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Start-Up Entrepreneurs as Accelerators of Digital Platform Economy

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| <p>The digital platform economy is gradually gaining popularity in many countries and industries. The platform economies have created a remarkable transformation in healthcare, banking, transportation, and energy industries around the world. The concept triggers a viral effect because many users are attracted to it. Consequently, a momentum for growth is created.</p> <p>Digital platform economies capture and transmit extensive data over the Internet, allowing individuals and firms to gain valuable knowledge and use it for development. Furthermore, they create a chance for the lead organizations to re-think their business strategies, structures, management, and models because firms in such economies must sustain an ecosystem of partners to remain competitive in the market.</p> <p>Most importantly, they can create value in two significant ways. First, they facilitate transactions between individuals and firms. Second, they allow innovation to take place, which further ensures that technology can be used to create complementary products. What is more, the entities behind such transactions and change can be located anywhere in the world, meaning that skills can be shared on the platform and that a nation can benefit from expertise from a range of sources.</p> <p>Notably, start-up companies and individuals have taken advantage of this concept to create profit and in the process contribute towards the growth and development of economies around the world. For example, the most successful platforms include Amazon, Alibaba, and Facebook. Specifically, they have ensured that consumers access their products efficiently from anywhere in the world and that the productivity levels of many sectors are enhanced.</p> <p>This thesis aims to study the phenomenon further by trough literature review and interviews of key persons from startups, venture capitalists, and larger enterprises. The study focuses on the role of the startups as accelerators of digital platform economy, their problems, and cooperation with larger companies.</p> | |
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CHAPTER 1: INTRODUCTION

1.1 Background

The digital platform economy has gradually gained popularity across many countries and industries. Platform economies have created a remarkable transformation in healthcare, banking, transportation, and energy industries in regions such as North America, Asia, Africa, Europe, and Latin America. Kenney and Zysman (2015) observed that digital platform economy characterizes mainly of the network that facilitates the easy connection between people and businesses. The concept triggers a viral effect because many users are attracted to it. Consequently, a momentum for growth is created.

Some companies including Amazon, Google, Facebook, Uber, and Etsy have taken into the creation of online structures to enable diverse human activities. The digital platform economy has distinct and identifiable effects in the reorganization of the global economy. The digital platforms that have emerged portray a diversity of functions and structures. For instance, while Facebook and Amazon allow social networking and search, they also provide infrastructural support for the development of other platforms. Similarly, while Amazon is a marketplace, it also offers tools and infrastructure for the creation of other platforms. Uber and Airbnb utilize the newly available cloud tools in motivating changes the existing businesses. The new digital platforms have provoked a reorganization of many markets and work arrangements, as well as creation and capturing of value (Kenney & Zysman, 2016).

According to Kenney & Zysman (2015), the emergence of the platform-based economy may not dictate the future but will continue framing the choices in starting businesses. Nevertheless, the pervasiveness of the platforms in the reorganization of business is yet to be understood. The utilization of the platforms in the development of new businesses will cause disruptions and radical transformation to the traditional business models and forms

of value creation. While ownership and control over the platforms are considered separately, many groups of peers are coordinating transactions and activities on various platforms to offer opportunities forms of ownership.

The effects of the digital platform economy vary across sectors, but questions remain about their productivity and growth. However, digital platform economies capture and transmit extensive data over the Internet, allowing individuals and firms to gain valuable knowledge and use it for development. Furthermore, they create a chance for the lead organizations to re-think their business strategies, structures, management, and models because firms in such economies must sustain an ecosystem of partners to remain competitive in the market. Most importantly, they can create value in two significant ways. First, they facilitate transactions between individuals and firms (Evans & Gawer, 2016). Second, they allow innovation to take place, which further ensures that technology can be used to create complementary products. What is more, the entities behind such transactions and change can be located anywhere in the world, meaning that skills can be shared on the platform and that a nation can benefit from expertise from a range of sources.

Notably, start-up companies and individuals have taken advantage of this concept to create profit and in the process, contribute towards the growth and development of economies around the world. For example, the most successful platforms include Amazon, Alibaba, and Facebook. Specifically, they have ensured that consumers access their products efficiently from anywhere in the world and that the productivity levels of many sectors are enhanced. Significant investments have also been made due to the ease of acquiring venture funds. Unlike established companies, the majority of the start-ups are willing to make changes and take risks to create a better economy using the platform enterprise (Accenture, 2015). Therefore, start-up entrepreneurs can be on the front line to create a competitive advantage in an economy. Nevertheless, the development and implementation of better policies will ensure

satisfactory incubation and development of the digital services (Welsum, 2013). In fact, firms and investors interested in investing in the platform should be motivated.

1.2 Problem Statement

The debate related to the effects of the digital platform economy extends the discussion about the early days of the digital revolution. The optimism in the high-tech industry has led to an increase in the inflow of entrepreneurs and investors in tech cities such as San Francisco as they take advantage of the opportunities for business growth. Start-ups must question their models in which they will create platforms that attract users and capture value. The optimistic version in the emergence of technology-based economy opines that the society could be reconstituted by turning producers into proto-entrepreneurs working on flexible schedules and benefiting from the platforms. Utopians consider that the platforms could unlock commercial value in underused assets. Indeed, platforms are considered as crucial in their contribution towards the economy.

Despite their potential to drive the digital platform economy, many start-up entrepreneurs are ill prepared for the implementation of a digital platform economy. For instance, research conducted in Finland by Finnish Research Institute in 2016 showed that while start-up enterprises in the country appreciated the benefits of the platforms, they were not willing to take risks (Government Communications Department, 2016). Similarly, the problem is replicated in other countries in the European region. As such, to deal with the challenges faced by the start-ups in the digital platforms, larger firms in collaboration with startups must develop measures to support each other.

Online platforms continue upending in many brick-and-mortar chains and continue making inroads across sectors. However, the role of start-ups in the growth of these platforms remains poorly investigated. Little academic research exists regarding the role of start-ups in

the acceleration of the growth of digital platform economy and the measures that are being taken to encourage start-ups to accelerate this growth. Therefore, this will be one of the few academic studies focusing on the subject area.

1.3 Research objectives

The principal objective of the study is to investigate the role of start-up entrepreneurs as accelerators of the digital platform economy in co-operation with larger companies. In that case, the paper will explore the measures being taken to encourage start-ups to grow in the platform economy by the larger companies. Moreover, the study will delve the rationale behind focusing on startups rather than large company projects and reasons why startups can be more efficient in growth as compared to projects completed only within the larger companies.

1.4 Research Questions

1. What role do startups play in digital platform economy?
2. What measures can be taken to encourage startups to grow in platform economy?
3. What role do the existing large companies play in the acceleration of startups growth?

1.5 Research Hypotheses

1. Large companies play a significant role in the growth of start-ups in the platform economy.
2. Start-ups have a significant role in accelerating the growth of platform economy through innovation and invention.

1.6 Organization of the Study

The study has six chapters. Chapter 1 has introduced the study through discussing the background of the problem, as well as highlighting the problem, the objectives, questions, and hypotheses. Chapter 2 appraises and reviews the existing academic and industry-level literature related to the topic. Chapter 3 identifies the methodological approaches used in the completion of the study. Chapter 4 will present the findings of the study. Chapter 5 will discuss the results pertinent to the review of the literature with the aim of showing the areas in which the study has answered the research questions and refuted or supported the hypotheses. Chapter 6 will conclude the study by providing a summary of the findings and highlighting the fulfillment of the study objectives.

CHAPTER 2: LITERATURE REVIEW

2.1 Platforms and the Platform Economy: A Definition

Researchers have used the term *platform* in diverse ways (Evans & Gawer, 2016). The term platform has been studied in several contexts including mobile application marketplaces, online infomediaries, operating systems, video games, credit cards, and the computer industry among others (Gawer & Henderson, 2007; Haigu & Jullien, 2011; Kaiser & Wright, 2006; Maruyama & Ohkita, 2011; Salminen & Teixeira, 2013). For this study, platforms are considered as the business models and the design of choices that support the success of other business models. Essentially, platforms have a unique characteristic in the creation of network effects (Gawer & Cusumano, 2002). As indicated earlier, the economy is rapidly changing because of the emergence of many digital platforms that revolutionize the traditional business models.

The digital platform economy characterizes four major typologies of platforms: transaction, innovation, investment, and integrated platforms. Transaction platforms facilitate the accomplishment of transactions between individuals or organizations that would otherwise have had challenges in finding each other. Rochet & Tirole (2003) refer to these platforms as the multi-sided markets. Examples include Amazon Marketplace, Uber, Google Search, and eBay. Integrated platforms include those that offer transaction and innovation functions, for instance, Apple, Amazon, Alibaba, Facebook, and Google among others. Investment platforms include companies that have a platform portfolio strategy and serve as an active platform investor, holding company, or both, for example, Softbank, Priceline, and Naspers among other. Innovation platforms include technological building blocks used by innovators as a foundation for the development of complementary products or services, for instance, SAP, Intel, Microsoft, Salesforce, and Oracle among others.

Innovation platforms enable the owners to take advantage of the external innovator's potential from the innovation ecosystem. Contrary to the traditional supply chain, platform owners do not require advance knowledge of the external innovators. Conversely, the innovators seek the platform and make efforts to connect with them. As such, the platforms become the magnet for complementary innovators through supporting the external innovators. Essentially, the level and quality of networking facilitated by the platform create value through attracting investment or input through innovative product or service development (Evans & Gawer, 2016).

The digital platform economy has attracted attention from researchers and generated diverse conceptualization. The terminology is used interchangeably with the term sharing economy. Many experts contend that the concept of digital platform economy is not new but an extension of the existing market models that have led to the development of a new marketplace government by collaboration and trust over the Web (Olson & Kemp, 2015; Schor, 2014). Fundamentally, the enablers of the digital platform economy include cloud storage, big data analytics, and the use of social media. It is worth noting that the Internet does not create the digital platform economy. Rather, it increases the range and pace of the activities that people can accomplish pertinent to economic activities. While the interest in understanding the digital platform economy is increasing (Martin, Upham, & Budd, 2015), no globally accepted definition of the term has emerged yet. The lack of research articles regarding the terminology exacerbates the challenges in providing a specific definition of the terminology.

For this study, the digital platform economy can be conceptualized as an economy driven by an increasing number of digital platforms that play a multiplicity of roles in the economy. Farrell & Greig (2017) categorize the economy based on labor and capital platforms. Labour platforms within this economy include those that facilitate participants to

accomplish discrete tasks while capital platforms include those that enable participants to sell, rent, buy, or develop products and services. Overall, the digital platform economy connects sellers or workers to customers, allow participation in the production process, and facilitate payment for products and services. Most importantly, the platforms offer a foundation for the development of new businesses.

2.1.1 Technical Foundation of the Digital Platform Economy

Cloud computing and the algorithmic revolution have become the foundations of the digital platform economy. The growth in computing power has been converted into economic tools through algorithms that operate on data as raw materials. The formalization and codification of computational activities convert the activities into computable algorithms. Fundamentally, the software layer is interwoven with and stretches in the economy, hence becoming the fabric of the algorithmic revolution. The software layer covers include services that use sensor networks and cover a multiplicity of political, social and economic activities. The layer extends the availability of these services and reduces the costs of accessing digital tools. In some cases, the costs reduce because of the application of open-source software, the ability to provide tools collectively through commercial physical sites or online platforms, or through “the race to zero” in cloud computing.

Cloud computing is less about geography and more about how computing is done. Essentially, cloud computing in the digital platform economy entails the abstraction and virtualization of the computing processes. While the details of the working of cloud computing do not matter in this paper, the consequences matter significantly. Fundamentally, large American firms remain the significant providers of cloud services. The firms have developed cloud paradigms, as well as cloud systems for their internal use. The scale of the cloud services matter in the provisioning of the cloud services. For startups, the consequences of the cloud services include the radical reduction in the cost of ICT tools and computing

resources. However, the terms of accessing the computing resources tend to change. Startup entrepreneurs can opt to “rent” the resources in units to avoid the costs of owning or building the entire system. Consequently, cloud computing avails the applications and platforms as operational expenses instead of capital expenses.

Algorithms within cloud computing reduce the complexity associated with the creation of platforms. This enables digital platform computing frameworks that accomplish a range of activities forming an entire ecosystem for the creation of value to businesses. Most of the platforms grow on other platforms in the form of an array of applications. For instance, many of the Amazon Web Services (AWS) supports most of the platforms on the Internet. The platforms that grow on other platforms are called complementors. They include emerging actors (startups) such as AppAnnie that rank the generation of revenue by apps and TubeMogul that measures the reach and classifies stars on YouTube. The complementors are considered as powerful allies that build and maintain the lock-in for the “parent” platform. Essentially, this shows that the digital platform economy encompasses algorithm-enabled “cyberplaces” through which the constituents (machines and people) can transact.

2.1.2 Diversity of the Platform Economy

Digital platforms that depend on algorithms and databases are restructuring the global economy rapidly. The digital platforms disrupt the existing economic activities by re-establishing entry barriers, value creation and value capture, power positioning in the network and economic system, and facilitating the repackaging work. There is no concise theory that outlines the effects of the platforms on the overall economy. Also, there is no dominant approach to the categorization of the platforms. Therefore, there is a need to structure a discourse about the organization of the economy around the platforms pertinent to the effects on entrepreneurship, work structures, and competition. The traditional categories based on sectors tend to be blurring. The categorization based on a business model or function of the

platform has also been blurred in some ways because of the overlapping characteristics. The categorization of the platforms based on their complexity could help in understanding the consequences of the platforms on the economy. The list below illustrates the categorization of the platforms based on complexity to shape the discussion about their effects on the economy.

1. *Platforms for platforms*: While the Internet is the foundation of the digital platform economy, a series of businesses provide the essential tools and infrastructure to other businesses. For example, AWS facilitates the creation of cloud services or tools on which other platforms can be created.
2. *Platforms that mediate work*: These platforms resemble electronic head-hunters in their mediation of work. Some of the examples include *Globally Biddable Work* such as Upwork, Amazon Mechanical Turk, and Incentives and *Occasional Informal Work*, which is cyber formalized through facilitation by apps including Handy, Task Rabbit, and Homejoy.
3. *Platforms that avail tools online*: The platforms reduce costs of creating other platforms through availing online tools. For instance, Github has become crucial as a repository for open-source software for any entrepreneur who may want to use them. Zenefits is another online marketplace that reduces costs for startups and small businesses through offering HR tools and disintermediation of the role of local insurance brokers.
4. *Platforms for retail and business functions*: The platforms encompass a gamut of platforms that act as virtual marketplaces, for example, Amazon, Etsy, and eBay.
5. *Platforms that transform the service industry*: The platforms are transforming the service industry through the conversion of consumer goods into investment goods. For instance, Uber connects drivers with customers through algorithms.

Consequently, the drivers are considered as contractors, hence placing them in a precarious position.

6. *Platforms that intermediate financial activities:* The platforms serve as intermediaries in diverse financial activities. For instance, Kickstarter is replacing the traditional intermediaries in project funding. Similarly, Zopa is displacing traditional financial institutions in peer-to-peer lending.

The platforms represent a plethora of business functions and models. The classification of the platforms raises several questions and suggests varied answers.

Value creation: In the digital platform economy, the Internet determines the economic relations between the actors. Each platform creates an ecosystem that serves as a source of value through the establishment of terms of use for the owners and users.

Value capturing: Capturing value in the digital platform economy entails a varied number of implications. Some platforms convert the work of the traditional employees into consigners, contractors, or quid pro quo employees. Value capturing can also be accomplished by “mini-entrepreneurs” who provide goods for the platforms such as YouTube and app stores.

Ownership of the platforms: The ownership of the platforms differs significantly. The power may be centralized in case the platform controls the communication system and locus of transaction separating the users from providers or providers from buyers. On the other hand, the ownership may be decentralized to allow the diffusion of power over the content.

Work packaging and value creation: Some workers remain under the traditional employment relationships, for example, those employees working in Google, LinkedIn, and Microsoft. However, other contributors work with the digital platforms through re-organized relationships by complementing the “parent” platform with their platform or other work.

2.1.3 The Economics of the Digital Platform Economy

The digital platform economy requires an understanding of the foundations of sharing within the economy. Utilization of services or products in the digital economy expands with an increase in sharing. The concept of excess capacity provides an appropriate way of understanding the creation of value from underused or unused assets. Essentially, underused or unused assets offer the owners with no value. Users have to make decisions about whether to buy/learn (acquiring) or rent/hire (renting) an asset when they face the need for the asset. The consistent renting can may be expensive while acquiring may be inefficient because of the skills required for the creation of profit. Figure 1 illustrates the ownership decision tree.

An underused or unused asset will depreciate and will be disposed at below the net depreciation value. However, the lost value may be captured through peer to peer renting at a price often above the cost of renting. The user (renter) will benefit from the assets if the owner rents the asset below the normal market rate. The example shows that the long-term pricing in the digital platform economy has its foundation in the economic theory because the assets are under-priced compared to commercial offering or the assets/businesses do not have commercial substitutes.

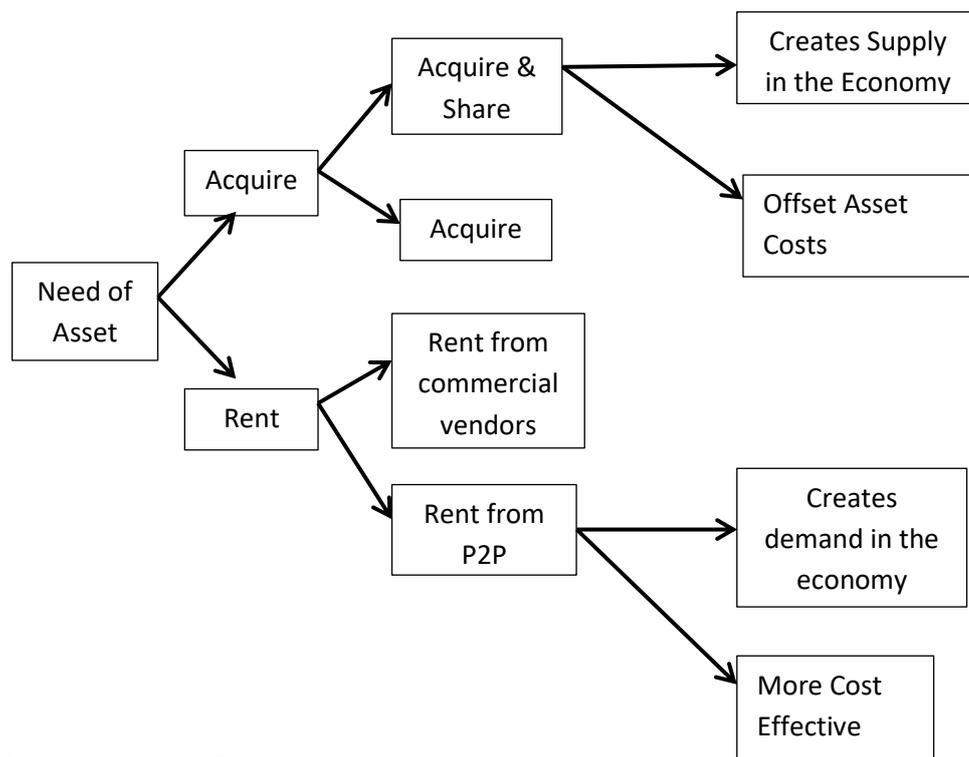


Figure 1. Illustration of ownership decision tree.

Fundamentally, the working of the digital platform economy depends on the level of sharing between users and owners. Collaborative consumption provides steady growth of the economy. According to researchers, the digital platform economy depends on the community of users, rating systems, available technologies supporting the platforms, and the skills of the users. The enablers create several benefits in the digital platform economy. Some of the benefits include the following.

1. Simple economic benefits: The platforms allow users and owners to utilize assets actively or passively. The extra income earned depends on the desire of the users to share the assets.
2. Reducing risk exposure: social media endorsements, payment technologies, and holistic rating systems reduce the degree to which the users are exposed to risks in the market.

3. Ubiquitous offering: The users can rely on the assets in the digital economy because of the opportunities to share the assets.

2.1.4 The Intermediary Role of Platforms in Business

According to Olma (2014), the emergence of platforms has offered a generic ecosystem that facilitates the linkage between potential customers to all products and services they require. The assertion implies that everyone can become a supplier at the click of a button. Lovink, Tkacz, & de Vries (2015) broadened the definition by *platform capitalism* has become a way of dictating how networks come together in rewards crowdfunding and donation. Meanwhile, Kostakis & Bauwens (2014) opine that the digital platform economy characterizes a tension between two modes of control over the digital infrastructures: netarchical capitalism and distributed capitalism. In netarchical capitalism, centralized privately owned platforms control the online infrastructure while in distributed capitalism the infrastructure is distributed with the promise of supporting anyone to become a “small” capitalist. The different observations regarding platform capitalism show the intermediary role of platforms in connective ecologies in the current economy.

The intermediary logic of the platform economy suggests that platforms help in solving coordination problems in market exchange through bridging the distance-shrinking networking capacities (Liebowitz, 2002). The advent of the internet provided opportunities for solving problems in two- or multi-sided markets (Evans et al. (2011). Discussed four examples of intermediation of platforms in these markets. The example of software platforms has relevance to the study and understanding the role of digital platforms in supporting startups. In software platforms, the code becomes the medium for connection of different actors. For instance, Apple runs a two-sided market in which the iOS platform connects the users and the application developers. Apple maintains a monopoly over the production of the hardware. Conversely, the smartphone industry characterizes a notable multi-sided platform

on which the Android relies on the open-source application and does not have a monopoly over the hardware in which the operating system could be used.

The intermediation of platforms in different areas of the economy has increased since mid-2000 based on the software-based industries. Table 1 illustrates the typologies of the platforms and their primary domains based on new digital economic circulations.

| Domain of circulation | Platform typology | Examples |
|---|--|--|
| Social media and user-generated content | Multi-sided market and open API that facilitate developers' participation and innovation Host for the user communities to share content | <ul style="list-style-type: none"> • Twitter • Facebook • Google • Flickr |
| Online exchange markets | Includes multi-sided platforms with closed APIs and two sided-platforms with open API for developers' participation and innovation They serve as a marketplace for the sale of products and services through streaming, downloads, and physical distribution at discounted prices as compared to the incumbents | <ul style="list-style-type: none"> • Apple • Amazon • eBay • Craigslist • Taobao • Amazon Marketplace • Alibaba |
| Crowdsourcing | Multi-sided markets with open APIs They serve as a marketplace for contractual and transaction work, informal labor, and freelance | <ul style="list-style-type: none"> • Upwork • TaskRabbit • Amazon • Mechanical Turk |
| Sharing economy | Multi-sided markets with closed APIs They act as a marketplace for the hire of services and assets that would be underused. They also offer discounted prices as compared to the incumbent businesses | <ul style="list-style-type: none"> • Airbnb • Uber • Sidecar • RelayRides |
| Crowdfunding | Multi-sided markets with closed APIs They serve as a marketplace for the donation, lending, pledging, or investing money at interests rates higher than the traditional financial service providers | <ul style="list-style-type: none"> • Prosper • Lending Club • Indiegogo • Kickstarter |

Table 1. Typologies of the platforms and their primary domains based on new digital economic circulations.

The digital network economy has become highly dynamic leading to some firms extending their operations to intermediate the network effects. Consequently, the firms have to decide whether they should open their APIs (application program interface) to enable external developers to participate in the innovation process. In fact, the model of interaction helped in the development of the open source software in the 90s (Weber, 2005) and had fast-tracked innovation through benefiting from a distributed community. According to Simon (2011), the adoption of the approach helped in the transformation of Amazon from an e-retailer to a platform, wide-spectrum online marketplace.

2.1.5 Infrastructural Intermediation and Participatory Culture

The materialization of the intermediary logic of platforms depends on specific socio-technical practices. For instance, Choudary, Parker, & van Aalst (2015) suggested that platform should combine three operational “layers” that vary in “thickness” and imperative based on the competitive strategy and the market context. The layers include the community layer, the infrastructure layer, and the data layer. The community layer engrosses the platform participants including their relationships. The infrastructure layer entails the software tools, services, and rules. The data layer allows the platform to match the demand with supply. According to van Dijck (2013), marketing pitches and web pages are important for the initial layer in their production of a participatory culture that democratizes the qualities of the internet. Different platforms attempt to enroll participants who become co-creators of value. Choudary et al. (2015) suggested that digital platforms should invest in behavior design to motivate behaviors that ensure the participants stick around willingly. In other words, Lovink & Tkacz (2015) suggest that the intermediation of the platform economy features a summoning-up of popular passions and interests among the “platformed masses.” In explaining the etymology of the term platform, Gillespie (2010) offered insights regarding the role of platforms in the co-creation of value (*platforms of opportunity*). This provides

insights regarding the role of platforms in the development of new businesses through offering opportunities for the experimentation of new business models.

While the marketing and presentation of many platforms position them as enablers of the participatory economic culture, many pioneers of startups have different opinions that reveal the importance of the layers mentioned. According to many, the emergence of the digital economy has become a new paradigm that has replaced industrial capitalism through allowing the participation in business through a sharing economy. In other words, the growth of the platforms is creating energies and synergies in business through the development of indispensable networks that enable entry into the business.

Consequently, it could be argued that the digital platforms are mobilizing infrastructures of participation intrinsic to the new digital platform economic circulation. Contrary to the conventional understanding of infrastructures, platforms are not only conduits or channels of circulations because they induce, produce, and program the circulations through motivating entry into the business. According to Beer (2013), platforms acknowledge and act on the data available through providing feedback, structure, and de-limiting circulations in the new digital economy.

2.2 Platform Business Model and VC

The socio-technical practices and the intermediary logic of platforms developed intermittently. According to Dijck (2013), the emergence of many social media platforms started as general services from community-bound initiatives rather than directed market efforts. As such, Lacy (2008) suggested that the indeterminacy of the platforms in the past led to their slow translation of socio-technical practices into viable business strategies. However, emerging business models are now offering an *ex-post* rationalization of the platforms as enterprises by themselves. The importance of platforms is emerging as the number of venture

capitalists increase with the aim of taking advantage of the increasing number of start-ups backed by the platform economy (Kenney & Zysman, 2016).

The digital platforms disrupt the existing economic activities by re-establishing entry barriers, value creation and value capture, power positioning in the network and economic system, and facilitating the repackaging work. No concise theory outlines the effects of the platforms on the overall economy. Moreover, there is no dominant approach to the categorization of the platforms. There is a need to structure a discourse about the organization of the economy around the platforms pertinent to the effects on entrepreneurship, work structures, and competition. The traditional categories based on sectors tend to be blurring. The categorization based on a business model or function of the platform has also been blurred in some ways because of the overlapping characteristics.

According to Mokyr (2002), the platform-centered economic circulation embeds strategic business logic on the innovative processes of the platform intermediation. The contemporary platforms support experimentation across different areas of economic circulation. Nevertheless, the success of the platform types turns on significant investment in technical expertise required in designing and operating the infrastructure, which has to prioritize fast scaling up. This implies that the success of a platform-based startup depends on its ability to *connect, attract, and create a flow of users* (Bonchek & Choidary, 2013; Evans & Gawer, 2016).

Experimentation with the platform-based business model with the aim of up-scaling of startups has become easier over time. The digital ecosystem allows access to infrastructural investment through “off-the-shelf” purchases from software companies or specialist providers. The access to labor requirements and core competencies has also become easy for startups. While the levels of investment vary based on the type of platform and

expansionary plans, studies have shown that up-scaling a platform-based business is relatively more straightforward as compared to the investment required by incumbents in vertical integration. Indeed, Chase (2015) suggested that the growth of platform-based startups defied laws of physics because the expansion relies on leveraging and unlocking the co-creation of value within the network. Choudary et al. (2015) support the view by suggesting that the network effect of platforms have become the new driver of scaling business growth.

The platform business model offers a coherent and powerful frame for the valuation and capitalization of the available platforms within the digital economic circulation. According to Muniesa (2016), the business valuation process of the twentieth-century entailed measuring a business as an asset where the business worth reflects its capacity to generate revenues for the investor(s). Other researchers contend that the platform-based businesses can use the platform assets in generating income or use them as collateral for additional funding (Leyshon & Thrift, 2007). The achievement of scale and coordination of network effects in the platform business model opens the enactment of revenue models for startups (Chase, 2015). The first revenue model entails constrained platform in which the startup operates in the sharing economy and several crowdfunding ecologies. The second revenue model does not feature intermediary charges and offers an opportunity for speedy growth of the startup (Lovink & Tkacs, 2015). Chase (2015) considered the second revenue model as the most crucial in explaining the growth of startups in the digital economy.

In critical terms, the revenue potential of startups built from platforms has increased the focus of large companies on the “rent” they acquire in participating in such initiatives. According to Lazzarato (2015), rent differs from taxation and profits because it combines appropriation of value from the property and the knowledge process of valorization.

Consequently, large companies have become “renters” of the network in facilitating the growth of the startups (O’Dwyer, 2015).

The growth of venture capitalists has become an essential feature in the platform business model. Most of the platforms that emerged from the dot.com bubble have been integrated into the corporate landscape. While many of the big firms in the digital economic circulation remained privately owned, the acknowledgment of the potential startups hold in value creation has increased their venture capital funds. For instance, the total venture capital funds in 2015 were more than \$58 billion with much of the funds being concentrated in technological innovations (Langley & Leyshon, 2016). Therefore, this implies that the performance of venture capital funds in the platform business model acknowledges the accelerated growth of technological innovations by new and relatively small enterprises. Indeed, Zook (2008) opines that venture capitalists have become knowledge brokers in technology firms, which continues to support technological innovations. The platform business model performs a portfolio structure of the funds through operating in a high-risk, high-reward investment environment. Fund portfolios are expected to have a minority of investments that will pay off when capitalizing on untested startup firms with high growth potential. The failure of the startup should be qualified, and the success articulated because of the potential effects both would have on the investors.

2.3 Effects of Platforms on Work and Entrepreneurship

The effects of the digital platform economy vary across sectors, but questions remain about their productivity and growth. However, digital platform economies capture and transmit extensive data over the Internet, allowing individuals and firms to gain valuable knowledge and use it for development. Furthermore, they create a chance for the lead organizations to re-think their business strategies, structures, management, and models because firms in such economies must sustain an ecosystem of partners to remain competitive

in the market. Most importantly, they can create value in two significant ways. First, they facilitate transactions between individuals and firms (Evans & Gawer, 2016). Second, they allow innovation to take place, which further ensures that technology can be used to create complementary products. What is more, the entities behind such transactions and change can be located anywhere in the world, meaning that skills can be shared on the platform and that a nation can benefit from expertise from a range of sources.

The packaging of work and entrepreneurship are highly interwoven. Much of the attention has been focused on the disruptions that appear from the new opportunities. However, practitioners and researchers should question whether the disruptions lead to the creation of viable entrepreneurial possibilities. The platforms open a gamut of entrepreneurial opportunities. For instance, some enterprises such as Zipcar envision an alternative social model. The model entails owning a car or making occasional use of the car through accessing the cars via the Zipcar platform. Spreading the model would result in an overall drop in the demand for auto production. This may or may not disrupt traditional cab services such as Hertz. Primarily, the sharing solutions offered could lead to unprecedented ripple effects on the market ecosystems.

The nature of most platforms entails a winner-take-all model in which one or two platforms in the market survive. The platform owners appropriate a significant portion of the value created by the uses on the platform. Most importantly, entails the decentralization of power to the platform to ensure the winning platform become a monopoly in the market. The monopolistic owner of the platform may squeeze the platform community, despite the community members being responsible for the production of value.

The policy objectives are critical in understanding the consequences of the platforms on work and entrepreneurship. The emergence of corporate organizations in the nineteenth

century aimed at shaping markets and organizing economic activity. Cloud services are likely to accomplish most of these activities in the twenty-first century. For instance, although Uber has about 1,500 employees, it has acquired a global reach beyond unexplainable by the small number of employees. Similarly, Google is a platform economic giant, yet it has about 50,000 employees globally. Consequently, this raises questions regarding the political and policy issues when the drivers of economic change are small firms rather than large multinationals.

The policies adopted could determine the balance in the digital platform economy achieves. Risk-taking entrepreneurs would be requisite in the infusion of an entrepreneurial spirit in the digital economy. However, the development of new businesses in the digital platform economy requires an appropriate understanding of the factors encourages fear, risk, or safety. The policies should focus on the flexibility of the workers or entrepreneurs using the platforms. As enablers, they may resist the change or facilitate the change as beneficiaries. This implies that the policies implemented could shape the risks, gains, and responsibilities for both entrepreneurship and work relationships in the digital platform economies.

As such, this requires considerations about ways of making the digital platform economy vibrant. First, social policy or welfare determines the risks taken by entrepreneurs and workers in the economy and the assessment of the effects of resisting or embracing the changes. The digital platform economy and its expanded gig employment and contracted work should lead to the consideration of an appropriate social policy model. Mainly, many social benefits are associated with citizenship rights. Therefore, the notion of flexible security offers rights to employers to adjust their workforce based on their requirements while providing social securities. The policymaking should consider the environment while addressing the downside risks for the entrepreneurial efforts associated with the provision of

flexibility to the worker. In essence, this would make the digital platform economy a source of sustained economic growth.

Secondly, the participants should consider the market rules that suit the digital platform economy. The economic changes result in a plethora of political melees about the rules that define the markets within the digital platform economy. The political challenges could occur in the formulation of policies associated with the protection against market disruptions offered to clients, communities, and employees. Some of the fights may relate to the business models or the consignment of the platforms. Additionally, the policy domains require a consideration of the competition policy, service provision requirements, taxation rules, and intellectual property rules. The old rules may fail to function appropriately in ensuring value for the companies operating in the platform era.

It could be argued that the digital platforms are mobilizing infrastructures of participation intrinsic to the new digital platform economic circulation. Contrary to the conventional understanding of infrastructures, platforms are not only conduits or channels of circulations because they induce, produce, and program the circulations through motivating entry into the business. According to Beer (2013), platforms acknowledge and act on the data available through providing feedback, structure, and de-limiting circulations in the new digital economy.

2.4 Role of Large Companies in the Start-up Boom

According to Mandel (2017), the startup economy has been spreading fast throughout the US as entrepreneurs (digital entrepreneurs) establish new companies that rely on technology in innovative ways. The US startup ecosystem has been characterized by high-profile technology hubs that tap on new innovators in the creation of new businesses. The startup culture has been sparked by the presence of scalable technology. The innovative use

of technology by startups has provided a foundation for the continued growth of the platform economy.

As suggested earlier, the largest proportion of startups are in technology. The establishment of high-tech businesses relies on the existing Web technologies, APIs, and cloud platforms in the development and distribution of new products or services. The advantage with startups over starting projects in large firms is the relatively little time associated with the development and distribution of new web products. Startups may have a short time-to-market as compared to large companies because of the minimal regulations and low levels of corporate governance under which they function. The set-up costs and entry barriers associated with the establishment of startups are lower, which makes them an attractive vehicle for starting an enterprise. Startups have to deal with a multiplicity of risks in the global, borderless market as they seek to scale up with their unproven products or services. Indeed, high-tech startups tend to have a higher growth rate and failure rate than most other categories of businesses. Nevertheless, this implies that the businesses could have high rewards because of their fast scaling up within the digital economy, which is attractive for investment.

Still, the increasing number of startups does not occur in a vacuum. Large companies play the most significant part in supporting the development and growth of the startup companies within the digital economy. Their financial capabilities allow them to create platforms that enable digital entrepreneurs to create and operate their companies while accumulating “rents.” According to Accenture (2015), the open innovation journey followed by many startups depends on the platform supporting the initiative. In turn, the corporate needs and market forces affecting the large companies affect the ecosystem of innovation and strategy used in supporting the startups. Large firms support the startups through corporate venturing, development of accelerators/incubators, co-creation, and ecosystem innovation.

The strategies help startups through the maximization of the network effects and collaboration with external partners.

Corporate venturing provides an easier and less risky way of entering the market as compared to massive investments in big projects. According to Accenture (2015), corporate venturing has become crucial for large companies that seek to de-risk financial gambles on internal R&D via external investment. As such, the companies lookout for next-generation technological innovations in which they invest when they deem the startup as appropriate in supporting the corporate strategy. Other large companies support startups through incubators or accelerators. However, most of the incubation and acceleration programs occur alongside corporate venturing. The programs have been found as an efficient way of ensuring the growth of startups because they ensure mentoring, coaching, and access to knowledge capital from the parent company.

Accenture (2015) observes that the scale of corporate venturing has been declining as large companies consider joint innovation as less risky. The model does not offer adequate support to startups because the startups contribute only towards the resolution of the large company's needs and problems. The partners may work collaboratively in the development of standard solutions but have different levels of control, which may be unsupportive to the startups. Lastly, some companies have been supporting startups through ecosystem innovation. The method is considered a far-reaching step in the facilitation of open innovation journey because it occurs within a vast ecosystem of collaborators. The strategy primarily supports the large companies because the startups will be working to solve the problems of the large company rather than market their products.

2.5 Challenges for Startups

The contribution of startups towards the growth of the digital platform economy depends on a multiplicity of factors. Studies show that digital entrepreneurs continue facing a diversity of challenges in their quest to contribute towards the digital economy. Van Welsum (2016) highlights several issues facing digital entrepreneurs including the business environment, skills, and infrastructure. In many parts of the world, digital entrepreneurs lack access to reliable and affordable broadband infrastructure. Consequently, this tends to slow the pace at which the startups in such countries contribute to the growth of the global digital platform economy. The distribution of the platforms is uneven leading to many parts of the world lagging. For instance, the report by Evans & Gawer (2016) show that Africa has only one platform company, which means that the part of the world lags in its contribution towards the digital platform economy.

Additionally, the business environment affects the entry and exit barriers, access to finance, business creation, and market fragmentation (van Welsum, 2016). According to Clayton & van Welsum (2014), startups focusing on ICT-enabled services suffer the most pertinent to this challenge. The inefficiency in these areas leads to frictions and uncertainty in the regulatory framework for the businesses. Furthermore, issues associated with Intellectual Property protection have slowed the pace at which some digital entrepreneurs seek funding from venture capitalists in the fear that they may not benefit from their innovations in the long-term (van Welsum, 2016). Hagi & Wright (2015) suggest that the *dis-intermediation* problem may affect the ability of the startup to grow beyond the initial stages. For instance, sellers and buyers may interact without the platform in the later phases of the business leading to reduced lifetime revenue.

2.6 Summary

Platforms have become a critical component in enabling the establishment of modern businesses. While the term does not have a concise definition, research in the area has increased as business models undergo a market revolution. The literature has outlined the role of platforms in facilitating changes in the business environment and the economy. Most importantly, the literature shows that the current digital platforms play an intermediary role in the establishment of businesses. As such, the platform-based business model has led to increased corporate venturing, especially for high-tech startups. While the barriers and costs of establishing startups are lower than R&D activities in the large firms, the startups have to overcome a multiplicity of risks. The next section outlines the methods the study will use in fulfilling the objectives.

CHAPTER 3: METHODOLOGY

3.1 Participants

The accomplishment of any empirical study requires an appropriate identification of the criteria for the selection of a population with the desired characteristics suitable for data collection. According to Robinson (2014), researchers should identify the individuals with the best information about the topic. The study sought the participation of employees from several startups that have utilized the existent platforms, as well as those seeking to utilize the existent digital platforms. Fundamentally, the population is considered appropriate because it constitutes individuals with an adequate understanding of the dynamics of the platforms used in starting businesses.

Saunders, Lewis, and Thornhill (2009) suggest that the access to participants has significant effects on the selection of participants. Etikan, Musa, and Alkassim (2016) observed the difficulties associated with the access to participants for studies that require more than one session of data collection. Accessing participants tends to be challenging, especially in situations where the researcher is not known to the organization. Therefore, a researcher should have a person to negotiate in the bid to access participants, despite having physical access (Saunders et al., 2011). The gatekeeper or contact person helps in accessing the participants through controlling their selection and helping in the final decision about whom to include. Research suggests that the prime contact should be senior to ensure the identification of participants that support the collection of data (Robinson, 2014; Stockendhal et al., 2015). The study sought help from the human resource managers or any other senior employee in the selected organizations to help in the identification of the suitable participants. Initial meeting with the participants involved articulation of the characteristics of the desired participants. Prolonged engagement with the contact person helped the researcher to develop a close relationship. Personal contact with the participants was established. The

participants received an email that detailed the nature of the study to ensure that they were appropriately prepared for the interviews.

3.2 Research Method

Researchers can use qualitative, quantitative, or mixed-research methods to accomplish their investigations (Jain, Sharma, & Jain, 2015). A quantitative investigation involves the collection of numerical data and conversion of the data into understandable statistics (Yin, 2014). Quantitative studies follow a deductive approach that entails the testing of hypotheses (Greener, 2008; Yin, 2015). On the other hand, qualitative investigations involve the investigation of a phenomenon based on open-ended questions that identify the beliefs, opinions, and attitudes of the participants (Saunders et al., 2011). Mixed-method research entails the combination of quantitative and qualitative elements of research in data collection, analysis, or both (Christ, 2013).

The choice of a research method should consider the philosophy underpinning the investigation. Saunders et al. (2011) classified research philosophies based on their epistemological and ontological orientations. The four categories of philosophies include positivism, interpretivism, realism, and pragmatism. Objectivism considers reality as existing independent of human influence. Positivism and realism follow are considered objective because they consider verifiable facts as the source of knowledge (Erikson & Kovalainen, 2015; Saunders et al., 2011). On the other hand, interpretivism follows a subjectivist paradigm in which reality is considered as subject to change and influence from human thought (Tsang, 2014). Interpretivism is often applied in business and management research. The philosophy was introduced to mitigate the reliance on law-like generalizations that emanate from a positivist stance taken by positivists and realists. Therefore, the study relied on a qualitative method based on interpretivism because it allowed for an in-depth investigation of the opinions and beliefs of the participants. The study selected the qualitative

method because the study did not aim at establishing a cause and effect relationship (Ahmed & Ahmed, 2014). The investigation sought an in-depth understanding of the role of startups in the digital platform economy, which does not require the formulation of hypotheses.

3.3 Research Strategy

Different strategies suit explanatory, descriptive, or exploratory studies. According to Robson (2002), a detailed investigation involves providing an accurate summary of an event, situation, or individual. An explanatory study seeks to establish a causal link between variables while an exploratory study provides new insights regarding a phenomenon based on novel approaches (Saunders et al., 2011). While the clear approach may offer crucial insights, it has little empirical value. The current investigation was considered exploratory because it focused on an issue that has not been adequately researched. Consequently, adopting the approach would offer new insights based on a novel method of investigation.

The nature of the study guided the choice of the research strategy to apply in the collection of data. Some of the research strategies often used in empirical studies include experiment, archival research, ethnography, action research, case studies, and grounded theory. The selection of the strategy should focus on the amount of information available about the topic, the research questions, the philosophy selected, and the contemporariness of the investigation. Three designs may be considered in selecting the strategy: phenomenological, narrative, case study. The study overlooked the narrative design was because of its reliance on autobiographies, journals, and stories in sharing knowledge rather than creating knowledge. The phenomenological design was overlooked because it tends to create biased opinions because of its reliance on lived experiences of the participants. Because of that the case study design/strategy was considered appropriate for the investigation.

A case study involves the investigation of a phenomenon in its original context using multiple sources of data. Mostly, the case study strategy was considered appropriate because it facilitated answering “what” questions (Amerson, 2011). Also, the strategy allows the collection of in-depth information regarding a phenomenon within its real-life context (Saunders et al., 2011). Rather than establishing causal links, the case study strategy enabled the identification of operational links.

Yin (2014) classified case studies into single versus multiple case studies and holistic versus embedded case studies based on the number of cases investigated and the units of analysis included. In single case study research, the researcher focuses on a unique or critical case while, in multiple case research, the researcher compares the results of two or more cases. On the other hand, a holistic case study entails the use of one unit of analysis while an embedded case study involves the use of several units of analysis. A multiple holistic case study was used in the organization several organizations (cases) were involved in the investigation based on a single unit of analysis.

3.4 Population and Sampling

The population considered appropriate included senior leaders in the respective organizations. However, there is a need to select a small sample in the qualitative investigation because of time and budget constraints, as well as the impracticability of using an entire population in an investigation (Cleary, Horsfall, & Hayter, 2014). Researchers can use probability (representative) and non-probability (judgmental) sampling techniques depending on the research method selected. Probability sampling methods are often used in quantitative research because of the need for a representative sample. Probability or representative sampling methods were overlooked in the sampling of the participants. Non-probability sampling methods such as purposive sampling, quota sampling, snowballing, convenience sampling, and self-selection are often applied in qualitative sampling.

The study relied on purposive sampling in which employees with an appropriate understanding of the role of startups was included in the sample. The identification of the sample focused on the top employees who are understanding of the ways through which their businesses have benefited from the digital platforms and ways through which the digital platforms could help in the growth of the platforms. The use of the purposive sampling method helped in the revelation of key themes through the in-depth information collected (Etikan et al., 2016; Neuman & Robson, 2014). The sampling technique suited the case study strategy because, as Yin (2014) suggested, case studies can rely on small samples that give profound insights regarding the issue under investigation. A case study should collect rich or quality data instead of large amounts of irrelevant data.

3.5 Ethical considerations

Empirical studies must consider several ethical concerns associated with the collection of data. Some of the common ethical considerations include anonymity of the respondents, informed consent, and confidentiality of the information. Researchers should communicate with the participants about the nature of the investigation and the use of the data collected (DiCicco-Bloom & Crabtree, 2006).

Informed consent entails the assurance that the participants were included voluntarily. The researcher sent an informed consent form to the participants to ensure they understood the nature of the study. According to Flick (2014), observing the ethical concern affects the quality of the data acquired. The informed consent form articulated the procedure used in the collection of the data. The form outlined the incentives associated with the study. Since this is an academic investigation, the researcher did not reimburse the participants in any way. The researcher also explained to the participants about their right to withdraw from the investigation. However, they would have to write an email to the researcher to request their withdrawal to ensure that the researcher does not include missing data in the analysis.

While qualitative investigation involves data collection methods in which the participant and the researcher have direct contact, revealing personally identifying information may lead to ethical concerns. As such, the researcher did not use personally identifying information in reporting the findings. Instead, codes were used for the organizations selected, as well as the informants who provided the information. Lastly, the confidentiality of the information collected must be ensured. Some of the information may have negative effects on the participants' careers or the competitiveness of the organizations. Because of that, the collected information is stored in password-protected folders to avoid being accessed by unauthorized individuals.

3.6 Data Collection and Analysis

Being a qualitative investigation, the study had to use an appropriate data collection method that ensured the collection of in-depth information. Semi-structured interviews were selected as the instrument for data collection. Semi-structured interviews allow flexibility in probing the participants while also ensuring a strict focus on the topic under investigation. Unstructured interviews may lead to deviations from the topic the researcher intends to investigate. Brinkman (2014) observes that semi-structured interviews are suited for qualitative investigations because they depend on standardized questions but allow the researcher to change the wording without changing the meaning of the question. This allowed the interviewer to prompt for more in-depth information in cases where the information the respondent provided did not resonate with the information from intended themes.

Semi-structured interviews should be used cautiously because of several methodological issues that arise. For instance, unconscious bias in the responses may emerge because of the internalized attitudes of the respondents based on their relationships with the organization. The researcher used prolonged engagement to ensure that the respondents provided adequate and unbiased information pertinent to the issues being prompted. To

increase the reliability of the interview data, the researcher also relied on panel review of the interview questions and transcript reviews. The process of panel review involved consulting with experts (professors) to ensure that the questions used in the interview protocol reflected the objectives of the study. Transcript review involves the interviewees checking the transcribed data to ascertain that the information included was as they provided.

According to Husein (2015), many case studies use methodological triangulation in the analysis of data. However, this method often applies to case studies that rely on mixed-method research. In this investigation, a thematic approach was used in the analysis. The thematic approach involved the triangulation of individual interviews with each other in comparing and constructing themes from the data. The themes constructed from the data will be compared to the theoretical part of the study to generate meaning from the data.

3.7 Validity and Reliability

In qualitative studies, credibility, confirmability, dependability, and transferability represent the concepts of validity and reliability.

3.7.1 Dependability

Dependability in a qualitative study is equivalent to reliability in quantitative research. According to Leung (2015), dependability focuses on accounting for the changing context of research. The researcher should articulate the changes that occur in the setting of the study to ensure that the readers understand the processes used. Researchers could improve the dependability of research through transcript review, member checking, direct/participant observations, and use of an interview protocol (Marshall & Rossman, 2014). In this investigation, an interview protocol was used to increase the dependability of the interview data.

3.7.2 Credibility

According to Cope (2014), credibility involves the establishment of the results are believable and based on the informants' perspective. As such, a researcher should understand the informants' perspective before analyzing and presenting the findings. In this investigation, triangulation and transcript review were used to increase the credibility of the findings.

3.7.3 Transferability

Transferability entails the degree to which the findings can be generalized to other contexts or settings (Marshall & Rossman, 2014). Some of the ways to increase transferability include explaining the underlying assumptions in research and describing the context of the study, as well as the processes used in the collection of data (Yin, 2014). The description of the processes followed in the collection and analysis of the data was considered enough to increase the transferability of the findings.

3.7.4 Confirmability

Confirmability refers to the degree to which the findings of a study coincide with the findings from previous investigations (Cope, 2014). Researchers can improve confirmability through prolonged engagement to exhaust themes, questioning respondents from different viewpoints, checking and rechecking the data collected, member checking, and triangulation. The study relied on prolonged engagement and questioning of the informants from different viewpoints to exhaust the themes collected and ensure conformability.

3.8 Summary

The chapter has outlined the methodological techniques and considerations used in the accomplishment of the study. Notably, the chapter has outlined the participants, methods, strategy, population, sampling, ethics, as well as data collection and analysis techniques. The

chapter also outlined the issues of credibility and reliability pertinent to the data collected. The researcher sought help from human resource managers in the respective organizations to identify the suitable participants. A qualitative method or technique was chosen because of the need to make an in-depth and comprehensive account of the research problem. The case study design was selected because it augmented the need for quality in-depth data from participants' perspective. Semi-structured interviews were used in the collection of data from ten respondents across startup firms and other organizations as illustrated in table 2. The next chapter presents the results and analysis of the interviews conducted.

| Respondent | Role | Description |
|-------------------|---|---|
| RE1 | CEO of a tech startup | Currently employing 15-20 persons in the startup focusing on bringing new kind of database and network technology to the market in co-operation with Oracle |
| RE2 | Member of innovation unit | The unit is working together with startups in actual projects aiming to partner with them. Their goal is to add value to their customers with new business models and emerging technologies |
| RE3 | Running advisor program for startups | Manages startup gatherings twice a year to promote, advise and network attending startups aiming to help young startups grow |
| RE4 | CEO of recently exited startup | Successfully built a startup with other key founders in the field of transportation in Germany which recently exited |
| RE5 | Co-founder of a tech startup | Focusing more on the technology the startup is developing but also contributing to the business plan of the company |
| RE6 | Co-founder of a tech startup | Growth hacker and co-founder of a tech startup. Working together with larger companies and other startups to increase the value each firm can generate for their customers |
| RE7 | Co-founder of a startup and angel investor | Mostly focused on the financial management of the startup. Experienced in many startups via investing and advising |
| RE8 | Startup advisor | Working in a large company and focusing on their collaboration with startups |
| RE9 | Board member and advisor for several startups | Long-term marketing background. Currently focusing on marketing and networking aspects of startups along with co-operation with big companies |
| RE10 | Board member and advisor for several startups | High focus on startup funding and initial growth strategies. Experience mostly in venture-backed startups |

Table 2. Profile of the people interviewed for this study.

CHAPTER 4: RESULTS AND ANALYSIS

The chapter reports the interview results obtained from the interviewees from several startups and other businesses established through platforms listed in table 2. A thematic approach is taken in grouping the findings according to the patterns identified.

4.1 Opportunities created by platforms

The interviewees were prompted about the opportunities that the platforms were offering to startups. First, the respondents identified cloud computing as an opportunity in ensuring the success of startups. Across the responses, the following opportunities were prominent.

- Delivery of computing resources as utility services that remove the need to invest in dedicated software and hardware infrastructures
- Provision of capacity needed on demand in which the startups use and pay for only the resources they need
- Allowing startups to access services and markets at the global level
- Reduction of costs through eradicating the need to purchase software, equipment, services, or pay for physical spaces to operate businesses

According to RES3, the cloud computing has a “utility” nature that allows startups to save or spend the amount they could have invested in dedicated computer infrastructure. Indeed, the observation was confirmed by RES1 regarding the use of capital in starting their business.

The respondent stated the following:

“The venture capitalists discouraged us from spending the funds on the purchase of fixed computing infrastructure because much of the services are available through the ubiquitous clouds.”

The use of digital platforms provides a cash flow advantage for startups. The respondents were in consensus that cloud computing prevents startups from spending capital on fixed assets ahead of revenue. The services offered allow the startups to buy computing resources on demand, which improves cash flow for the companies. RES5 stated the following:

“The on-demand aspect facilitated by cloud computing is proportional to the use of services, which helps in freeing up capital for investment in other areas. This has facilitated effective management of costs and utilization of capital.”

The respondents opined that platforms allowed the acquisition of specialized expertise alongside capital. The venture capitalists that have proliferated in the digital platform economy offer specialized expertise to ensure that the startups scale up fast.

RES4 stated the following:

“Building our business through venture capital allowed us to achieve fast scaling because the financiers provided adequate expertise to facilitate the process. Cloud computing allowed the digital enterprise to scale up to the national level, despite starting as a simple regional business.”

The spread of communication technologies and easy access to the internet has provided an opportunity for new entrants to scale their businesses quickly. The respondents agreed that the growth in the smartphone market and other technologies had provided an opportunity to build businesses based on platforms that can efficiently perform on the available devices.

4.2 Startups in the Digital Platform Economy

A series of questions investigated the opinion that startups will drive the digital platform economy in the future. The respondents provided several opinions, which were coded to identify specific themes related to their beliefs. Essentially, the responses reflect the ways

through which startups interact with the digital platform economy through various ways. Five key themes were identified explaining why startups will continually drive the digital platform economy.

4.2.1 Reduced barriers to entry

The respondents opined that the declining computing costs had accelerated the rate of the emergence of novel ideas. Concurrently, digitization was identified as a driving force in the emergence and success of many startups. RES6 opined the following:

“Massive digitization and reduced costs of technology have made it easy for novice developers and prospective digital entrepreneurs to enter the market. Unlike in the traditional models, digital platforms are facilitating easy entry because the initial capital outlay is not significantly large.”

The opinion reflects reducing a number of entry barriers in the tech industry for startups. The eradication of the entry barriers including the expensive proprietary software and processing power facilitates the proliferation of innovative ideas. According to RES7, the startups have led to the emergence of digital entrepreneurs armed with innovative ideas that can take down incumbents. Explicitly, the respondent stated the following.

“Tech challenges are no longer a problem. As a startup, we did not have many entry barriers having identified an appropriate platform on which to build our business. Consequently, this revolutionized the sector and had been taking the market share from the incumbents.”

Startups can take on the incumbents in driving the growth of the digital platform economy because of the ripple effect. As one startup rises, platforms become popular with other

startups that identify the benefits offered. RES1 reinforced the opinion by suggesting the following:

“Startups are creating a cycle of success for platform organizations. One platform tends to attract a multiplicity of startups as they identify the opportunities offered. As such, the platforms organizations tend to grow exponentially as they become popular among startup entrepreneurs.”

Therefore, the startups are driving the digital platform economy through taking advantage of the benefits and allowing the platform organizations to grow in their reach and effect.

4.2.2 The startup culture

Founding businesses have experienced a steady global rise considering the decreasing entry barriers. Many young entrepreneurs do not focus on finding a job for life anymore. Instead, they use their innovative ideas to start innovative businesses. The respondents indicated the increase in the “startup culture” across the globe, especially in a country with active platform organizations. RES10 gave an opinion regarding the global trend in startup economy.

“Founding of businesses is not occurring only among the millennials. Many people are finding it hard to achieve their dreams through formal employment. They are seeking opportunities in the diverse tech industry to start their innovative businesses. This has led to an increasing number of startups across the globe.”

The rise of the startup culture can be associated with the growth of the platform economy. On the one hand, the growth of startups is encouraged by the increased number of platform organization. On the other hand, the startups encourage the success of the platforms, which leads to increased growth of the digital platform economy. RES4 opined the following pertinent to the theme:

“The proliferation of platform organization has encouraged the emergence of the startup culture. A feedback loop emerges in which the success of the digital platforms will depend on the number of startups ready to utilize them. Startups will continually play a critical role in the success of digital platform economy as long as the success of the platforms is sustained.”

In fact, the digital platform economy may reach new levels considering its entry in the emerging economies too. Even professionals are using their contacts from their work experience to launch new businesses that aim at rectifying the challenges they have identified in their workplace. One of the respondents (RES5) opined the following:

“In starting our business, we had seen many challenges in the transportation sector. We identified a platform company on which to establish our services on, and it was possible to start at the city level and expand nationally based on the experience we had gained with such technologies on the lower level. The success of the company is driving many other startup entrepreneurs to take a similar avenue.”

The assertions show that the rising popularity of platforms based on their benefits is providing an opportunity for startup entrepreneurs to pursue their passion and offer innovative products and services. As such, the success and expansion of the platform economy will continually depend on a large part on the rate at which new entrepreneurs adopt them.

4.2.3 Networked capital

The existence of networked capital has an indirect impact on the growth of the digital platform economy pertinent to the rate at which startups are being formed. Essentially, startup costs had been a challenge for many entrepreneurs in the past. However, the responses show that the emergence of digitally enabled networked has eradicated such challenges.

RES10 opined that the search for funds has become easier for startups because of the networks.

“Digitally enabled networks are facilitating startups to pool resources easily. Therefore, the evolution of digital companies is taking an unprecedented pace because of the networked capital.”

Similar opinions were identified from other respondents. The increasing number of spheres from which entrepreneurs can source their startup capital is making it easy for them to enter the market. Coupled with the ease with which platform enables business founding, entrepreneurs are revolutionizing the business environment. RES9 stated the following to affirm the claim.

“The evolution of the digital networks has increased spheres for the search of capital. In many cases, venture capitalists will offer capital or refer the innovative entrepreneurs to other people in the network. In this way, the networked community becomes larger leading to the growth of the digital economy.”

Indeed, one of the respondents cited several companies that have enabled the search for funds. According to RES6, organizations such as Indegogo and Kickstarter have created an easy way for entrepreneurs to engage in crowdfunding to raise money. Based on the success stories of the companies that have relied on the platforms, many other startups have sought such opportunities through the networked community. Necessarily, this implies that startups drive the digital platform economy through increasing the degree of networking among the businesses and prospective entrepreneurs. Individuals can create a network of peers and engage in a multiplicity of funding activities. As innovative ideas continue emerging, an additional number of platform offers supports to the startups emerge to facilitate the success of the innovations.

4.2.4 Emergence of new models

The responses show that the world is experiencing significant changes that require the deployment of new models in the business. The emerging models are creating disruptions that tend to edge the incumbent businesses out of the market. The platform-based startups seek the creation and capturing of value through non-traditional methods. This generates a network of people and organizations seeking to reap benefits from a single business opportunity. RES5 opined the following.

“Startups are coming up with new business models to counter the challenges with the traditional businesses. They have deployed mechanisms that seek advantage of the networked community to facilitate the creation and capture of value.”

4.3 Challenges and risks facing startups

In driving the growth of digital platform economy, startups experience a multiplicity of challenges identified in the interviews. Some of the challenges identified from the interviews include business environment, skills, and infrastructure. In many parts of the world, digital entrepreneurs lack access to reliable and affordable broadband infrastructure. Some of the respondents suggested that the distribution of the platforms is uneven leading to many parts of the world lags. Issues associated with intellectual property protection have slowed the pace at which some digital entrepreneurs seek funding from venture capitalists in the fear that they may not benefit from their innovations in the long-term. The dis-intermediation problem may affect the ability of the startup to grow beyond the initial stages. The respondents also stated the need for increased IP training when starting businesses. Several respondents identified inadequacy of finances and resources as a challenge facing many startups. In their initial stages, startup entrepreneurs face a dilemma regarding the sources of financing. RES10 observed the following.

“While many sources of financing for startups exist, many financiers suggest that the lack of fundable or comprehensive business plans and value proposition affect their positions in funding the startups. Also, the lack of feasibility and quality of the business ideas limit the financiers in funding the startups.”

Startups in the digital platform economy face a multiplicity of risks. First, several respondents identified the non-diversifiable risk associated with digital startups. The non-diversifiable risk mostly affects startups backed by venture capital. Startups may fail to generate adequate profits because of the risk associated with paying the venture capitalists because of the low salaries or revenue they may generate. Additionally, RES5 opined that startups might fail to diversify their product or service offering because of the low revenues they generate while paying off the venture capitalists.

Startups backed by venture capital also face significant risks in their exits. The exit from a venture-backed enterprise remains significantly challenging for many startups. RES7 suggested the following.

“While many startups seek venture capital to start their enterprises, they should understand the associated risks. Many startups find it hard to exit from the partnerships. While many receive a sizable amount of payoff in their exits, almost three quarters receive nothing in their exit.”

Nevertheless, startups have a multiplicity of strategies to mitigate the challenges and risks they face. From the interviews, several themes emerged regarding the response to and management of risks in startup ventures. First, the responses show that startups can mitigate operation risks through strategic identification and seizing of opportunities. According to RES7, big firms have an advantage in managing risks strategically. However, startups can

rely on their networks within the digital platform economy to build awareness about the available opportunity that can facilitate the management of the risks.

Moreover, RES3 and RE6 identified networking as a crucial strategy in the management of risks that startup ventures face. Networking is associated with the management of financial, market, and recruitment risks. RES6 suggested the following.

“Networking helps startup entrepreneurs in identifying appropriate sources of financing. A large network can help in the identification of the active markets, as well as a high performing workforce in the uncertain technology markets.”

4.4 Role of Large Companies

As hypothesized, the study expected to find whether large companies have a role in the rise of startups within the digital platform economy. The respondents gave significant insights regarding the ways large companies are helping the digital startups in the ecosystem. Respondents agree that large companies are a crucial part of tech startups. For instance, some large companies have ceased offering venture capital to engage in joint innovations. The large corporations are seeking new innovative ideas to turn them into profitable businesses. The research found that many of the companies had sought corporate help at some point to achieve their success. According to RES2, seeking help from large companies helps in research and design activities.

“Corporate partnerships provide startups with many benefits, especially R&D considering some of the significant costs of research associated with deep-tech products and services.”

Before identifying the opportunities available through the collaboration between large companies and startups, the interviews identified several challenges that make the corporate

partnerships almost impossible for startups. Some of the common challenges identified include the following.

1. Misalignment of processes and timing
2. Slow corporate decision-making on the part of large companies
3. Inefficient definition of the relationship between the large company and the startup
4. Inadequate preparation among startups including ambiguous value proposition and proof of concept
5. Lack of high-level sponsorship policies in many corporations
6. Failure to achieve buy-in from the startups

Large corporations play a critical role in facilitating the success of deep-tech startups. First, the interviews revealed that the corporations within the ecosystem offer skills, infrastructure, and knowledge. RES5 emphasized the opinion by opining the following.

“Engaging in tech innovations requires significant input pertinent to skills, infrastructure, and knowledge. The external factors that affect such innovations call for appropriate corporate-startups engagement for the provision of the additional requirements.”

Big tech companies acting as platforms also offer substantial funding and marketing for the deep-tech products. According to RES6, some of the innovations seen today could not emerge without the participation of the large corporations. The time-to-market required for deep tech makes some of the innovations fade before entering the market. Consequently, the large corporations offer funding and marketing resources to enable the deep tech startups to take off. Indeed, RES6 emphasized on these aspects by asserting the following.

“Deep tech requires significant experimentation, testing, and scaling. The payback period and time to market is longer than for conventional products. Without the effective partnership with large corporations, some of the innovative ideas among prospective entrepreneurs may go unnoticed and fade away.”

In the investigation of the role of large corporations in the growth of startups, the study identified different forms of startups and their preferences pertinent to the corporate-startup engagement (CSE). The segmentation of the startups relied on prompting the specific needs that startups have in entering the digital platform economy. The categories include technology bets, development bets, demand bets, and potential quick wins. Based on the respondent’s description of startup needs, technology bets were considered as startups that identify a promising technology but lack market application. Therefore, the objective of the startups entails developing viable products to satisfy the market need. The startups face an uphill task in the acquisition of corporate partnership because their uncertainty makes funding risky.

Development bets included startups that have identified a market opportunity and delineated the value proposition. The startups are often engaged in the development of the product but lack a market-ready product. Large corporations sometimes gamble with the development bets based on the value proposition. The startups aim at overcoming technological uncertainty and gaining technical expertise, as well as market access. Many large corporations only use joint inventions with such startups to minimize the risks associated with failure.

Demand bets include startups that have mature products, but the product does not have commercial application. These startups must identify and create demand for their products. They face challenges associated with the lack of sufficient distribution networks

and market resistance. The most crucial resource they require from large corporations other than funding is market access (distribution network and customer base) and business expertise. The themes that emerged from the interviews point to several roles of large corporations in the digital ecosystem.

1. The corporations allow the growth of the innovations through funding
2. Large corporations provide a supporting ecosystem through facilitating market access
3. Large corporations offer startups with the required technical and business expertise
4. The corporations help startups to access facilities required in kick-starting the businesses
5. Large corporations help in talent acquisition once the startup has picked up

4.5 Startups versus Big Company Projects

The engagement in startup activities has an advantage over big company projects in many ways. The interviews revealed several aspects of startups that tend to give them an advantage over big company projects. The study revealed that small startup companies had a higher level of dynamism as compared to big companies. Startups seek to revolutionize areas in which the big companies have failed or have not produced favorable results. Moreover, the study found that the acquisition of intellectual property through the help they acquire from educational institutions and big firms. On the other side, acquisition of IP protection in big firm projects is complicated because of the requirements that the firms have. Startups tend to compete in areas with higher dynamism as compared to projects launched in big companies. Consequently, the startups have a high chance of picking up and winning the market as compared to projects from big companies, despite the brand name of the companies.

4.6 Factors and means of growth for startups

The interviews aimed at ascertaining the factors that influenced the growth of startups and the means through which startups steered their growth. Several variables were identified pertinent to the factors influencing the growth of the firms. First, the interviews revealed that the need for achievement was significant in the growth of startups. RES10 stated the following.

“Most startup entrepreneurs enter the market with a dream and vision for high growth. The desire to achieve their dreams leads to high expectations and significant input in the business, which often results in growth.”

The interviews revealed that resilience played a significant role in the growth of startups. Resilience is considered a clear growth strategy for startups considering the multiplicity of challenges that they face. The ability of the entrepreneurs to handle uncertainty and adversity in the market determines their success and longevity in the market. RES3 opined the following.

“The characteristics of resilience among tech startup entrepreneurs give them skills, dexterity, and tools to succeed in the uncertain and unpredictable technology environment.”

Further, the study identified extraversion as a factor for growth among startups. In many cases, startup entrepreneurs succeed because of the extraversion characters of their founders lead to success and growth. Unlike big technology firms, a startup entrepreneur has to adopt a personality of extraversion to assist in the development of networks with other companies in the ecosystem. RES2 suggested the following.

“The ability, frequency, and intensity of tech startup entrepreneurs in their interaction and development of a relationship with other companies, their ability to acquire support, and their success in penetrating the markets depend on their extroversion. They have to be outgoing to succeed in the market.”

The educational level was suggested as an external growth factor in startups. According to two respondents, many tech startups rely on the support they receive from their respective institutions of higher learning in furthering their ideas. While big tech firms play a role in the entry of the startups in kick-starting many startups, the educational background of the startups plays a critical role in that many of the entrepreneurs rely on their universities in the early development of their ideas. The educational background provides business knowledge for startups. RES1 opined the following.

“Educational background provided proximity to supports from the respective university faculty who may aid in the development of the ideas that startup entrepreneurs have. An appropriate educational background provides a proxy for knowledge, including an understanding of business operations.”

Lastly, the source of financing was identified as a significant driver of startup growth. Many ideas among prospective startup entrepreneurs fail to take off because of the lack of financing. An appropriate source of finance allows startups to take off because it provides a platform for the operations of the startup. Indeed, financial resources were considered the most influential factor in the initial success of startups. According to many respondents, financial resources provide the requisite flexibility in the development of strategies that affect venture growth. Financial resources were associated with the number of partners in the startups. According to most respondents, startups with partners from established corporations tend to portray higher growth as compared to startups with partners with minimal experience

in the market. RES6 opined that startups with several partners had a higher likelihood of succeeding as compared to startups with a single person because of the diverse ideas the partners bring into the startup.

The interviews identified several means through which startups instigate their growth in the competitive market. While contextual and team factors influence the growth significantly, most of the respondents focused on strategic means through which startups ensured their growth. First, the study identified internationalization as a means of growing startups. RES9 opined the following.

“The extent to which a startup reaches a global market determines its longevity and success. There are many ways of reaching a global audience in the tech industry. Essentially, effective marketing activities in the online platforms have facilitated the growth of many startups.”

Mainly, the internationalization strategy as a means of growth depends on marketing activities that enable the penetration of the company into the global market. Several respondents identified diversification as a means of growth for startups. Diversification involves the extent to which the startup engages in new product launches in different areas. While many startups enter the market with a single innovative idea, they tend to engage in other activities as they increase their revenue generation and penetration in the market.

However, RES8 cautioned against diversification as a growth strategy because of its associated risks.

“While startups can grow through diversification, it may be a risk not worth taking in many instances. Diversification may lead to the launch of products that do not

represent the brand created leading to waste of resources and slow market responsiveness.”

Diversification is used as a growth strategy in startups that have already gained a sizable market size. RES6 reinforced the idea by suggesting the following.

“Diversification is crucial in the growth and expansion of startups. However, startups should only diversify their offerings after they gain an appropriate footing in the market and have the financial capability to engage in R&D activities that lead to the launching of new products.”

Thirdly, the interviewees identified low-cost strategy as a means through which many startups ensure their growth and competition with the incumbent firms. A low-cost strategy entails the use of cost advantages in seeking competitive advantage in the market. Many startups enter the digital platform economy with the aim of lowering access to services offered by incumbent firms. Consequently, they use the low-cost strategy to compete with the incumbent and maintain their rate of growth. RES5 opined the following.

“A low-cost strategy has become one of the major strategies that startups are using to compete with the incumbents in the digital platform economy. Essentially, they facilitate the access of services or products at lower costs as compared to the incumbents.”

Lastly, startups use marketing planning and marketing intensity as a means of growth in the digital platform economy. Marketing intensity entails the degree to which a startup pursues strategies based on unique marketing efforts. Marketing planning entails the formalization of synoptic models of strategic planning. Startups understand the competition in the market.

Therefore, they tend to be apt in the marketing plans to lure the target consumers into embracing their services or products.

CHAPTER 5: DISCUSSION

Today, platforms are considered as a marketplace where transactions between two or more user groups take place. The paper focused on two- and multi-sided platforms as marketplaces that are executed digitally by startups in the creation a platform ecosystem. In this context, the platform makes value creation possible for all participants. It is a business, which enables external producers and consumers to create value by interactions between each other. Platform sets a participative and open infrastructure for the interactions. It is also responsible for the governance of the infrastructure and interactions. The purpose of the platform is to facilitate the exchange of products, which can be goods, services or even social currency.

The two- and multisided platforms can be considered matchmakers that bring members of different groups together. They sell access to the target group or target groups. (Evans David & Schmalensee 2016, pp.1–2) Today the hype around two- and multisided platforms is ongoing due to the digitalization of the matchmakers. The digital technology expands the reach, convenience, speed and efficiency tremendously compared to the traditional way.

Platforms function uniquely in facilitating the establishment of new businesses. As illustrated in the review of the literature, platforms are founded on cloud computing and the algorithmic revolution. The aspects enable the provisioning of resources, tools, and infrastructure to the startups. For startups, the consequences of the cloud services include the radical reduction in the cost of ICT tools and computing resources. However, the terms of accessing the computing resources tend to change. Startup entrepreneurs can opt to rent the resources in units to avoid the costs of owning or building the entire system. Consequently, cloud computing avails the applications and platforms as operational expenses instead of capital expenses. Based on specific algorithms, platforms have become complementors in the establishment of startups. The complementors are considered as powerful allies that build and

maintain the lock-in for the parent platform. This shows that the digital platform economy encompasses algorithm-enabled “cyberplaces” through which the constituents (machines and people) can transact.

The diversity of the platform economy is a driving force in the establishment of startups. Digital platforms that depend on algorithms and databases are restructuring the global economy rapidly. The digital platforms disrupt the existing economic activities by re-establishing entry barriers, value creation and value capture, power positioning in the network and economic system, and facilitating the repackaging work. As observed in the literature, platforms could be categorized in diverse ways. This implies that their implications on startup activities differ depending on the role to which they are assigned. The trend may explain the diverse number of startups that emerge from a single platform company.

The increasing number of startups has shown the importance of startups in the digital economy. Platforms have become intermediaries in the acquisition of resources. The acquisition of resources for startups is among the multiple challenges the startups face. Platform capitalism has led to increased rewards for startups that seek infrastructure, funding, and resources to take off. The intermediary logic of the platform economy suggests that platforms help in solving coordination problems in market exchange through bridging the distance-shrinking networking capacities.

The rise of the platform organization and the increased startup activity has a feedback effect on each other. The startup economy has been spreading fast throughout the US as entrepreneurs (digital entrepreneurs) establish new companies that rely on technology in innovative ways. The US startup ecosystem has been characterized by high-profile technology hubs that tap on new innovators in the creation of new businesses. The startup culture has been sparked by the presence of scalable technology. The innovative use of

technology by startups has provided a foundation for the continued growth of the platform economy.

As suggested earlier, the largest proportion of startups are in technology. The establishment of high-tech businesses relies on the existing Web technologies, APIs, and cloud platforms in the development and distribution of new products or services. The advantage with startups over starting projects in large firms is the relatively little time associated with the development and distribution of new web products. Startups may have short time-to-market as compared to large companies because of the minimal regulations and low levels of corporate governance under which they function. The set-up costs and entry barriers associated with the establishment of startups are lower, which makes them an attractive vehicle for starting an enterprise. Nevertheless, startups have to deal with a multiplicity of risks in the global, borderless market as they seek to scale up with their unproven products or services. High-tech startups tend to have a higher growth rate and failure rate than most other categories of businesses. This implies that the businesses could have high rewards because of their fast scaling up within the digital economy, which is attractive for investment.

The increasing number of startups does not occur in a vacuum. Large companies play the most significant part in supporting the development and growth of the startup companies within the digital economy. Their financial capabilities allow them to create platforms that enable digital entrepreneurs to create and operate their companies while accumulating “rents.” According to Accenture (2015), the open innovation journey followed by many startups depends on the platform supporting the initiative. In turn, the corporate needs and market forces affecting the large companies affect the ecosystem of innovation and strategy used in supporting the startups. Large firms support the startups through corporate venturing, development of accelerators/incubators, co-creation, and ecosystem innovation. Essentially,

the strategies help startups through the maximization of the network effects and collaboration with external partners.

Corporate venturing provides an easier and less risky way of entering the market as compared to massive investments in big projects. According to Accenture (2015), corporate venturing has become crucial for large companies that seek to de-risk financial gambles on internal R&D via external investment. As such, the companies lookout for next-generation technological innovations in which they invest when they deem the startup as appropriate in supporting the corporate strategy. Other large companies support startups through incubators or accelerators. Most of the incubation and acceleration programs occur alongside corporate venturing. The programs have been found as an efficient way of ensuring the growth of startups because they ensure mentoring, coaching, and access to knowledge capital from the parent company.

Accenture (2015) observes that the scale of corporate venturing has been declining as large companies consider joint innovation as less risky. However, the model does not offer adequate support to startups because the startups contribute only towards the resolution of the large company's needs and problems. The partners may work collaboratively in the development of common solutions but have different levels of control, which may be unsupportive to the startups. Lastly, some companies have been supporting startups through ecosystem innovation. The method is considered a far-reaching step in the facilitation of open innovation journey because it occurs within a broad ecosystem of collaborators. The strategy primarily supports the large companies because the startups will be working to solve the problems of the large company rather than market their products.

The packaging of work and entrepreneurship are highly interwoven. Much of the attention has been focused on the disruptions that appear from the new opportunities.

Practitioners and researchers should question whether the disruptions lead to the creation of viable entrepreneurial possibilities. Fundamentally, the platforms open a gamut of entrepreneurial opportunities. For instance, some enterprises such as Zipcar envision an alternative social model. The model entails owning a car or making occasional use of the car through accessing the cars via the Zipcar platform. Spreading the model would result in an overall drop in the demand for auto production. This may or may not disrupt traditional cab services such as Hertz. The sharing solutions offered could lead to unprecedented ripple effects on the market ecosystems.

The findings of the study provide an overview of ways through which startup entrepreneurs can drive the growth of the digital platform economy. Unlike large corporations, startups have an advantage in their entry in the digital platform economy. Some of the advantages the startups have included reduced barriers to entry, the growing startup culture, the presence of a networked capital in the digital networks, and emergent of practical models to facilitate business growth.

Fundamentally, the effects of startups on the growth of the digital platform economy depend on the availability of appropriate platforms. As observed in the findings, startups increase when the ecosystem has an adequate number of appropriate platforms. On the other hand, the number of platforms increases as the number of startups seeking collaboration with them increases. Therefore, the two factors have a feedback effect on each other. In other words, the findings show that platform-based startups have a minimal chance of survival in the absence of appropriate platforms. Similarly, the platforms would be dysfunctional without an adequate of startups and new businesses seeking the services.

A multiplicity of challenges continues affecting the success of startups. While digital platforms provide an avenue for entry into the market, some of the challenges and risks have

limited the growth opportunities for the startups. This implies the need for startup entrepreneurs to adopt strategic measures that take advantage of the available opportunities and help in the mitigation of the challenges they face. Most importantly, startups are faced with challenges and risks such as the uncertainty of the business environment, access to infrastructure and skills, sources of financing, inability to diversify, and exit risks. The results illustrate the importance of networking in managing the risks because it facilitates the identification and utilization of the available opportunities.

The digital platform economy provides opportunities for the growth of startups. Similarly, startups provide an avenue through which digital platform economy can grow. Therefore, the two have a feedback effect in which continued growth of startups that rely on digital platforms furthers the growth of the digital platform economy. The rise of the entrepreneur culture relates directly to the growth of the digital platform economy.

Several considerations must be considered in showing the link between the growth of the digital platform economy and the startups. The factors that affect the growth of startups have a direct impact on the rate at which the digital platform economy grows. Without adequate motivation, startups may fail to take off or trigger the growth of the economy. Startup entrepreneurs require a high degree of resilience and extraversion in the uncertain market to ensure they succeed. Strategic business planning ensures that the startups maintain a relatively high growth rate in their innovations.

CHAPTER 6: CONCLUSION

6.1 Conclusion

Some companies including Amazon, Google, Facebook, Uber, and Etsy have taken into the creation of online structures to enable diverse human activities. The digital platform economy has distinct and identifiable effects in the reorganization of the global economy. The digital platforms that have emerged portray a diversity of functions and structures. According to Kenney & Zysman (2015), the emergence of the platform-based economy may not dictate the future but will continue framing the choices in starting businesses. The pervasiveness of the platforms in the reorganization of business is yet to be understood. The effects of the digital platform economy vary across sectors, but questions remain about their productivity and growth. However, digital platform economies capture and transmit extensive data over the internet, allowing individuals and firms to gain valuable knowledge and use it for development.

The debate related to the effects of the digital platform economy extends the discussion about the early days of the digital revolution. The optimism in the high-tech industry has led to an increase in the inflow of entrepreneurs and investors in tech cities such as San Francisco as they take advantage of the opportunities for business growth. Start-ups have to question their models in which they will create platforms that attract users and capture value. Despite their potential to drive the digital platform economy, many start-up entrepreneurs are ill prepared for the implementation of a digital platform economy. The little empirical research that has been conducted regarding the role of startups in the growth of the digital platform economy motivated the research. The objectives of the study were to identify the roles of startups in accelerating the growth of the digital platform economy, the measures that encourage the growth of startups, and the role of large companies in accelerating the

growth of startups. Moreover, the study investigated the challenges and risks that startups face in their quest for contribution towards the digital platform economy.

The literature review provided a theoretical background for the conduction of the study. The review reveals some of the themes expected in the study. From the review, it was found that startups and the digital platform economy have a dyadic relationship in which they affect each other positively. Fundamentally, the most crucial role of the platforms is to offer the resources and infrastructure that startups require to take off. On the other hand, it is expected that startups increase the activity of platforms, which strengthens the digital platform economy.

Based on a qualitative design, interviews were conducted on ten respondents from startups and other organizations. Several observations can be made from the interviews pertinent to the objectives. The first observation entails the opportunities that platforms create for the growth of the startups within this economy. The following aspects were identified as the contributions of the platforms towards the growth.

- Delivery of computing resources as utility services that remove the need to invest in dedicated software and hardware infrastructures
- Provision of capacity needed on demand in which the startups use and pay for only the resources they need
- Allowing startups to access services and markets at the global level
- Reduction of costs through eradicating the need to purchase software, equipment, services, or pay for physical spaces to operate businesses

Secondly, observations were made regarding the feedback loop that exists between startups and the digital platform economy. The two affect each other through the following aspects.

- Reduced barriers to entry
- The increased rise of the startup culture
- Presence of networked capital and resources
- The emergence of new models for business operation

Thirdly, the interviews revealed several challenges and risks that affect the contribution of the startups towards the digital platform economy including the following.

- Uncertain business environment
- The inadequacy of skills and infrastructure
- Sources of financing
- Intellectual property protection issues
- The dis-intermediation problem that limits the growth of startups
- The non-diversifiable risk associated with the inability to diversify product or service offerings
- Exist risks

Several challenges were identified pertinent to the establishment of relationships with the large companies that help in steering the growth of the startups. The challenges include the following.

1. Misalignment of processes and timing
2. Slow corporate decision-making on the part of large companies
3. Inefficient definition of the relationship between the large company and the startup
4. Inadequate preparation among startups including ambiguous value proposition and proof of concept
5. Lack of high-level sponsorship policies in many corporations

6. Failure to achieve buy-in from the startups

Fourth, the study identified several roles of large companies in the growth of startups. Some of the contributions include the following.

- Access to financing
- Incubation of ideas
- Access to markets
- Access to technical and business expertise
- Creation of demand for the products from startups

Overall, the corporations have the following contributions towards the growth of startups.

1. The corporations allow the growth of the innovations through funding
2. Large corporations provide a supporting ecosystem through facilitating market access
3. Large corporations offer startups with the required technical and business expertise
4. The corporations help startups to access facilities required in kick-starting the businesses
5. Large corporations help in talent acquisition once the startup has picked up

Fundamentally, the research provides insights regarding the nature of the relationship between startups and the digital platform economy. From a general perspective, the two factors have a dyadic relationship. Platforms increase the number of startups through providing rare opportunities to engage in entrepreneurship. On the other hand, increased number of successful startups relying on platforms increases the dependency of other startups on the platforms, which broadens the scope and reach of the platforms. Consequently, this leads to the growth of the digital platform economy.

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