? How strong they are? How are they strong?
 - b. What are your advantages, how different you are?
 - c. Are you able to compete with your competitors? What do you do to compete?
9. How does the ecosystem affect the innovativeness of your product/service?
- a. Do you think that components of entrepreneurship ecosystem define the level of innovativeness?
 - b. Do you think that could you produce a more innovative product/service in a more supportive ecosystem? Which element in the ecosystem carry more importance?
10. Do you think that having an innovative product affects your success/growth? In what level it affects?

Personal characteristics

1. What are your character features in terms of evaluating opportunities or tolerating risks in your entrepreneurship process according to you? What are your best character features that helped you in this process?
2. Do you think that your past experiences& educations have any effect on your success?
3. Is there any exceptional elements that you came across in your startup story? Or does the process of becoming successful for each startup work in the same way?

BRIEF CURRICULUM VITAE

Academic Qualifications

2012-2020	PhD Graduate School of Social Sciences Yasar University, İzmir, Turkey Doctoral Thesis: "How Entrepreneurship Ecosystem Affects Startup Process and Success"
2010-2012	Master of Business Administration Graduate School of Social Sciences Yasar University, İzmir, Turkey
2005-2010	Bachelor of Arts Faculty of Letters Department of American Culture and Literature Hacettepe University, Ankara, Turkey
2008-2009	Bachelor of Arts Faculty of Culture and Literature Department of German and British Studies Alpen-Adria University, Klagenfurt, Austria

Employment History - General

11/2019-still	Co-founder <i>Maya Entrepreneurship Centre, İzmir</i> <ul style="list-style-type: none">• Mentoring and investing on startups at early stages.• Running a co-working space.
05/2015-still	Founder <i>Hafa Colnsultancy, İzmir</i> <ul style="list-style-type: none">• Offering consultancy to SMEs on business development and funding,• Developing government supported R&D based projects,• Coordinating EU based youth projects.

11/2016-still

Business Development Manager

MCF A.Ş., İzmir

- Developing short and mid-term strategy for the company,
- Coordinating R&D and non-R&D projects.

11/2014-05/2015

Entrepreneurship Coordinator

Minerva Incubation Center, Yasar University, İzmir

- Managing incubation center,
- Mentoring startups at early stage.

11/2014-05/2015

R&D Specialist

R&D and Application Center, Yasar University, İzmir

- Developing R&D based projects together with researchers,
- Coordinating university-industry collaboration.

Publications

Yarimoglu, E. K., Hacıoglu, F., Gencturk, S., Kamali, Y. C., & Sayginer, C. (2015). A Qualitative Research on Municipalities' Social Responsibility Practices in Izmir City. *Journal of Yaşar University*, 10(39), 75.

Karaata, S., Hacıoglu, F. (2015). *A Short Review on SMEs, Innovation and Financial Markets*. *Journal of Entrepreneurship and Innovation Management*.

Dalgıç, G., Hacıoğlu, F., Arbak, H., Taşpınar, P., Gençer, H., & Karaata, S. (2015). İnovasyon Ölçümüne İlişkin Bir Derleme: Dünyadan ve Türkiye'den Bazı Öne Çıkan Yaklaşımlar. *AR-GE ve İnovasyon Programlarında Değerlendirme ve Etki Analizi*, 41-67.