



Entrepreneurship as a Driver of the Digital Transformation

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ABSTRACT

Digital technologies are also affecting the supply and demand of the sector. Apparently, more firms are keen in optimizing the methods of utilizing their assets to foster productivity. Thus, digital technologies are seen as ideal mechanisms for changing the patterns of energy consumption, optimizing asset, fostering cross-industry partnerships, and fostering a greater use of industrial platforms. Adapting open inventions, paradigm accepts that organizations have to utilize the internal ideas and as well as the external ideas and further the internal paths and external paths to market established companies are building up structural programs to harness the power of entrepreneurial.

Keywords: Entrepreneurship, Digitization, Digital Transformation, Technopreneurship

JEL Classifications: L26, L86

1. INTRODUCTION

To positively engage in the ongoing globalized economy, a producing disruptive innovation is frequently required like tesla motors or facebook which have structured expectancy as bringing in the startup companies, disestablished companies and raising up with the “next big thing” in developing unchallenged disrupt entire industries and market space McGrath (2013). In the contemporary establishment, understanding is required in generating innovation which progressively exists externally within restrictions. Present startup organizations are developing major technology improvements which are replaced by mandatory technologies and prevailing organizations. Adapting open inventions, paradigm accepts that organizations have to utilize the internal ideas and as well as the external ideas and further the internal paths and external paths to market Horn (2014) established companies are building up structural programs to harness the power of entrepreneurial Mocker and Bielli (2015).

Every organization has individual skills with regards in accessing scale, authority, routines and resources. The strength in a comparable method was listed by Lehmann (2011) were scale,

process excellence, brand power and resources. Organizations have the ability to rapidly scale start up business chances by their resources. The procedures required to process a verified business model competently occur in a well-developed business. The brand status of a business develops negotiation and credibility benefit in trading collaborations. Developed organizations normally have an abundant quantity of human resources, influences, knowledge, cash and data at the time of clearance. (Salido et al. (2013), Vascellaro (2011) and Chesbrough (2015) found that the present scenario is showing more interest towards collaborating of startup organizations with the developed organizations. As the startup organizations have been developed more over the last few years with a rapid development, the effort put in by the corporate organizations in reaching out the startup ecosystem. Burfield (2014) stated that there have been huge counts of the developed companies who are using collaboration as a key element for the innovation strategy with startups companies.

Innovation is considered as quadruple, emerges from collaborative innovation of networks. Hence, source of innovation becomes a modern subject of research. The three distinct poles of innovation research and the connections are shown in Figure 1.

Entrepreneurial learning also relates to policies due to rapid changes in technology or market. Hence, how to cope up with new policies and regulations are learnt by innovating entrepreneurs. Innovation policy emerges from and oppose on entrepreneurial practices and evolution of technology. Education and entrepreneurial learning have to examine various innovation processes and modern sources and also to explore underpinning legislations and should suggest effective policies for both social innovation and business innovation Ketikidis (2012).

According to Chesbrough (2015) a startup company’s strengths varies rendering to their area of business, stage of development and numerous other factors. On a general basis the strengths could be positioned according to their focus on development, overcoming their hazards, innovative ideas and agility. Generally a commencing business will be embedded with innovative ideas wherein these ideas changes into an authentic innovation. Targeting towards a quick development is surrounded with their targets in a rapid development. Agility permits startups in facing risks through in vestigating their recognized factors and immediately hinge if unsuccessful. In a graceful organizational structure, commencing businesses are capable to respond immediately to alter their environment and adjust to different circumstances. To engage with startups, corporations can employ these four different models as it is a success factor as shown in table below Table 1.

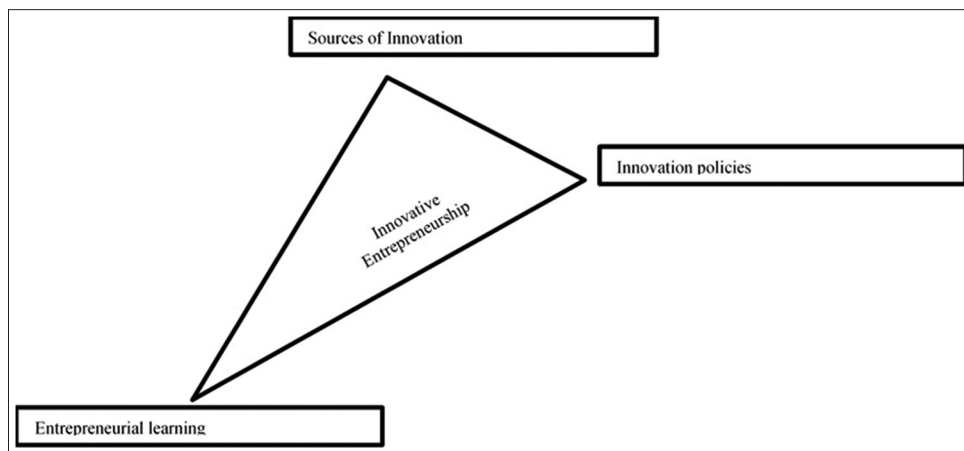
In a discussion with the Forum’s report fostering innovation driven entrepreneurship of Europe Kearney (2014), a valuable and important strategy for the developing organizations to work together with the developed organizations has been accessing different organizational and financial resources. Correspondingly, reputable organizations look for improving their peripheral innovation abilities could benefit diverse perceptions, attitudes and

risk viewpoints of developing organizations. Developing, dynamic organizations are often structured with the development of strictly innovative and hypothetically disrupting facilities and products, while well-known organizations have established progressions and significance systems. The complementary capabilities could be exploited through collaborative innovative partnerships (Rösler, 2016).

Whereas, developing startup corporate for a partnerships and innovative collaboration were considered in being authoritative in accomplishing an enhanced advantage in the economical market wherein digitization is being as an idea for accomplishing the same. Digitization shadows the margins between the sectors of industries, reduces the obstacles entering and generates associations. The first partnerships are of individuals with diverse industrial sectors commencing to develop around the clients in offering not only with the products but also with experience and explanations. Innovation lay as groundwork for organizations in flourishing the digital world, as well as for nations in developing a competitive and dynamic economy. Between the various individuals in the global ecosystem, partnership could aid creativity connected to the authority of innovators and entrepreneurs in developing innovative concepts into their companies, the start-ups influence the power of superior individuals in developing innovative ideas for marketing quicker (Rösler, 2016).

Technical and digital elucidations are delivered by startups which could be pragmatic to any type of industry. Netessine and Bonzom (2016), Mocker and Bielli (2015), Netessine and Bonzom (2016) and Koskinen (2015) stated that in most of the industries startups are being operated. Requirement in redevelopment as well as innovation is applicable to several types of industry as digital interference disturbs principally each type of industry. Netessine

Figure 1: Innovative entrepreneurship



Source: Adopted from Ketikidis (2012)

Table 1: Four models engaging with startups source: Adopted Chesbrough (2015)

| Corporate venturing | Corporate incubation | Startup program (outside-in) | Startup program (platform) |
|--|---|---|---|
| Strategic mission clarity | Independent from corporate influences, guidelines and standard procedures | In co-developed innovations, precautions taken to handle IP issues | Revenue model clarity of the program |
| Clear positioning in the world of startups | Right to access corporate resources whenever needed | To make sure the intake of program-created innovations at parent, the procedures must be in place | Capacity to handle high number of collaborating startups simultaneously |

and Bonzom (2016) stated with an example of Bain Company (2015) and Accenture (2016) which is a top tier consulting company, have recognized purchaser products customs startups in their accelerator platform in generating innovative spirit brands although the establishment has not been associated with the technique at all Accenture (2016).

While much research focused on the need to corporate startup collaboration and the importance of digital competitiveness that could be achieved through the same, no research till date examined the various factors influencing such collaboration and the importance of digitization. In this regard, the present paper attempts to examine the various factors that affect corporate startup collaboration through digitization wherein the entire paper will be review based.

The rest of the paper is as follows: section 2 is the factors affecting entrepreneurship as a driver of digital transformation; section 3 is the framework; section 4 is the discussion section and section 5 is the conclusion.

2. FACTORS AFFECTING ENTREPRENEURSHIP AS A DRIVER OF DIGITAL TRANSFORMATION

Causation and effectuating can be discussed in the lines of being a unique logic of human decision-making and action-making in environments that are not sure (Sarasvathy, 2001). Causation is an objective-based approach where a predefined goal is attempted to be attained with the most powerful set of means, for instance outlining the destination for a trip and then choose the commendable mode of transport Berends and Jelinek (2014). Effectuation considers a set of means as the origin and aims, given those means, to form potential results. Hence, planning a trip would assess possible modes of transport besides resource constraints including time or budget and point out potential destinations Gregory et al. (2014). Moreover, various scholars found out particular characteristics of causation and effectuating Berends and Jelinek (2014), Chandler et al. (2011), Cai et al. (2017), Fisher (2012) and Werhahn et al. (2015). Chandler et al. (2011) discuss in their research that causation can be construed as a uni dimensional construct and effectuating can be construed as a multidimensional construct. Effectuating is regarded as a formative construct with experimentation, flexibility and affordable loss as independent pre-commitments and sub-dimensions as a shared dimension with that of causation Chandler et al. (2011), Fisher (2012) and Werhahn et al. (2015). Under experimentation, it is found out that several variations are formed to accomplish commercialization Chandler et al. (2011) and Fisher (2012). Affordable loss is regarded as an entrepreneurial behavior that takes into account only limited number of resources to a venture at a time and assesses how much loss turns out affordable Sarasvathy (2001), Fisher (2012) and Werhahn et al. (2015). Flexibility means that the company responds to potential opportunities, adapts the required resources in a pertinent manner and does not get into actions that would not contribute to its flexibility Fisher (2012). Pre-commitment means that the entrepreneur forms relationships with suppliers, partners, and customers early itself Sarasvathy (2001)

and Fisher (2012). Causation is regarded as one dimensional and is determined by means of the identification of an opportunity prior to forming anything towards its Chandler et al. (2011).

Fisher (2012) and Reymen et al. (2015) observed that effectual and causation features as well as decision-making procedures exist at the same time period in a venture and that effectuating particularly takes place in new ventures. Moreover, effectual strategy and decision-making is primarily positive related to new venture performance as Read et al. (2009) demonstrated in their meta-analysis.

Similar outcomes have been offered by Cai et al. (2017) who provide proof from Chinese new ventures and demonstrate a positive relationship between effectuating and performance. The features of small companies including quick decision-making, low bureaucracy, risk taking, effective internal interaction, or motivated labor Vossen (1998) give way to the new venture to react to changing market situations or conditions quickly Tellis (2000). Reacting to these changing market conditions by means of innovations does generally result in niche market activities or strategies Fernhaber et al. (2007). But, these niche market innovations have the chance to improve gradually and turn out to be a mass market product that is superior to the current product Christensen (2011). This is keeping in mind that they under perform at the outset in relation to the mass market products. Tellis (2011) elaborate on it and suggest that formerly niche solutions have the prospect to become disruptive for the current mainstream market segment Macheleidt (2016).

Another unique feature of new ventures and small firms is that they generally do not adhere to a conventional and well-framed new product development process, as large companies follow Scozzi et al. (2005). This facilitates the discussion that small and new ventures take up approaches of effectuating on the contrary to taking up causation. But as the company grows and sustains for a longer time span, the company has high probability to change from effectual to causal logic Reymen et al. (2015). Concentrating on means and not more on ends permits new ventures to be more welcoming to new ideas and innovative approaches Sarasvathy et al. (2014).

Young, powerful companies are generally framed around the development of truly innovative and possibly disruptive products and services, while established firms have profound processes and value networks. Collaborative innovation partnerships can take advantage of these complementary capabilities. In specific, young firms infuse fresh viewpoints on nascent markets, and are freed from complex processes, the onus of fixed capital and human costs and the demands of big influential customers Christensen (1997). Young businesses are generally in proximity to those users and customers who denote growth-based markets, and can be more adaptive than huge companies in experimenting with various approaches, letting themselves to react more quickly to changing needs Iammarino et al. (2012). Young firms can hence form, test and commence innovative products and services quickly than big firms, as the structures and processes that enable large firms to successfully function and take care of risk can thereby

slow or stop innovation processes which are not straight in line with a big company's main business or customer requirements. In the meantime, the resources, size, and experience of big and established companies bestow varied, though equally significant benefits. Big firms consist of financial resource that is in dearth in almost all young companies, besides the networks, regulatory knowledge and experience required to successfully commercialize fresh offerings. This in turn provides them a specific benefit. Here knowledge is regarded as cumulative Rösler (2016).

Sawyer and McGee (2003) research showed that external networking does not have any impact on the link between perceived vagueness and firm performance in SME. Pre-commitments from partners may be basically dependent on forecasting the future (causal logic), and consist of the search of maximum opportunity in the formation of fresh and sustenance of earlier relationships. This is not cost-effective; it takes time, financial resources and energy. Zheng (2008) stated that as partnership tie strength sees a raise, there is not enough time for a company to look out for new resources that may pave way to fresh ideas to trigger innovation. Our research's outcome observes that companies choose not to risk to an extent than they can afford to lose. They achieve what they can, on the contrary to what forecasting say they could. In a similar way, affordable loss does not predict service or product innovation, but it consists of a direct influence on firm performance. The outcome is that it appears that keenly being in the quest for pre-commitments to justify innovation tasks has no impact (at its best). However, considering an affordable loss approach helps see a rise in total company's performance Roach and Makani (2016).

Environmental hostility has a major influence on the link between entrepreneurial processes as well as entrepreneurial learning. But, a rather contradicting effect rising from the expectation is identified. There is a considerably higher exploratory mean for effectuating in a nonthreatening environment. This shows that in a perceived nonthreatening environment a rise in the application of effectuating also raises exploration. A probable elucidation is that entrepreneurs who use a great degree of an effectuating view the environment to be not very hostile, since they are applying more effectuation. Effectuating has the adaptability to tolerate this hostility and hence the entrepreneurs view the environment as more non-threatening. If such is the scenario, the outcomes would facilitate the expectations. More research is needed that can offer empirical evidence to provide a proper elucidation. Heterogeneity controls the connection of effectuating and entrepreneurial learning in such a way that there is both a positive and note-worthy relationship Mannes (2013).

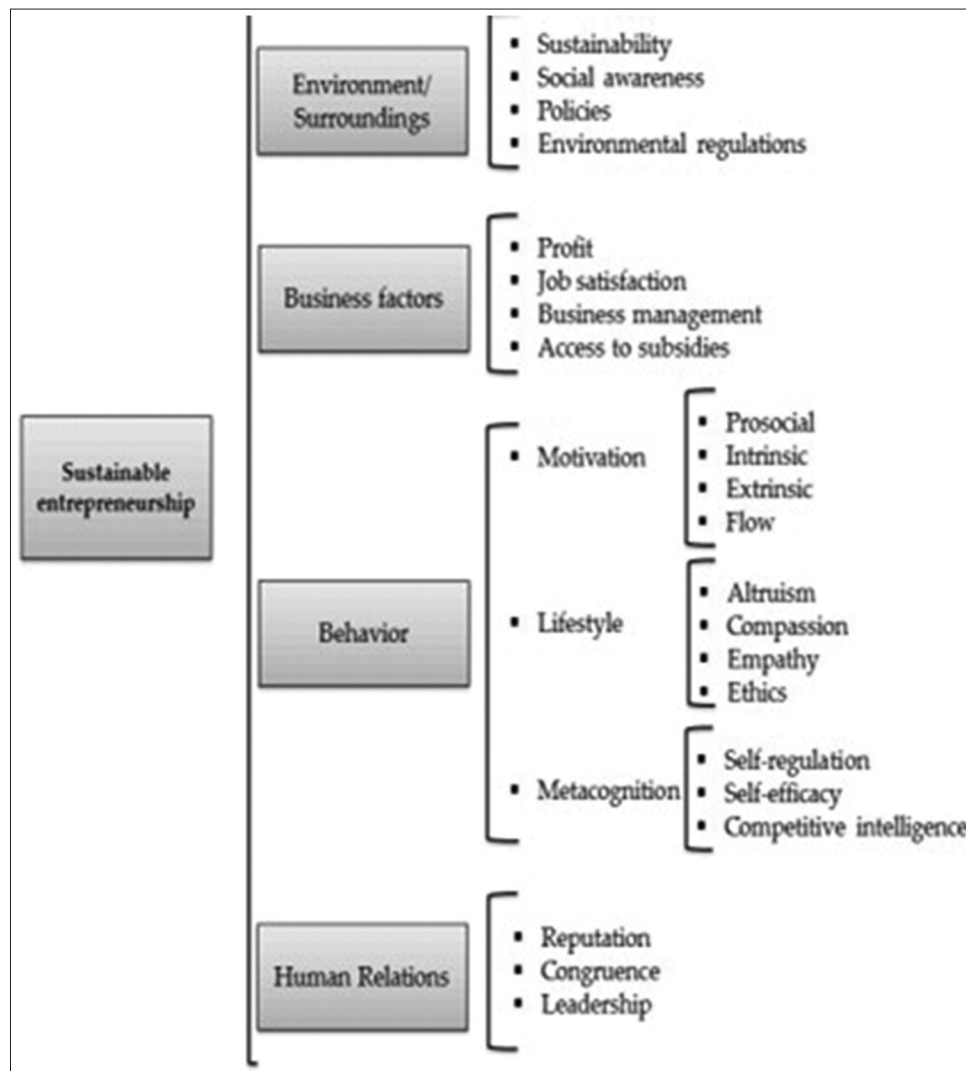
Entrepreneurial companies are generally seen in hostile environments Friesen (1982). So as to survive firms have to be innovative, look out for new possibilities and markets and have to differentiate themselves from competing firms Covin et al. (2000a). These vagaries can have an impact on both entrepreneurial process and the entrepreneurial learning. Exploitative learning and effectuating are more corresponding to use in a hostile environment that is having more uncertainty since through innovation and exploration of fresh possibilities the future is formed and controlled. Causation depends on forecasting of the future and thus is more suitable to apply in environments which are perceived as more non-threatening

Sarasvathy (2001). Causation is generally applied by more mature organizations which have huge size gradually. These mature firms crop up from vagueness into more foreseeable and stable environments. The entrepreneurs have carved a niche for themselves on their market or in their industry Sarasvathy (2001), Covin et al. (2000b). Hence, the entrepreneur perceives the environment as more non-threatening. As per Daly (2007) "Smaller firms can effectively use exploration in high-technology industries to compete against larger firms since customers value, and are willing to pay a premium price for, technologically superior goods". Empirical research by Menguc (2005) observes that exploration is connected to effective company performance under hostile conditions in the environment, while exploitation-based companies are linked to not higher effective firm performance under hostile conditions.

Hence, it is anticipated that effectuating has a dynamic linkage with entrepreneurial learning under a hostile environment. Causation will have a dynamic linkage with entrepreneurial learning, exploitation in specific, under a non-threatening environment.

Entrepreneurial processes and entrepreneurial learning can both be influenced by the environment's heterogeneity. Heterogeneity can be determined by the diversity of the organization and the unconnected industries they function in, difference in customers' purchasing habits in the preference of their products, ambiguities pertaining to the nature of competition between markets and products and also the perceived differences in drive and uncertainty between products and markets Friesen (1982). Firms with great degrees of exploration are more probable to produce new products, which eventually can be used in varied industries or markets Friesen (1982), March (1991). Hence, it is debated that explorative learning is better matched to heterogeneous environmental scenarios. Furthermore, opportunities can crop up through a heterogeneous environment, because progressions from one market can be used in other markets. However, this needs explorative learning Zahra (1991). Though it is anticipated that both effectuating and causation can necessitate ambidexterity, it is also anticipated that effectuating will tend to have a dynamic connection with exploration rather than causation. Hence, it is anticipated that effectuating will have a powerful link with entrepreneurial learning within environmental heterogeneity. This is due to the reason that heterogeneity develops vagueness by means of its complexity. Effectuating is debated to be in a situation to withstand uncertainties, in line with the debates within dynamism and hostility Sarasvathy (2001).

Startups should rank corporate who are earnest to make things take place and have a drive to make decisions nimbly. Across all verticals, corporations are focusing on what took place in entertainment, financial services, media and software, and come to the understanding that disruption is forthcoming in their area too. Several corporate perceive the best startups as a prevailing threat. This makes the established brands to think of attempting to innovate from within, by getting the best of the talented people, or choose to collaborate with startups. For the major portion of the corporations it's far more noteworthy to find out how to control the innovation that startups have achieved by means of mutually-beneficial partnerships. They can accomplish this in lot of modes. Initially, as a customer, they can purchase the solution that the startup provides

Figure 2: Factors affecting the sustainable entrepreneurship

Source; Tur-Porcar et al. (2018)

and control those new technologies to enhance internal service and efficiency range to their own customers. Secondly, they can form a “channel partnership” by offering a combined solution to their customers. On the other hand, a big firm can form a long-term relationship, by either turning out an investor in one or more startups, or even by purchasing them Mocker and Bielli (2015).

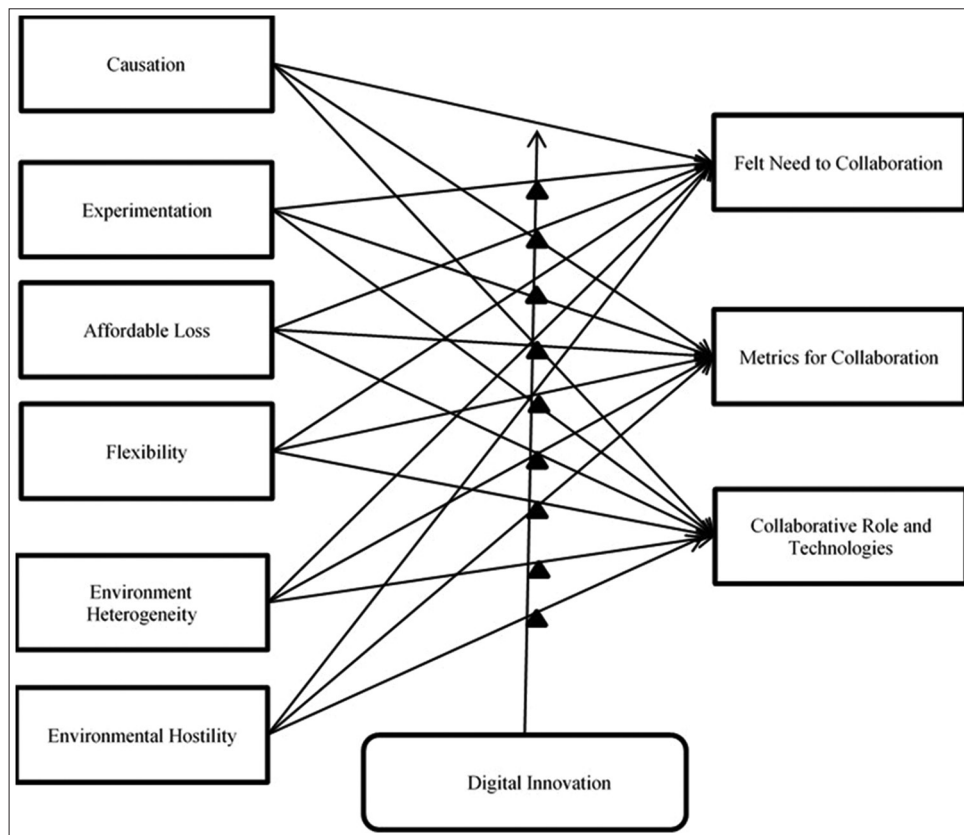
Sustainability is a primary key factor which is very important in our society and people are aware of the need for the development of entrepreneurship Hall et al. (2010). The goal is to take actions to develop profitable opportunity and for sustainable development Lans et al. (2014). Hence, the values and ethics of an individual is linked with the sustainable development. As the first factor, environmental and business may drive entrepreneurial sustainability and the second factors are behavioral and human relations. Furthermore, Figure 2 represents the factors affecting the entrepreneurial sustainability. It is hierarchy of the characteristics/factors affecting the sustainable entrepreneurship.

Digital innovation has garnered significantly scholarly attention of late Austin et al. (2012), Gregory et al. (2014) and Tumbas et al.

(2015). This interest is inspired by the idea that digital technologies “possess some highly distinctive characteristics that have important practical and theoretical implications for innovation”. Yoo et al. (2010) termed digital innovation as “innovation enabled by digital technologies that leads to the creation of new forms of digitization”. Till date, analyses of digital innovation have been inclined to concentrate specifically on one or other of these factors. But, with regard to the cumulative effect of different processes and product innovation results over time, and the socio-technical changes related with subsequent digitization Yoo et al. (2010), scholars have of late given interest to cognitive changes pertaining to the categorization and inference of digital technologies, and firms’ products and processes Navis and Glynn (2010), besides pertaining changes in organizational identity Alvarez (2008).

3. DISCUSSION

Through this research the relationship between causation, experimentation, affordable loss, flexibility, environmental heterogeneity and environmental hostility and the need to collaborate, metrics for collaboration, collaborative role of

Figure 3: Branches of digital innovation (by author)

technology has been identified and it has been attempted to be visualized using the below Figure 3.

This analysis is based on previous studies, and a framework has been developed as a result of this research. As far as the research examined, digital innovation is steering these factors.

4. CONCLUSION

Startups and big companies bring to each of them great opportunities by means of collaborations that, if tapped correctly, form win-win situations for both of them. In this present world where innovation on the contrary to pure efficiency, is the major influencer of long-term success, joining hands with startups lets corporations form and test new technologies and service solutions with affordable costs and risk to their major operations. Startups also consist of new talent and ideas that can assist renew corporate cultures. Similarly, big firms have several benefits in the case of startups: economies of scale, market knowledge and experience, well-formed networks and brand power besides other significant resources. Joining hands with major businesses can be a significant way for startups to test their products for the purpose of market fit Lehmann (2011); Mocker and Bielli (2015).

5. FUTURE WORK

In this study, we examined the various factors that affect corporate startup as a driver of digital transformation. However, a digital transformation strategy is needed for an effective promotion of

companies with limited resources. Hence, in the future, empirical evidence is needed from more researches and it is necessary to examine further factors that affect digital transformation. Furthermore, guidelines for digital transformation promotion can be formed, if the availability of such literature is high.

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