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Strategies for Improving Technology Startup Capital

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
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Abstract

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MBA, Marylhurst University, 2012

BA, California State University, East Bay, 1995

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

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Abstract

Funding is one of the most critical resources high potential technology startup (HPTS) ventures need to achieve success. Some startup founders lack access to capital, a critical resource for HPTS founders to create value for customers and capture value for their organizations. Capital constraints can hinder business performance, endanger growth and the ability to grow and scale into the global markets. This multiple case study explored the strategies HPTS firms used to access capital to grow and scale into global markets. Mishra's venture capital investment model and Blank's customer development model served as the conceptual framework for this study. Data were collected from semistructured face-to-face interviews, direct observations, member checking, and a reflective journal. Participants were selected using a purposive sampling of 5 founders from the Silicon Valley of California, who were involved in equity finance decisions in the last 5 years. Yin's 5-step data analysis plan was used in the final data analysis. Eight themes emerged from the study: capital constraint; identification of potential investors; collaboration, guidance, and support; investment potential; investment thesis; measurement of success; passion and preparedness; and prevention of stock dilution. The findings of this study have implications for positive social change. HPTS ventures can use the study findings to gain approval of investment proposals and increase ventures that create value for customers and for the organizations.

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Dedication

I dedicate this doctoral study to Ndifreke Adams, my lovely wife, my daughters, and son: Inyene, Edima, and Innih Adams for their unconditional love, patience, and support. To my deceased parents, Robinson Adam and, Ako Williams, and the best grandmother I could ever have asked for, Atim Udo-Idiong. Dad, you rightly envisioned your son achieving a university-level education, and mother you planted the seed of that dream early on into my head to sprout. To late Chief John Ekpenyong Isok, you demonstrated that wherever there is a will there is a way. Thank you for showing up when I needed funding to complete my secondary school education. Otherwise, I would not reach this level. I dedicate this doctoral study also the late Dr. Simon Awakessien and Mrs. Mayen Awakessien for funding my trip to study in the U.S. To Friday Ikpe, a special dedication of this study to you for opening the door of opportunity for me to advance my education beyond secondary school education in the United States. Dr. Darrell Burrell, a special thank you for being a great advisor to this achievement because nowhere did I envision taking my educational achievement to this level. Lastly, I dedicate this study to all my relatives and friends. Thank you for your full support and encouragement.

Acknowledgments

A special acknowledgement to Dr. Gregory Uche for serving as my program chair and for his patience and guidance to enable me to achieve this dream. Additional acknowledgement to Dr. Janet Booker, who served as my second committee member. My final acknowledgement to Dr. Patricia Fusch, my University Reviewer (URR), for encouraging and supporting me throughout the review process of my doctoral study program.

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Section 1: Foundation of the Study

The ability of high potential technology startup (HPTS) founders to identify required resources, the development phase to use the resources, and criteria to acquire them are key to efficient capital access management. The process of cultivating HPTS ventures begins with ideas from the founders, mixed with human, physical, financial, and intellectual resources for development and growth (Allen, 2015). The successful acquisition of these resources enables the founding team to kickstart a HPTS venture until the sale of a product generates positive cash flow to cover all expenditures without the need for external capital (Allen, 2015).

Most HPTS firms lack enough capital to develop, produce, and market their products (Simic, 2015). Inaccessibility of external capital hinders the survival of technology startups with growth potential (Rector, Fatoki, & Oni, 2016). Lack of adequate investment capital can contribute to business failure (Coleman, Cotei, & Farhat, 2014). Startup founders who can access external capital improve the odds of developing, growing and scaling their ventures into global markets. The findings of this qualitative multiple exploratory case study may contribute to improving HPTS capital access to grow and scale into global markets.

Background of the Problem

Lack of funding for startups is a major concern for entrepreneurs. To follow the high growth aspiration of startup ventures, founders need enough capital to grow and scale into global markets (Bocken, 2015). Most HPTS founders depend on personal funds and funds from family members and friends to finance operation during the gestation

period (Coleman et al., 2016; Ingram, Hechavarria, & Matthews, 2014). However, these soft sources of financing are usually not enough for startups to develop products or services that solve high value customer problems, recruit experience founding team members, and make enough investment capital available. Becker-Blease and Sohl (2015) stated that potential investors are critical of the success of new ventures because they often lack prior sales history, credit history, and tax information needed by lenders to properly evaluate investment proposals. Due to lack of these information or information asymmetry and being new in the business or liability of newness, HPTS firms could not access capital from traditional lending institutions, including commercial banks (Soderblom, Samuelsson, Wiklund, & Sandberg, 2015). Drover et al. (2017) suggested that HPTS ventures turn to equity financing firms such as business angel and venture capital firms for funding in exchange for some share of stock in the venture.

Equity capital firms invest in HPTS ventures in the Silicon Valley because they are the best performing funds for investors (Wessel, 2013). Capital access via the traditional equity capital firms is contingent on the entrepreneur removing two important conditions to satisfy investors for capital acquisition to take place. Entrepreneurs could use the venture capital investment model (VCIM) and customer development model (CDM) to remove risk mitigation and return on investment (ROI) contingencies respectively to improve capital access to grow and scale into global markets.

Knowledge-based activities and processes are key drivers of innovation, by bringing new-to-the-world ideas in technology, marketing, and business model domain to the global markets (Maier, Geibel, & Sandner, 2016). The contribution of HPTS firms to

the overall economy of the United States, specifically the economies of California and the Silicon Valley, creates the need for HPTS entrepreneurs to gain an understanding of certain strategies that may improve capital access for their ventures to grow and scale into global markets, create net new jobs, and contribute to the economy.

Problem Statement

Startup founders need funding to carry out activities critical to the success of new ventures (Hechavarría, Matthews, & Reynolds, 2016). More than 80% of investment proposals received and reviewed by angel investors do not reach the stage of due diligence considered for suitable investment (Simic, 2015). The general business problem was that lack of access to enough capital affects the growth of HPTS ventures. The specific business problem was that some HPTS founders lack strategies to access capital to grow and scale into global markets.

Purpose Statement

The purpose of this qualitative multiple exploratory case study was to explore the strategies HPTS founders used to access capital to grow and scale into global markets. Founders of HPTS firms are highly dependent on regional knowledge for innovative and competitive advantages, jobs, wealth creation, and economic growth (Neffke, Hartog, Boschma, & Henning, 2017). This study was anchored using two conceptual models: Venture capital investment and customer development models. The study population consisted of five HPTS firms that used certain strategies to improve capital access in the Silicon Valley, California. I selected and interviewed participants from the five firms because they successfully overcame equity capital access constraints and acquired

enough funding to grow and scale into global markets. Findings of this study may contribute to positive social change including improving capital access to benefit more HPTS firms, entrepreneurs, and the business community. The survival and growth of more HPTS firms could lead to higher paying jobs, wealth creation, economic growth, and prosperity. Emerging entrepreneurs may use the findings of this study to make informed decisions that could improve capital access rather than approaching the process haphazardly and unprepared. Additionally, the study findings could add to the existing professional and academic literature and conceptual models for this study.

Nature of the Study

Researchers may use any of the three types of research methods to conduct rigorous research about an investigated event: qualitative, quantitative, and mixed methods (McCusker & Gunaydin, 2014). A researcher conducts qualitative research to test and support preconceived ideas (Ellinger & McWhorter, 2016). Researchers use the qualitative research method to collect expressive data from interview participants about their experiences and analyze the data to understand the phenomenon (Kruth, 2015). Researchers may not gain insights into *what*, *why*, and *how* to uncover a story behind an investigation without depending on the accounts of eyewitnesses (Myers, 2015). Choosing the qualitative research method for this study allowed me to interview participants and ask *how*, *what*, and *why* questions to understand the strategies used for improving technology startup capital access.

By contrast, the quantitative research method is statistical, comprising of numbers such as percentages or averages, to test theories and confirm associations and correlations

between variables (Clement, at al., 2014). Mixed methods research involves the application of qualitative methods to interpret and describe data while validating quantitative findings (Molina-Azorin, 2016). The purpose of this study was to generate new insights about improving HPTS capital access through semistructured interviews of participants, which required more than a quantitative research approach that limited participants' voices or a costly mixed methods approach.

Some qualitative designs include narrative, phenomenology, ethnography, and case study (Guetterman, 2016; Meadows & Wimpenny, 2016). Researchers use a narrative design to understand the subject and interview data in qualitative research (Guetterman, 2016). Researchers use the phenomenological research design to focus on the lived experiences of participants and verify if every participant in the study experienced the same phenomenon (Lewis, 2015). A researcher may use ethnographic study to understand complex social phenomena (Kaminski, 2015). Researchers use the qualitative exploratory multiple case study to explore why, what, and how to generate new details and perspectives about an event (Yin, 2014). A learner may use the case study design to control the scope of the study, ensure reaching data saturation, and complete a doctoral study in a reasonable amount of time (Fusch, 2015). I used the multiple exploratory case study design because it was the most appropriate design to explore certain strategies for improving HPTS capital access.

Research Question

The overarching research question for this study was: What strategies did HPTS founders use to access capital to grow and scale into global markets?

Interview Questions

To answer my research question, I asked the following questions to participants:

1. What barriers did you face, as HPTS founder, when accessing equity capital for business investment to grow and scale into global markets?
2. What strategies did you use to access equity capital to invest and scale your startup into global markets?
3. How did you measure the success or failure of these strategies?
4. As a technology startup founder, how did you determine which equity capital firms to access for capital?
5. What key features on your presentation deck influenced an investor's decision to provide equity capital access to grow and scale your company into global markets?
6. In what ways did you meet investors' demands for risk mitigation and ROI to secure capital?
7. How did you protect the value of stock in your business by accessing equity capital?
8. What additional information can you provide on ways to improve startup firms' access to capital?

Conceptual Framework

This study was anchored using two supporting concepts: the venture capital investment model (VCIM) and customer development model (CDM). Mishra (2015) developed the VCIM conceptual model and explained that the core ability of successful

HPTS entrepreneurs and investors is efficient risk management. Mishra stated that the VCIM is a valuable tool for startup entrepreneurs who may use it to meet investors' key condition for capital access: risk mitigation. Entrepreneurs who apply this tool before or after writing a business plan may succeed to access equity capital for their new ventures (Mishra, 2015). Key ideas applicable to VCIM include risk mitigation and ROI, deal-killer risks, incentive-alignment risks, path-dependent risks, and immediate critical risks.

Blank (2006) theorized that a startup is not a small version of a large firm rather a temporary organization used by the founding team to search for a scalable, repeatable, and profitable business model prior to company building and execution of business plan. Most founders' visions about new products or services, markets, customers, and business models are educated guesses at best. Blank said that successful HPTS ventures do not jump to executing a 3 or 5-year business plan rather they conduct research, test, and validate those guesses for feasibility through startup organizations. Blank proposed that since new businesses often fail mainly due to lack of customers, then HPTS ventures should adopt the following key principles: (a) a customer development model (CDM) as an essential tool for understanding customer problems and needs, (b) customer validation for developing a repeated sales model, (c) customer creation for driving end user demands, and (d) company building, including hiring of the management team to join and execute the business plan. The findings of this study align with Mishra's VCIM and Blank's CDM for the removal of risk mitigation and ROI contingencies respectively for HPTS firms to gain access to investment capital to grow and scale into global market.

Operational Definitions

The following were operational definitions of some terms in the study:

Angel investors: Angel investors are high net worth informal investors who use personal funds to seek high returns through private investments in startup firms (Collewaert & Manigart, 2015).

Business model: A business model is a representation of a specific integration of resources in which transactions create value for the customer and capture value for the firm (DaSilva & Trkman, 2014).

Diffusion of innovation: Diffusion of innovation is a type of communication that spreads innovative ideas, practices, innovation, and technology through individual channels over time among individuals or groups in a social system (Aizstrauta, Eroles, & Ginters, 2015).

Due diligence: Due diligence means a comprehensive evaluation of investment proposals to identify and measure the integrity of deals, risk mitigation, and ROI (Croce, Tenca, & Ughetto, 2016).

Investment thesis: An investment thesis is a description of a firm's product or service, as well as a review of trends, prospects, and company strengths to provide the rationale for investment in a venture (Bocken, 2015).

Lean startup: A lean startup refers to a practice used by startup firms to build a minimum viable product (MVP) to allow for incremental improvements and customer validation to eliminate uncertainties during product development process (Marinakis, Harms, & Walsh, 2015).

Market segment: Market segment refers to a group of consumers for a given set of products or services with a common set of needs or wants who reference their peers when making decision to buy (Venter, Wright, & Dibb, 2014).

Scalability: Scalability refers to a description of an action by a startup firm to expand its business model, system, or platform to a widespread number of users (Montecchi et al., 2015).

Startup: A startup is a temporary search organization designed for the founding team to use to search for scalable and profitable business opportunities under conditions of uncertainty (Giardino, Unterkalmsteiner, Paternoster, Gorschek, & Abrahamsson, 2014).

Venture capital: Venture capital is a form of equity financing that plays a key role in providing investment capital used in addressing the funding needs of HPTS firms (Bocken, 2015).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are facts not corroborated by other sources (Marshall & Rossman, 2016). A researcher makes explicit assumption by identifying the boundaries of research to serve as the foundation for a body of interlinked theories, developed and shared by a community of researchers (Scherdin & Zander, 2014). Assumptions carry risks with the potential to taint data findings.

The first assumption was that participants would answer the interview questions in an honest and straightforward manner. A second assumption was the inclusion criteria

of the sample of five HPTS firms were appropriate, and therefore, the participants had all experienced the same phenomenon. A third assumption was that participants had a genuine interest in participating in the research without any other motives such as compensation for participating; no participant was compensated to participate in this study. A further assumption was that interview responses would lead to identification of emerging themes relevant in exploring strategies for improving HPTS equity capital access. The final assumption was that the data collected from interview participants would provide clarity for understanding the strategies for improving technology startup capital to grow and scale into global markets.

Before starting the face-to-face interviews, I reminded participants of the full disclosure and confidentiality statements. In addition, I informed them that all data collected and kept in the file would remain stored in a safe filing cabinet, kept and locked for 5 years and destroyed thereafter. These were key approaches to easing participants' minds to participate willingly in the interview.

Limitations

The foundation of this study included limitations. Limitations are drawbacks, circumstances, or forces not within the control of the researcher with the potential to affect the result of study findings (Verhaeghe, Annemans, De Maeseneer, Maes, & Van Heeringen, 2015). Limitations are inherent in research studies (Tsang, 2014), which may affect the generalizability and usefulness of the findings and conclusions. Participation was limited to the Silicon Valley geographical area and curtailing the study to a single technology industrial cluster may affect the generalizability of the findings and

conclusions. A small sample size was limited to five participants; qualitative studies typically do not require large sample sizes but require enough participants to obtain responses about the phenomenon. Adding more participants may not necessarily yield new data. There was a 30-45-minute maximum interview time limit, potentially constraining participants' responses. Time constraints imposed by the DBA program may impact the findings and conclusions of the study.

Limited researcher experience potentially can affect the outcomes and concluding statements of the study in the event experienced researcher repeated the study and rejected the findings and conclusions because the novice researcher failed to adhere to procedures. Some inexperienced researchers are often overwhelmed by the intricacies of research process when conducting scholarly inquiries (Ellis & Levy, 2009). Novice researchers including DBA doctoral students face significant challenges such as lack of understanding of the qualitative research paradigm. Some of the challenges faced by novice researchers include handling reliability and validity in qualitative research, determining how to conduct a systemic data analysis, and familiarity with presenting qualitative findings (Wang, 2013). Bias may pose challenges to the quality of the research findings and conclusions. Full disclosure of the research process via informed consent form by the researcher can mitigate the effect of bias (Anney, 2014). Lack of access to participants can limit the amount of data collected by a researcher in a timely manner.

Delimitations

Researchers set precise boundaries for their studies to narrow the scope of the research (Waller, Hockin, & Smith, 2017). The first delimitation of this study is the choice of the problem being explored (Ody-Brasier & Vermeuler, 2014). The general business problem identified for this study was lack of capital access experienced by HPTS firms for investment. I could have explored any other business problem but decided on the strategies HPTS founders used to access capital to grow and scale into global markets. The second delimitation of the study is the research question. The research question for this study was: What strategies did HPTS founders use to access capital to grow and scale into global markets? I could have asked a different overarching research question if I was exploring a different business problem. The third delimitation was the conceptual models adopted for this study. There are other conceptual models that could have been chosen for this study other than VCIM and CDM. If I explored a different business problem and asked a different overarching research question, I may not have chosen the conceptual models used for this study. The fourth delimitation of the study was the equity capital offered through business angel and venture capital firms. The fifth delimitation of the study was the geographical location of the study: The Silicon Valley region of California. Another geographical location could have been chosen for this study. The sixth delimitation of the study was that the population would consist of five HPTS firms. Twenty participants could have been chosen for this study. By selecting a certain research approach, I referred to other possible approaches as delimitations

Significance of the Study

The purpose of this qualitative multiple exploratory case study was to explore strategies HPTS founders used to improve capital access to grow and scale into global markets. This study holds significance for the field of technology entrepreneurship and innovation. Knowledge gained from the study may improve capital access to grow and scale HPTS ventures in the Silicon Valley into global markets.

Contribution to Business Practice

A HPTS is a type of startup entrepreneurship (Blank, 2013c). The findings of this study may help emerging entrepreneurs in understanding that HPTSs are knowledge-based ventures different from other types of startup entrepreneurship and require different approaches in meeting their needs. The management of HPTS ventures is under the control of the founding team instead of a lone entrepreneur, and how the team collaborates depends on previous experience working in a startup (Klotz, Bradley, Busenitz, & Hmieleski, 2014). High potential technology startup firms do not start operation by executing company business plan until after searching, testing, and validating the business idea as well as the customer, market, and business model for feasibility (Blank, 2006). Company building follows the validation of customer-product-market-business model fit where managers, supervisors and employees are hired to execute the company business plan. Additionally, HPTS ventures use equity rather than debt to finance their operation, and depend on the collaboration, guidance, and support from venture capital firms for productivity and profitability. Further, HPTS ventures exchange some stock in the new firm for ideas, financial capital, and human resources

(Fairlie, Morelix, Reedy, & Russel, 2016), to grow and scale into the global markets. Founding teams of new ventures might find the study findings helpful in creating value for the customer and capturing value for the firm in the form of big capital gains.

Creating value for the customer and capturing value for the firm are core elements in HPTS business strategies and firm's success to ensure capital access (Davidson, Harmer, & Marshall, 2015). Companies with product or service that solve problem for a widespread number of customers do not fail. Startup founding teams may find the study useful in focusing on customer as well as product development to avoid product failure and ensure that the product solves the problem the customers is experiencing to have the need for the product or service (Cooper, 2016). High potential technology startup firms that offer the customer a better product or service made superior by technology increase the odds of capital acquisition and success (Fuertes-Callen & Cuellar-Fernandez, 2014).

Startup founding teams may benefit from the study findings on how to mitigate risks in venture activities to improve capital access. Emerging entrepreneurs may use the study findings to collaborate with investors and negotiate for capital in exchange for shares of stock in the company without diluting ownership in the venture. Startup entrepreneurs may find the study findings useful in selecting board members because every HPTS venture requires a board of directors; the effectiveness of board members to the new firm depends on their qualifications and training. Startup founders may benefit from the study by learning that they cannot be lone entrepreneurs but need to assemble individual founding teams to collaborate in the early-stage development of the new venture. Scholars of business management, innovation, entrepreneurship, and technology

entrepreneurship may use the findings of this study in future research relating to the complex problem of technology startup capital access.

Implications for Social Change

High potential technology startup ventures need financial resources for productivity and profitability of their ventures. Disseminating the study findings to HPTS entrepreneurs and startup networking groups may heighten awareness of what strategies entrepreneurs need to improve capital access to grow and scale their ventures into global markets. The findings of this study may contribute to social change by adding to the general knowledge base of improving capital access for entrepreneurs who are challenged by asymmetric information such as sales history, credit history, and tax information and cannot access investment capital from the traditional lending institutions and banks. Often these required information are needed for two years for risk assessment, the new venture faces the liability of newness and cannot access capital from the traditional lending institutions. High potential technology startup entrepreneurship is a promising field, creating more net new and highly paid jobs (Addae, Abbey, & Singh, 2014). The outcomes of this study may support entrepreneurs to be productive and profitable, leading to more high-paying jobs, wealth creation, as well as improve economic growth and prosperity.

A Review of the Professional and Academic Literature

The purpose of this qualitative exploratory case study was to explore the strategies HPTS founders used to access equity capital to grow and scale into global markets. The problem statement and research question provided the focal point for the

literature review. The specific business problem statement was that some HPTS founders lack strategies needed to access capital to grow and scale into global markets. During the literature review process, additional issues emerged.

I used two conceptual models for this study as lenses through which to focus on the application to improve technology startup capital access. Organizing this literature review started with fundamentals of HPTSs pioneered in the Silicon Valley: prestartup requirements, business model generation, CDM, technology marketing and sales, and entrepreneurship and entrepreneurs. Other sections of the literature review include types of startup entrepreneurships, challenges facing startups, entrepreneurial financing sources, frameworks for evaluating venture capital investment, pitch deck presentation, and perceived startup success strategies.

I used the following databases in the search for professional and academic literature: ABI/INFORM Complete, Business Source Complete, Emerald Management Journal, Google Scholar, ProQuest, SAGE Premier. I also used information from the U.S government agencies that included the U.S. Small Business Administration, the U.S. Internal Revenue Service, and the U.S. Department of Health and Human Services. Books and journal articles were the major types of publications used in this review.

I searched and retrieved published items using the following keywords: *HPTS*, *VCIM*, *CDM*, *entrepreneurship*, *technology entrepreneurship*, *lean startup*, *technology frameworks*, *business model generation*, *technology marketing/sales*, *diffusion of innovation*, *technology adoption life cycle*, the *Silicon Valley*, *regional advantage*, *industrial clusters*, *seed capital*, *scientific method*, and *equity financing*. Other keywords

included *startup capital*, *strategy*, *government funding*, *research and development*, *qualitative research method*, *quantitative research method*, *mixed methods*, and *case study design*. An audited list of references used for this doctoral study included peer-reviewed materials, books, information from government agencies, corporate, and academic websites. (see Table 1).

Table 1

Audit of References Used in Doctoral Study Literature Review

Source Content of Literature Review			
Content Sources	Total Number of Sources	Total No. of Sources within 5 years of graduation	% of peer reviewed articles Govt. sources, Corporate Websites
Peer reviewed	264	229	87%
Books	18	16	89%
Govt. Sources	08	07	88%
Corporate/ Academic websites	11	10	90%
Total	301	262	89%

VCIM

Scaling a technology startup venture into global markets requires significant venture capital to expand, often requiring more than $10 million (Blank & Dorf, 2012). Gaining access to first-round funding is an important milestone for startups; however, the rate of ventures receiving first-round funding is minimal (Flemming, 2015). Startups in general face significant financial constraints, especially HPTS ventures, because of the absence of trading history, risks, and uncertainties associated with funding new ventures (Cannone & Ughetto, 2014). Honjo, Kao, and Okamuro (2013) contend that information asymmetry y and the liability of newness constrain access to capital available for startup ventures (Honjo, Kato, & Okamuro, 2013).

Emerging founders are likely to approach financial institutions haphazardly for external funding when private funds and funds from family and friends are insufficient before approaching individual investors to pitch for early-stage funding (Zachary & Mishra, 2013). Typical bank financing is inaccessible in the early stage of development because of information asymmetry (Gilje, Loutskina, & Strahan, 2016). To address this asymmetry, Shivakumar (2013) argued that an independent accountant's reports could provide needed and verifiable financial information to investors to mitigate existing information asymmetry between startup founders and investors.

The role of venture capital firms is to mitigate the asymmetrical information problems associated with funding risky high-potential startup ventures. Foster, Garrett, and Shastri (2016) suggested that some of the reasons investors reject funding requests from HPTS entrepreneurs were that the proposed venture was not in the venture capital firms' area of specialization, the product/service was not proprietary, and the business, financial statements, or projections contain unrealistic numbers. Other reasons investors reject funding requests from entrepreneurs can include poorly qualified management team and missing financial information in the business plan. Marion (2016) emphasized that investors expect high-performing investments to include at least one female founding team member, younger founders from top schools because they perform better, and prior experience at a top-rated firm. Fewer women are backed by venture capital firms than men. Some investors who expect high-performing investments to include at least one female do so not only because of gender diversification but also differentiation in perspective since men and women often see things differently.

Investing in HPTS ventures involves risks (Picken, 2017). High potential technology startup firms experience several types of uncertainties and risks, which include new and untested products, entrepreneurs, customers, and business models (except a serial entrepreneur who previously started or has been involved in more than one startup venture) (Blank, 2006). The risks inherent in HPTS firms include technology risks or whether the new technology will work, capital risk or whether the new firm can acquire investment capital and manage it properly, customer risks or whether the customers will have need for the new product, and whether the founding team will remain together without conflict. Additionally, new ventures continue to lose money during the gestation period through operational costs and without sales revenue. As a new venture, identifying an investor willing to take the risk and invest in the venture is one of the most difficult challenges entrepreneur-founders face. Mishra (2015) said that the essential capabilities of experienced founding team members involve a thorough understanding of efficient risk management, capital allocation, and effective investment skills. At the screening stage, equity firms must have the right team with risk management experience and skills for handling, controlling, and managing risk to avoid overestimation of ROI and underestimation of risk in the new venture. Entrepreneurs who apply VCIM and CDM conceptual models before or after writing a business plan are more likely to access equity capital for their new ventures.

Mishra (2015) suggested that the first tool of the VCIM framework is the investment thesis. The investment thesis requires entrepreneurs to make definitive statements to investors on how their investments will capture value for the business and

the firm or add value to investors' portfolios. The odds of getting investment funding improve with an investment thesis focused on a firm's strategic priorities, a list of appropriate milestones, and a well-prepared team to respond quickly (Caiazza & Ferrara, 2016). Sparks (2014) synthesized key points from Apple and Tesla investment theses for a successful template, which include stating the unique value proposition/observation by the firm, discussing whether the proposition was undertaken previously, and if not, address why this is the best time, and describing why the entrepreneur can execute the proposition better than competition. Other key points of investment thesis is listing the requirements needed to be successful, describing the critical assumptions made about the growth of the business by the founding team to the investor, and addressing what happens if these assumptions are incorrect. Additional elements of the investment thesis include providing a profile of the team members and organization required to execute the strategy and providing evidence that the entrepreneur can execute the strategies.

The second tool of VCIM is the formulation of the customer value concept. Mishra (2015) reported that formulating a compelling value proposition, demonstrating whether addressable market size is widespread enough to achieve scale economies, and determining whether the product provides the venture a superior advantage in the industry. A third tool is redefining the business model strategy by creating, delivering, and monetizing customer value efficiency to improve the firm's odds of getting funding. However, this tool requires the entrepreneur to make various assumptions about the business model. Making constant assumptions and refining the assumptions improve the

odds of getting funding for successful execution and sustainability of the venture (Mishra, 2015).

The fourth tool is determining the venture valuation and a risk-adjusted equity share for the investor. Ventures that succeed target specific milestones after identifying some elements necessary for the success of the new firm linked to those milestones (Mishra, 2015). As a rule, investors prefer collaborating with management teams who are flexible and willing to refine their business model or strategy to reduce risk and provide successful exit strategy to investors. The fifth tool of the VCIM framework is the structure of investment terms and conditions: whether the deal structure protects the investor in case of adverse performance conditions and increases the possibility of investment liquidity and the investment structure delivers adequate incentives to motivate the entrepreneur. The sixth tool of VCIM framework is aligning management incentives with investor objectives. Mishra (2015) suggested some tools that align management incentives with investor objectives include stock option plans, shared buyback rights, time and performance vesting, and the threat of the investor's ability to replace the management team.

The seventh and final tool according to Mishra (2015) is an evaluation of the venture's risk, profit, and investment potential. Investors are growth partners and business builders who not only supply investment funds but also actively participate in assisting to build and grow the business. When reviewing and qualifying an investment deal, investors evaluate the risk of investment loss and expected ROI. Often, investors alter the risk-reward structure of investments through direct participation in building and

shaping the direction of the business. In addition, investors often evaluate whether their resources of time and money are worth the risk and structure investment deals to mitigate risks and uncertainties inherent in HPTS ventures while providing the entrepreneur incentives to keep working in partnership with the investor. Mishra (2015) posited that new venture founders that properly apply these tools and the VCIM model after writing a business plan increase their odds of obtaining startup funding to grow and scale into global markets.

CDM

The CDM is one of the essential supporting ideas that complement this doctoral study. Blank (2006) observed that the usual route traveled by most startups goes from idea to writing a three- or five-year business plan to hiring and developing a product or service without customer feedback. Most startups also attempt to raise capital haphazardly and execute a business plan like large firms, hoping customers will flock to the market and buy their product. Blank rationalized that this route leads to product rejection by customers. Product rejection results in business failure at launch, because startups often deal with highly uncertain and untested products, customers, and business models, unlike large and established firms. Based on this observation, Blank theorized that startups are not a miniature version of large companies that can start with the execution of a multiyear business plan; rather, they are temporary organizations designed for the founding team to use in searching and discovering the customer-product-market fit as well as a scalable and repeatable business models.

The tenets of CDM include hypothesis formulation, testing, pivoting, customer feedback loop, timing, speed, iteration, and learning from mistakes. Unless the founding team performs these activities satisfactorily, the new venture team cannot transition into hiring managers and supervisors to execute the business plan (Blank & Dorf, 2012). The CDM delivers a repeatable, scalable, and profitable business model for HPTS firms. Each tenet has a set of instructions to enable the launch of a new firm to grow and scale according to plan. Startup ventures fail because they execute business plans prematurely rather than search for unknown customers, products, and business models (Blank, 2006). Until customer discovery, validation, creation, and company building occurs, emerging entrepreneurs should not attempt the immediate execution of business plan because it may lead to company failure.

In 1996, Louis Border founded Intelligent System for Retail and using funds realized from the sale of a successful bookstore chain co-owned with his brother (Fisher & Kotha, 2014). A software engineer, Border expected to revolutionize direct delivery of various lines of products to customers with personalized and intensive use of a software system to manage inventory and delivery of a wide range of items to consumers. Broder's personal fortune was not enough, and he partnered with venture capital firms such as Sequoia Capital, Benchmark Capital, Yahoo!, Softbank, Goldman Sachs to fund the venture (Aspray, Ocepek, & Royer, 2013). The company successfully acquired $1.2 billion in IPO, motivated by capturing part of a half trillion-dollar grocery market in the U.S., Border changed the name of the firm to Webvan. The primary focus of the firm was

selling groceries online to customers within a 30-minute delivery window specified by the customer (Mishra, 2015a).

Webvan rapidly went into operation in 26 metropolitan areas, building sophisticated warehouses costing $35 million each to build including capital expenditure and salaries for 3,500 employees for a burn rate of $125 million per quarter (Blank, 2013a). However, the growth of the customer base was not enough to sustain Webvan's operation. Most importantly, as a startup, Border went into executing a business plan instead of searching to uncover unknown customers and products that would solve the customers' problems (Blank, 2013a). Premature scaling is a catalyst for failure, and too much capital, like lack of capital, can lead to startup failure.

Scaling a startup into global markets is important to the economy, and it usually requires intensive venture capital for growth and expansion, usually in the tens of millions of dollars (Blank & Dorf, 2012). However, new firms face capital constraints to carry out essential activities necessary for the success of the new firm (Hechavarría et al., 2016). Launching a startup organization involves the application of precise instructions for every required process because the smallest mistake at launch could result in a catastrophic failure. Successful startups suspend execution of business plans until the discovery and validation of the product or service features, customer segments, and business models, all of which remain unknown. Startup ventures are not in business to grow and scale known products rather new-to-the-world products or services. Successful HPTS ventures focused on bringing new-to-the-world products or services by testing and experimenting with each idea before hiring managers to execute the business plan

(Lindkvist & Stjernberg, 2016). The discovery process involves the scientific method and this method can take a variety of forms, but practically they are similar in nature. The seven basic steps of the typical scientific method, as applied to startups, are:

The process of scientific method begins with the identification of the problem by formulating a research question. The next step is to formulate hypotheses as a statement that proposes to answer to the research question. The next step in the process is to observe and test each hypothesis to see whether it is acceptable or not. Another step in the process is to organize, explain or interpret the data and state whether the experiments and observations support hypothesis. The next step is to draw conclusions in the form of a statement that explains or summarizes the research and result of the test and experiment. In the next step, if the answer is "no" or if the observation and experiment do not support the hypothesis, the search begins to discover why hypothesis failed followed by pivoting, a process that starts the process all over until both the observation and experiment support the hypothesis (Blank & Dorf, 2012). If the answer is "yes," then draw conclusions about the customer, problem-solution, product-market fit, and business model. The final step is to communication the findings, in this case for product development process. ,

This methodology of choice highlights the steps startups can apply to uncover the product that solves customer problems, discover a customer segment or segments that fit the product, ensures product–market fit, and provides a sales model that fits before transitioning into a large firm and hiring managers to execute the business plan at this stage. These steps in the search process can also increase the likelihood of new product

and firm success with the tendency to reduce upfront cash, eliminate wasted time, reduce effort, reduce risks, and protect scarce resources (Blank, 2013c). The adoption of CDM is appropriate as the conceptual model for this doctoral study because customer development is vital to exploring strategies for improving startup capital access to grow and scale HPTS ventures.

Fundamentals of HPTS Ventures Pioneered in the Silicon Valley

Technology startup entrepreneurship with growth potential pioneered in the Silicon Valley promotes an unprecedented prosperity among individuals and corporations within the region, state, and nation (Benton, 2016). The Silicon Valley is the leading role model among regional technology clusters around the world (Chaminade & Fuentes, 2015). Entrepreneurs and engineers who appraise whether certain ideas are technologically viable, come from the same pool of technology entrepreneurship (Hoten, 2015). The engineer who prefers entrepreneurship to employment to support the formation of a HPTS is the chief economic pillar in a startup venture (Hoten, 2015). In the Silicon Valley, investing in startup ventures can create wealth for the entrepreneurs and investors.

The characteristics of successful startups pioneered in the Silicon Valley region include specialized talents, appetite for risks, external sources of capital, research and development through government support, and renowned academic institutions, specifically Stanford University and the University of Berkeley (Fung, Aminian, & Tung, 2016). These features combine to provide the Silicon Valley an advantage over other technology clusters around the world. Startup ventures based in the Silicon Valley have

been responsible for the success of Apple, Yahoo, Google, Uber, Facebook, Airbnb, Hewlett Packard, Xerox, IBM, Microsoft, VMWare, and Oracle.

Kaplan (1995) illuminated on the operation of successful startups in the region from gestation to exit phases. The chapter titled *The Deal* featured a startup game, depicting an aspiring entrepreneur who doubles as the founder of a HPTS venture. The purpose of a HPTS venture is to deliver a wider range of high-quality products and services made superior by technology to solve customer problem. The entrepreneur-founder of a HPTS venture possesses an artificial currency representing the total stock in the new venture, ready to risk it for the reward of starting and operating an efficient and profitable venture.

The objective of the entrepreneur-founder is to increase the value of the shares of stock in the venture for shareholders to cash out at the exit phase for real money (Kaplan). The founder has one strategy to accomplish the central goal of the venture: to exchange some stock in the venture for essential resources including ideas, financial capital, and human resource with a diverse set of business and technical experience. The entrepreneur-founder protects the intellectual property of the firm by investing in some well-written nondisclosure agreements. The essential elements in the success of HPTS firms depend on: (a) solving a high value problem for a widespread number of customers, (b) recruiting experienced founding team, and (c) the availability of enough capital. Often, the initial pre-startup soft funds generated by the founder, family and friends are often insufficient for operational and development purposes.

Traditional lending institutions do not lend to new firms as a general principle because of the liability of newness and information asymmetry. The entrepreneur-founder collaborates with business angels and venture capitalists during the development and production phases respectively, to exchange some stock in the company for capital. Business angel and venture capital firms soften the effect of loan servicing usually required by traditional bank loans by eliminating monthly current payments. In exchange, investors or equity providers require a higher rate of return or a reasonable compensation on their investment usually between five and 10 times the initial investment for a period of five years.

The founding team and employees of HPTS firms receive compensation in form of salaries that are less than stable incomes for living expenses; more importantly they receive company stock options as part of their ownership in the firm (Kaplan, 1995). To protect the value of stock in the business, the entrepreneur raises only the capital needed to prevent diluting the firm of too much stock (Kaplan, 1995), a claim also supported by Zabala and Josse (2014). The founder earmarks the initial capital investment to meet identified milestones carefully chosen to demonstrate improved prospects of the firm to potential investors and to account for a higher price of the stock (Kaplan, 1995). At this stage, if the firm runs out of funds, the game is over.

The last stage in the life-cycle of HPTS venture is the initial public offering (IPO), with the company listed on the public stock exchange poised to take the exit strategy (Kaplan, 1995), additional claim supported by Mousa, Bierly, and Wales (2014). Prior to the IPO, no one can cash out any amount of the stock. By moving forward with

an IPO, the company transitions from a risky to a profitable and viable venture (Kaplan, 1995). This study will travel through the gestation and exit stages, to uncover the strategies HPTS founders used in the Silicon Valley of California to access capital to grow and scale.

The Silicon Valley: A Hotbed of Innovation and Entrepreneurship

The Silicon Valley refers to a 1500-square-mile area of northern California, stretching 49 miles from San Francisco southward to San Jose and marked by two major freeways, the U.S. 101 and Interstate 280. The region has a rich history and culture, an all-year-round moderate temperature, and blue sky. The people in the region enjoy a casual lifestyle and a "live-and-let-live" attitude. Estimate of the current population of the Silicon Valley is three million people (Silicon Valley Institute for Regional Studies, 2015). The Silicon Valley is the unquestionable global headquarters of innovation with the dominant enterprise being HPTSs (Engel, 2015). However, before World War II (WWII) the dominant enterprise in Santa Clara County used to be agriculture rather than high-technology startups.

Technology clusters such as the Silicon Valley are a striking characteristic of many national, regional, state, and municipal economies, especially in the advanced economy (Feldman, 2014). A cluster comprises of an ecology of interrelated technology businesses with which companies can compete both nationally and worldwide, as well as associated institutions that increase productivity (Feldman, 2014). The Silicon Valley is an ecology with talented people including researchers, entrepreneurs, and investors who collaborate to develop, start new firms, and produce goods and services (Oh, Phillips,

Park, & Lee, 2016). Clusters refer to regional industrial network systems, a unit of analysis, and pre-existing industrial structures comprised of the regional ecology that generates current industrial enterprises and innovative ideas (Isaken & Trippl, 2014). Policy-makers and researchers utilize trade theories to analyze the benefits of industrial system to the economy and population (Isaksen & Trippl, 2014). The proximity of major institutions of research to industrial network systems influenced the development of electronics-related firms, generated current industrial clusters, and innovative ideas in no small measure (Wonglimpiyarat (2016).

An industrial cluster can contribute to the success and growth or failure and stagnation of an entire industry based on the lack of or profusion of local sources of competitive advantage (Saxenian, 1994). During WWII, the U.S. government sought the development of high-technology weapons from the Massachusetts Institute of Technology (MIT), Stanford University, and the University of California at Berkeley (UC Berkeley) (Watkins, 2015). After the war, laboratories at these universities became more independent from their institutions and started to function as businesses, depending primarily on government contracts. Adapting to civilian markets due to decline in government contracts meant Boston Route 128 and the Silicon Valley technology clusters had to step up to find a niche to sustain each regional cluster (Saxenian, 1994).

Boston Route 128 and the Silicon Valley technology clusters depended largely on MIT, Stanford University and UC Berkeley to expand the commercialization of research into startup formation and regional development (Etzkowitz, 2016). However, the lack of support from MIT and local sources of competitive advantage contributed to stagnation

of Boston Route 128. The profusion of superior sources of competitive advantage in the Silicon Valley one of which is the high concentration of equity capital firms, led to the rise of the Silicon Valley as the most prominent technology cluster in the world transforming how people live, work, and play

The economy of Santa Clara County before the war was mainly agricultural, placing the county at a disadvantage compared to Boston Route 128 technology corridor, which had a long tradition of technology entrepreneurship. The Massachusetts Institute of Technology and Harvard University, to a lesser extent, are two institutions with proximity to Boston Route 128 on the East Coast, while Stanford University and UC Berkeley share proximity to the Silicon Valley on the West Coast. Universities enhance the achievement of entrepreneurial activities and startups that foster closer relationship with universities achieve higher degrees of success (Fu & Hsia, 2014).

Boston Route 128 and the Silicon Valley technology clusters benefited from cutting-edge research and training programs in Knowledge based activities by nearby institutions. Each institution had technology entrepreneurship in its engineering department. Access to research reports and involvement of local firms in related activities by local academic institutions were important local sources of competitive advantage (Saxenian, 1994). However, MIT was of no particular assistance to firms in Boston Route 128 technology corridor, nor did the institution involve local firms in its research activities: MIT charged each firm within the corridor as much as $50,000 to allow access to research reports and facilities (Saxenian, 1994). Business leaders preferred employees in formal dressing and forbade employees from speaking publicly about their work.

Additionally, business leaders discouraged movement of workers from one firm to another to take up employment or involve in startups because doing so was as a sign of disloyalty to employers (Saxenian, 1994).

The problem with Route 128 was related to rigidity in the local industrial system, causing local officials to opt to base their startups in the Silicon Valley because of its culture of open innovation (Berger & Brem, 2016). An independent firm-based system flourished where the ecology favored market stability and slowly-changing technologies, allowing extensive integration for advantages of economies of scale and control (Saxenian, 1994). Additionally, the changing competitive atmosphere within the field of technology entrepreneurship overwhelmed firms in the Route 128 corridor. Furthermore, investment by firms in dedicated equipment and specialized work skills also trapped technology firms within the Route 128 cluster in obsolete technologies and markets. Self-sufficient structures in Route 128 prohibited the ability of firms from adapting over time. Consequently, the self-imposed prohibition deprived the surrounding economy of resources for self-generation because large firms absorbed most local supplies of skills and technologies (Saxenian, 1994). Successful industrial clusters do not thrive in the status quo, with rigidity stifling innovation and competition (Saxenian, 1994). A technology cluster that succeeds thrives through significant and positive changes or innovation within the cluster and marketplace competition.

In contrast, Stanford University and UC Berkeley shared a close relationship with local technology firms and firms from the Route 128 corridor such as Digital Equipment Corporation and Fairchild Semiconductor. Unlike MIT, Stanford charged firms within

Route 128 corridor only $10,000 for research reports and involved them in its related activities (Saxenian, 1994). Human beings are in their natural state when they involve in fluid self-organizational networks (Smith & Shaicz, 2013). Employees in the Silicon Valley were free to form partnership networks across firm boundaries on shared challenges affecting the industry and could easily switch from one company to another or could move to join startups or create new ventures (Saxenian, 1994). The Silicon Valley had an open culture from the beginning, a passionate group of people, driven, independent, and individualistic yet tolerant of diversity and willing to risk everything to get rich or fail to succeed (Shankar, 2014). The introduction of casual dressing started in corporate culture with the inception of the Silicon Valley. Business leaders and workers in the region preferred wearing T-shirts to work rather than button-down shirts, ties, and suits. The Silicon Valley served as a planting ground for ideas where students became inventors, disseminators, and part of the workforce. Innovators and early adopters were readily available to endorse innovative technologies or products in the Silicon Valley to assure other consumers (Wani & Ali, 2015). Business failure may be under-appreciated in other places but tolerated in the Silicon Valley as essential mechanism to enhance learning and iteration in the field of innovation and entrepreneurship (Piscione, 2013). As a leading technology cluster, open innovation set apart the Silicon Valley while competition from other clusters trailed behind (Kushida, 2015).

Startups represent a major force in the economic dynamics of the Silicon Valley. Factors that helped in promoting the success of the Silicon Valley innovation and entrepreneurship include free flow of capital, diverse talents and skilled labor,

government support, and appetite for risk (Fu & Hsia, 2014). Entrepreneurs in the Silicon Valley created and built technology firms for global markets in retail, movies, education, financial services, energy, transportation, hospitality, and the environment, in no small part because investors fund deals faster in the Silicon Valley than in other regions (Gupta & Wang, 2016; Wessel, 2013). The quick turnaround in deal funding contributed to the emergence of the emergence of firms such as Facebook moving to the Silicon Valley after being started elsewhere. On average, raising funds outside the Silicon Valley took startups 10% longer (Wessel, 2013). If it takes a startup even a month longer to raise funds, the odds of success of the new venture decreases.

Another key factor that continues to play a vital role in the success of the Silicon Valley was government research and development spending to the region's institutions: Stanford University and UC Berkeley (Douglass, 2016). Government support for research and development at Stanford University and University is important to the Silicon Valley and the United States economy (Galatzer-Levy, 2013). The Silicon Valley is home to a large pool of skilled immigrant population of Indian and Chinese immigrants with technical skills and expertise in computing and electronics (Kenney, Breznitz, & Murphree, 2013). Startup in the Silicon Valley cut across all industries faster than other technology clusters around the world (Gupta & Wang, 2016).

The *theory of competitive exclusion principle*, or Gause's principle, is another lens a researcher can view through to explain the impossibility of Route 128 and the Silicon Valley co-existing as complete competitors in the same industry. Researchers often use competitive exclusion principle in natural ecology to explain that two species

cannot co-exist at constant population values if other ecological reasons remained the same (Kramer & Drake, 2014). Gause's principle transplanted into business ecology implies that Boston Route 128 and the Silicon Valley could not co-exist as complete competitors after WWII in the U.S. technology sector. Possible outcomes of the principle for both clusters are either Route 128 or Silicon Valley crowds out the other, or both cease to exist.

The Silicon Valley is the most iconic and promising technology cluster and industrial system in the world because of superior sources of competitive advantage (Best, 2015; Fieldsteel, 2013). The Silicon Valley is an economic force and the most appreciated cluster for HPTS ventures (Engel, 2015). Long-term competitive advantage of the Silicon Valley in national and global economy depended on local knowledge, relationships, and motivation that may be impossible for competition to duplicate (Fourne, Jansen, & Mom, 2014). The Silicon Valley is the leading global technology cluster that draws followers around the world who attempt to clone the Silicon Valley to create jobs, wealth, and economic prosperity within a society (Duff, 2016).

Pre-Startup Requirements

The process of cultivating a HPTS begins by determining resources needed, when entrepreneurs need them, and how to acquire them effectively during the pre-startup phase. The diverse types of resources needed include ideas and human, physical, financial, and intellectual resources. The ability of HPTS founders to identify these requirements is critical to the feasibility of the new ventures (Allen, 2015). The requirements include, (a) human resources, comprised of individuals such as the founding

team, advisors, and independent contractors, (b) physical assets, involving equipment, inventory, and office or plant space, (c) financial resources, which consist of cash, equity, and debt, and (d) intellectual resources including brand name, patents and copyrights, licenses, and proprietary knowledge (Allen, 2015). The aim of the founders is to acquire these resources and combine them in ways that will allow the startup to operate until sales of the product achieve positive cash flow to cover all expenditures without equity investment.

Choosing a legal entity. When starting a new venture, some entrepreneurs pay little attention to selecting an appropriate form of business structure. Such a mistake is reversible, but it is costlier and more complicated than getting it right the first time. Instead, when consulting with financial advisors, some entrepreneurs of startup organizations ask for clarification on asset protection issues, tax advantages, and estate planning (Hopson & Hopson, 2014). Successful entrepreneurs go through a requirement-gathering phase to select an appropriate form of business registration to establish for their organizations (U.S. Internal Revenue Service, 2016). Through formal registration, companies obtain legal structures in which designated agents or management can act on behalf of the firms, enter into a contract, sue, and be sued.

A new venture entrepreneur can choose from six types of legal structures: (a) sole proprietorship, (b) general partnership, (c) limited partnership, (d) Limited Liability Company (LLC), (e) C Corporation, and (f) S Corporation (Hopson & Hopson, 2014). Several reasons contribute to entrepreneurs' preferring one form of legal entity to another; however, entrepreneurs of startup ventures with growth potential must anticipate

raising capital from public offerings to restrict their choice to a legal entity that enables them to engage venture capital firms in a bid to raise capital. Entrepreneurs of new ventures, regardless of their chosen legal entity, may access additional capital if early-stage capital needs are beyond funds from personal savings, family, and friends (Gregson, 2014). The ability of an entrepreneur to access capital from investors depends on the chosen legal entity of a firm because some legal structures do not attract investors.

Lack of access to sufficient capital can be a major hurdle at the early stage of a new venture with prospects for growth, which needs seed capital for product development, prototyping, and testing (Blank, 2013a). Commercial banks and other traditional lending institutions typically do not lend to new ventures because of liability of newness, lack of a record of accomplishment or collateral, untested nature of the new product or service, business model, or entrepreneur (Gregson, 2014). As such, entrepreneurs of startup ventures with growth potential turn to business angel and venture capitalist firms for seed capital for product development, prototyping and testing and growth phase product manufacturing activities.

Mentor and mentorship. Mentors are business leaders with certain knowledge, skills, and experience who previously benefitted from mentorship and willing to return the favor by mentoring others (Edge, 2016). A mentor is an individual who has started a business, successful or not, and is highly qualified, experienced, and willing to provide strategic advice and guidance to a mentee (U.S. Small Business Administration, 2016a). Mentoring is an important human resource development undertaking in business (Ayodeji & Lassisi, 2015). Mentorship assists in encouraging career development and productivity

(Azzam, Fricchione, & Gopalan, 2014). Mentors are an important part of human resources needed to advise the founding team on the activities of the new venture (Allen, 2015). Turning a startup organization into a successful business is notoriously challenging for an inexperienced entrepreneur (Ketchen & Sandler, 2015). The strategy for entrepreneurs is to identify and select a mentor to foster the development of the mentee or protégé areas and make it easy for the mentee to succeed in the business (St-Jean & Audet, 2013). One of the tasks of a HPTS entrepreneur is to turn the challenges facing the startup into positive developments and organizational outcomes.

Mentoring is a human development approach practiced worldwide for leader identification, development via continuing learning experience, and development via self-knowledge (Muir, 2014). Mentorship is a valuable tool for entrepreneurs without prior experience in cultivating expertise, values, skills, and perspectives (Barlett, 2013). Both the public and private sectors, including businesses, use mentoring to develop startups, and mentorship is increasingly a popular initiative in HPTS entrepreneurship, where expertise is contextual and dynamic (Follman, 2016).

One of the reasons HPTS entrepreneurs are drifting toward the Silicon Valley is the availability of intellectual support including the availability of mentors (Ketchen & Sandler, 2015). Mentoring provides a learning opportunity for mentees to gain business knowledge from mentors who have walked the path of starting a new business and experienced challenges associated with the endeavor (Sinha & Cullen, 2015). Growth-oriented organizations of all sizes and industries are facing a major shortage of breakthrough innovators, making it important for startup entrepreneurs to initiate

relationship with mentors for skill development, performance improvement, maximization of potential, and, ultimately, the realization of a dream (Sinha & Cullen, 2015). Retired and experienced entrepreneurs in the Silicon Valley, once identified, may mentor emerging startup entrepreneurs to help realize their dream.

In the Silicon Valley, mentors are not just those who started one business; they include serial entrepreneurs, business angels, and venture capitalists (Hu, Wang, Yang, & Wu, 2014). Many successful entrepreneurs adopt familiar names or top technology executives as their mentors. A mentee can have more than one mentor. Many universities and business schools have professors and lecturers who routinely serve as mentors for aspiring entrepreneurs, especially if the mentees affiliate with their institutions. For example, through Stanford University startup accelerator program known as Startx.com, professors, and lecturers from the computer science department and School of Business serve as mentors for current graduate students and other affiliates of the institution. When assembling human resources, HPTS founders should seek out individuals experienced in startups who are willing to provide strategic inputs and guidance to the new venture.

Business Model Generation (BMG)

A business model is a plan or schematic designed by startup entrepreneurs to describe the rationale behind their firms' creation, the delivery of value to customers and capturing of value for these companies (Osterwalder & Pigneur, 2010). A business model describes a system of interconnected and interrelated activities successful startup entrepreneurs use in determining business conduct with customers, partnerships, and vendors (Euchner & Ganguly, 2015). Entrepreneurs use business model for various

purposes relating to startups including analysis, comparison, management, communication, and innovation (Wirtz, Pistoia, Ullrich, & Göttel, 2016). Startup founders generate business model to identify specific elements and processes necessary for new ventures to create value for the customer and capture value for the firm (Slavik & Bednar, 2014).

Successful startup organizations adopt business models capable of transforming certain technology features into new products or processes to mitigate barriers to market adoption (Bohnsack, Kolk, & Pinske, 2014). Before startups can penetrate the market, they must clearly define the customer segment, value proposition, distribution channels and customer relationships relative to the overall operation (Simmons, Shaver, Tyner, & Garimella, 2015). Most startup organizations fail because they start by executing a business plan (Blank, 2013a). Instead of beginning with the execution of the plan, startups should generate an innovative business model oriented toward customer–product–market fit.

The business model is a powerful tool for startup organizations to generate and deliver a repeatable and scalable business that solves customer problems and satisfies their needs. Osterwalder and Pigneur (2010) developed a business model generation plan with four critical elements: (a) the product element, which involves value proposition; (b) the customer interface element, including customer segment, channels, and customer relationships; (c) the infrastructure management element, which includes key resources, key activites, and key partnerships; and (d) the financial element, made up of cost structure and revenue streams. Decisions about resources relate to the product and

customer interface elements (Allen, 2015). A discussion of the components of each element follows.

Value proposition. The product element involves value proposition, a systematic search for innovation to improve an organization's offerings or to create offerings and evaluate ecosystem restructuring (Kumar & Reinartz, 2016). Startups seek to solve customer problems or satisfy customer needs by way of value proposition (Osterwalder & Pigneur, 2010). Value proposition assists HPTS entrepreneurs in tackling the most significant challenges faced by every organization, such as creating high value products and services that customers need and want (Osterwalder, Bernarda, Pigneur, & Smith, 2015). Startup entrepreneurs use value proposition to describe (a) the value the firm intends to deliver to customer, (b) customer problem the firm aims to solve, (c) customer need the business helps to satisfy, and (d) the bundle of products or services the company offers to each customer segment. Consumers choose one company over another because of value proposition (Osterwalder & Pigneur, 2010).

Value proposition may be of qualitative value, such as design and customer experience, or quantitative value, such as price and speed of delivery. Successful execution of value proposition by startup firms results in sustained competitive advantage (Payne & Frow, 2014). High potential technology startup founders, when pitching to investors for funding must demonstrate they understand the problem they are trying to solve for the customer in form of value proposition, otherwise it may be difficult to access capital to grow and scale into global market.

Customer segment. The customer segment involves differentiating the various groups the organization is creating value for or the firm's most valuable customers (Osterwalder & Pigneur, 2010). Entrepreneurs use the customer segment to gather detailed information about different groups of customers (Noori, 2015). A company or organization can serve some segments, or both. For example, ride-sharing firms such as Uber and Lyft serve two ride-share clients: riders and car owner-drivers. Airbnb also serves two sets of clients: those who have rooms available and those who need temporary accommodations. Organizations that serve two or more corresponding customer segments adopt a multisided market (Holzmann, Sailer, & Katzy, 2014). High potential technology startup firms that serve two customer segments may find multisided platform business model useful for providing value to customers. All business models are not the same; whether a HPTS firm serves some segments, the founder must choose appropriate business model to provide value to the customer to improve capital access to grow and scale into global market.

Customer channels. Channels are conduits for delivering a firm's value proposition to various customer segments (Osterwalder & Pigneur, 2010). High potential technology startup firms create value for the customer and capture value for the firm; without adopting appropriate channels to deliver value for the customer, the delivery of such value stalls. The channels include communication, distribution, and sales. There are direct and indirect channels of communication, distribution, and sales available for any enterprise. For example, the management of Samsung and Apple use in-house sales forces, company websites, and company-owned storefronts for direct distribution and sale

of their products to customers. The management of Samsung and Apple also use Verizon, Best Buy, and Fry's Electronics as partners and wholesalers for product sales, delivery, and after-sales to customers.

Entrepreneurs of successful new ventures tend to integrate channels of communication, distribution, and sales in the most efficient ways to lower risk level for the company (Osterwalder & Pigneur, 2010). The phases of channels of communication include (a) creating consumer awareness of company products and services, (b) evaluating the organization's value proposition through customers, (c) enabling customer purchase of company's specific products and services, (d) delivering the value proposition to the customer, and (e) providing a means for after sales support to the customer (Osterwalder & Pigneur, 2010). Investors require entrepreneurs to remove risk mitigation contingency, lowering the risk level of a company is a strategy successful entrepreneurs use to improve capital access to grow and scale into global market.

Customer relationships. Customer relationships are a key activity of any business and the means to an effective management of the relationship between a company and its customer base (Bocken, Evans, Rana, & Short, 2014). The term customer relationships refers to the types of relationships each customer segment expects a new venture to establish and maintain with the segment (Osterwalder & Pigneur, 2010). The survival of any enterprise depends on the exploitation of knowledge resources to improve and sustain customer relationships. High potential technology startup firms succeed or fail through the support garnered from their customer base or lack of support it. When customers reject a firm's product, causing the support base to dwindle, making

it challenging for the firm to access equity capital to invest in developing the firm's product to grow and scale into global market.

High potential technology startup firms that identify a high value problem, provide the right solution for a widespread number of customers, improve the chance of getting funding from investors who expect a reasonable return on their investment. However, it is not enough for HPTS firms to provide customers with a product or service made superior by technology to solve their needs; new firms must actively work to enhance their effort in maintaining quality customer relationship with the segment (Tseng, 2016). A dwindling number of customers because of poor customer relationship increase the risk level in the firm, therefore, detrimental to capital access to grow and scale into global market.

Some companies create and maintain quality customer relationship with clients through online communities, permitting the sharing of knowledge and feedback to improve value to the customer and create value for the company (Osterwalder et al., 2015). Adopting a co-creation model to involve the public in creating content for their product enhances customer relationship, acquisition, retention, and improved sales (Hidayati & Novani, 2015), leading to improved capital access to grow and scale into global makret. Firms such as YouTube adopt this practice to engage the public in co-creating the content of its products for public consumption as part of the firm's strategy to improve relationship with the firm's customer segment to gr ow and scale into scale into global market

Key resources. The key resources are the physical, intellectual, human, and financial assets of a firm required to create value for customer and capture value for the firm (Osterwalder & Pigneur, 2010). Physical assets include the manufacturing plant, vehicles, point-of-sales systems, buildings, and the distribution network. Intellectual resources include brands, partnerships, patents, copyrights, and customer databases (Deren & Skonieczny, 2016). All firms need a human resource to function properly at various levels of related skill and experience (Osterwalder & Pigneur, 2010). A HPTS company needs an engineer to help produce a prototype of its product. Almost every company needs a skilled and experienced sales force to create sales and provide revenue for the firm. Financial resources are the lifeblood of any business (Deepika & Rani, 2014). Without the ability of a HPTS firm to acquire funding from business angels and venture capital organizations, such firm cannot meet its financial obligations such as rent payment, paying for products and services, or acquisition of equipment.

Investors screen investment proposals to evaluate the profiles of the founding team and verify their management competence, experience, and previous participation in a HPTS venture. Team members that include female, young members from highly regarded universities and firms perform better (Marion, 2016). When assembling a founding team, it is important for a founder to consider and select team members that reflect diversity, young and educated from top-rated universities who previously worked at a top-rated corporation with management competence, experience, preferably including those with past involvement in startups to improve capital access to grow and scale into global market.

Key activities. Key activities are the essential items a company must perform successfully to deliver value to its customers and capture value for the firm (Osterwalder & Pigneur, 2010). Every value proposition requires a set of the most important activities, such as marketing and sales for products or services to reach the market for customers. The management of the customer relationship for customer acquisition and retention, for example, is a key business activity (Frow, Payne, Wilkinson, & Young, 2015). Production and supply chain activities dominate the manufacturing industry. Problem-solving activities dominate the service-related industry (Kowalkowski, Windahl, Kindström, & Gebauer, 2015). Development and maintenance of platforms or networks dominate companies like Alibaba, Amazon and eBay to consistently provide value for customers and capture value for the enterprise. There are certain functions of a new firm that the founders need to keep in-house for proper control and not outsourced (Allen, 2015). To experience a successful launch, founders of HPTS firms must have a clear understanding of why they are in business, the key activities of their new venture, and what not to out-source but keep within the firm. When HPTS founders pitch to investors for funding, investors want clarification and to verify if the founders have a clear understanding of why they are in business; what key activities the new firm will perform that leads to the return on their investment to improve capital access to grow and scale into global market.

Key partnerships. A company's key partners include major firms that collaborate for various business reasons, including outsourcing of some activities and acquiring some resources (Osterwalder & Pigneur, 2010). In the current business

landscape, companies are cooperating and collaborating with one another on strategic alliances. Microsoft and General Electric created Caradigm, a joint venture partnership in the healthcare information technology field (Iansiti & Lakhani, 2014). Nokia Siemens Network is a partnership between Nokia and Siemens (Schrempf, 2014). In both cases, the companies combined wealth, resources such as joint management, and expertise to operate and share profits and losses. Firms that create alliances do so to lower the risk level to acquire resources (Zamir, Sahar, & Zafar, 2014). High potential technology startup firms that mitigate risk level of their product or service succeed in improving capital access to grow and scale into global market.

Revenue streams. Revenue streams refer to the cash generated by a company from each customer segment excluding costs for positive earnings (Osterwalder & Pigneur, 2010). Good managers understand the process of developing, sustaining, and managing new revenue streams (Johnson, 2014). The entrepreneurs of startup ventures must determine (a) the value customers are willing to pay, (b) what customers are currently paying, (c) how they pay, and (d) the contribution of each revenue source to total revenues. Making a fair determination of these elements allows the company to generate more revenue streams from every customer segment. Without a steady stream of clients resulting in corresponding streams of income, a new venture is likely to suffer from a burn rate, in which monthly expenses are more than earnings. Suffering a high burn rate is detrimental to improving HPTS capital access. Investors require the removal of two contingencies, risk mitigation and ROI, from entrepreneurs to improve capital access to grow and scale into global market.

Cost structure. A firm incurs costs with every activity conducted in the course of creating, delivering value to the customer, and capturing value for the company. Cost structure refers to an essential costs entrepreneurs incur for operating under a particular business model (Osterwalder & Pigneur, 2010). These costs are easy to calculate after identifying key resources, key activities, and key partnerships. Some business models are low-cost driven. Depending on the business model, the cost of delivering value to the customer may also vary. As a company output expands, the firm benefits from the economy of scale based on a lower bulk purchase that reduces rate per unit (Osterwalder & Pigneur, 2010). High potential technology startup firms that enjoy certain cost advantages to reduce the risk level for investors while increasing the odds of ROI to improve capital access to grow and scale into global market.

Technology Marketing and Sales

Developing a new product or service, practice, or idea passes through four life cycles: (a) introduction, (b) growth, (c) maturity, and (d) decline (Bozkurt & Ergen, 2014). Technology adoption life cycle (TALC) imitates an estimated bell-curve distribution (Stratopoulos, 2016). The five stages of TALC on a bell curve include: (a) innovators 2.5% (b) early adopters 13.5%, (c) early majority 34%, (d) late majority 34%, and (e) laggards 16% (Rogers, 1962). This pattern holds true in all types of adoption decision.

One explanation for interest in diffusion of innovation is the difficulty in getting a new product, practice or idea adopted no matter the economic benefit (Hossain, Simula, & Halme, 2016). For example, the adoption of hybrid seed corn spread slowly among

farmers (Gross, 2018), despite providing approximately 20% more yield than traditional corn. Farmers who were reluctant to adopt hybrid-seed corn practice feared the economic consequences of a failed harvest. Many innovations or changes require prolonged periods of penetration, sometimes calculated in years, to become widely adopted (McGrath, 2013). Hybrid seed corn was widely adopted in 10 years by majority of Iowa farmers (Colton, 2015) and many American households adopted electricity use after 28years (McGrath, 2013). However, advancing technology leads to faster adoption of innovations or changes than in previous decades: the penetration of mobile phones into 50% of American households took five years, whereas it took some decades for fixed-landlines to reach the same penetration rate (McGrath, 2013). Due to advancing technology leading to faster adoption of products, the penetration rate of new products represented by bell-shaped curve is getting narrower.

Technology adoption life cycle is the basis for many HPTS business plan (Moore, 1999). Marketing and selling disruptive products to mainstream customers start with innovators. The early adopters are willing to pursue the advantage of being the first to adopt the use of a new product. However, a chasm exists between early adopters and the early majority (Moore, 1999). The challenge for innovators and marketers is to narrow the gulf quickly to reach the early and late majority (34% each) waiting for improved product quality. Laggards are comprised of 16% that do not budge to adopt new products (Stratopoulos, 2016). The strategy for startup firms is to create value for other four segments totaling 84%, to capture value for the firm in form of big capital gains and add value to the investors' portfolios.

Entrepreneurship and Entrepreneurs

Entrepreneurship refers to the practice of searching for change, responding to change, and exploiting change as an opportunity (Drucker, 2014). Passion drives entrepreneurship: the more passionate the entrepreneur, the greater the likelihood of running a successful business (Tasnim, Yahya, & Zainuddin, 2014). Entrepreneurship contributed to the technological advances and breakthroughs in recent decades (Goutam & Sarkar, 2015). Ghio, Guerini, Lehmann, and Rossi-Lamastra (2014) stated that entrepreneurial performance and economic growth are necessary in a given society to improve human welfare. Schumpeter (1934) described entrepreneurship as the entrepreneur's appetite for innovation and improvement that creates upheaval and change. Entrepreneurship is a force through which innovation creates destructive or productive disruption (Schumpeter, 1934). For example, the taxicab industry was stagnant for decades without innovation or change. Lurking behind the stagnation was an opportunity discovered by the founders of Uber Technologies. Uber is among the most disruptive HPTSs ever, causing a 65% drop in taxicab business in San Francisco (Isaac, 2014; Watanabe, Naveed, Neittaanmäki, & Brenda, 2017). Uber caused upheaval and change in the industry that was stagnant by means of a low fixed-cost model, faster and more reliable service, and service supply in real time enabled by smart phone technology (Isaac, 2014). Entrant firms with better ways to conduct business create disruption and change, causing incumbent firms to become obsolete (Schumpeter, 1934).

Entrepreneurship flourishes where there is (a) skilled population, (b) risk-takers, and (c) ability to see opportunities (Block, Sandner, & Spiegel, 2015). Human, social,

and financial capital that includes regional conditions and social demographics influences entrepreneurial performance (Stuetzer, et al., 2018). Policymakers are paying close attention where needed to create an entrepreneur-friendly economy (Idea Watch, 2012). Government policies to foster entrepreneurship are critical for job creation and economic growth (Terjesen, Bosma, & Stam, 2015). Without entrepreneurs creating new enterprises to contribute to job growth, there would be no employment opportunities for job seekers including managers.

An entrepreneur is one who forms, organizes, starts, and manages a business enterprise (U.S. Small Business Administration (2014). Entrepreneurs assume all risks associated with business formation, partly motivated by profit margin; entrepreneurs also want autonomy and freedom. Markman, Jennings, Lumpkin, Mair, and Russo (2016) defined entrepreneurs as business leaders who found startups with a long-term goal of growth in mind, profit, ethics, and sustainability of their enterprises. Entrepreneurs are creative people with sparks of innovation in business and individuals who contribute to a firm's profitability and growth (Shane & Nicolaou, 2015). Schumpeter (1934) referred to entrepreneur as someone who carries out new combinations of products, services, technologies, and ideas. Drucker (1985) described entrepreneurs as individuals in search of change. Entrepreneurs are a group of individuals passionate about change while exploiting the change as an opportunity to solve customer problem.

Technology and innovation contribute to economic growth, a significant achievement of entrepreneurs (Feldman, 2014). Entrepreneurs recognize opportunity, mobilize resources, create institutions and build capacity to sustain regional economic

development (Feldman, 2014). Successful entrepreneurs share certain personality traits including creativity, passion, self-confidence, dedication, and determination (DeNisi, 2015). They are an intelligent and smart group of individuals who seek greater possibility for financial reward and prestige (U.S. Small Business Administration, 2015). Startup entrepreneurs are in business by finding a new or better way of doing business than competition offers.

Types of Startup Entrepreneurships

The idea of technology-driven entrepreneurship as a research field was first introduced by Cooper in 1971. The present-day technology-driven entrepreneurship is different from traditional entrepreneurship in that it is Knowledge based versus market-based (Romano, Del Vecchio, & Passiante, 2016). Blank (2013c) proposed six types of startup entrepreneurship: (a) lifestyle technology startup, (b) buyable technology startup, (c) large corporation technology startup, (d) small business startup, (e) social enterprise startup, and (f) HPTS.

Some technology enthusiasts in the Silicon Valley bridge passion and profession to create lifestyle technology startups and serve local clients while earning their livelihood from small contracting jobs and training (Blank, 2013b). Lifestyle technology startup entrepreneurs comprise of those who qualify to work for any companies in their various technical crafts but choose not to. Rather, they prefer to remain freelancers and independent because they do not want to work for any corporation or manager (Boudreau, Creelman, & Jesuthasan, 2015). Freelance talent platform is a trend in the Silicon Valley, allowing those involved to live the way they want, depending on small

coding and web designing contract jobs (Boudreau et al., 2015). Two former Yahoo executives, Jan Koum and Brian Acton, collaborated to develop the Whatsapp social media platform for sending and receiving text, audio, and video messages. Despite amassing 472 million users worldwide, rather than the founders choosing to scale the company, Facebook acquired Whatsapp with 55 employees for $19 billion (Joe Prathap et al., 2014). Buyable technology startup entrepreneurs can create product–market fit without accessing capital from equity capital firms.

Large firms ensure their survival by creating corporate-backed venture capital units within their organizations and though innovative, are less profitable than independent venture capital firms (Chemmanur, Loutskina, & Tian, 2014). MetLife, General Electric, International Business Machine, Tyco Corporation, and MasterCard are large firms with startup venture units. MasterCard has many new ventures started from its MasterCard Labs and backed by the MasterCard venture capital unit (Alsever, 2015). Most of the businesses in the United States are small businesses, with fewer than 500 employees (U.S. Small Business Administration, 2014). Business leaders in small business startups identify and aim for new opportunities and passionate about their businesses, like entrepreneurs in other types of startups (Aulet & Murray, 2013). Small business startup owners consist mostly of sole owners; they employ no one or create few non-tradable jobs and consider success to be a thriving business serving local communities and occasionally regional customers (Aulet & Murray, 2013). However, small business startups with good plans and execution have a chance at modest success.

Nearly 80% of all small business startups created in 2014 survived in 2015 (U.S. Small Business Administration, 2016b).

An average startup between 2004 and 2014 survived one year (U.S. Small Business Administration (2016b). While large corporations are retrenching employees, the rate of small business startups in the U.S. is increasing with declining rate of failures. Some small business startups include barbershops, hair salons, restaurants, travel agencies, electrical repair shops, neighborhood convenient stores, auto mechanic shops, consulting, tax preparation businesses, and bookkeeping businesses. Small business startup owners use personal funds or funds from family and friends for business development. Typically, small business owners lack access to loans from banks and traditional lending institutions. Being a small business startup, the small business owner faces a barrier to accessing a bank loan due to asymmetric information and liability of newness (Becker-Blease & Sohl, 2015). These challenges may be responsible for the failure of small business startups each year.

Muhammad Yunus used a social enterprise startup model to provide micro-loans to the poor, mostly women, through Grameen Bank or Bank of the Poor (Kumar, Gope, & Hossain, 2015). Entrepreneurs used to be motivated only by profit-margin to engage in business; entrepreneurs and corporations are using the triple-bottom line of profit, people, and the planet as a source of competitive advantage and differentiation to provide value for customers (Bhattacharya, 2016). Startup entrepreneurs involved in the business of social enterprise create social value through private use and management of human and

financial assets, developed by market forces to “do good by doing well” (Chernev & Blair, 2015).

Many large companies are leveraging on social entrepreneurship to do well by doing good (Henry, 2015). Social enterprise startups’ objective is often to make the world a better place for those left behind by powerful forces in the society (Miller & O;Connor, 2016). Social enterprise startups combine the best of profit-making activities and a not-for-profit platform to support a social agenda and deliver value to their customers and donors (Osberg & Martin, 2015). Forming a social enterprise startup can take the form of a nonprofit, for-profit organization, or a hybrid of both (Blank, 2013b). Entrepreneurs of social enterprise startups are equally passionate about developing their business and making an impact on society.

High potential technology startup ventures are distinct from other types of technology-related startup entrepreneurships; they are firms in their early-stages of development cycle, with the founding teams collaborating to bring initial product or service to the market (Klotz et al., 2014). The basis of HPTS includes technical innovation, process innovation, and business model innovation for potential competitive advantage (De Cleyn, Braet, & Klofsten, 2014). New venture founders contribute to bringing new-to-the-world ideas in technology, market, and business model domains to global markets (Aulet & Murray, 2013).

Technology startups with growth potential are highly uncertain and risky, having a high failure rate as well as a high ROI (Giardino, Unterkalmsteiner, Paternoster, Gorschek, & Abrahamsson, 2014). Key features of HPTSs are high uncertainty, rapid

growth, and scalability (Giardino et al., 2014). High potential technology startups often start small and scale cautiously fast into global markets despite extreme conditions of technological, product and business model uncertainties (Giardino, Abrahamsson, Bajwa, & Wang, 2015). Technology startups with growth potential are more profitable than large corporate-backed ventures (Chemmanur et al., 2014). Companies that scale prematurely fast may fail; the lack of funding is not often a reason for business failure as the case of Webvan demonstrated despite raising sufficient amount of capital.

Research and development are essential ingredients in successful management of HPTS ventures (Wang, Liang, Li, & Yang, 2016). Technology startup ventures with potential to scale are temporary organizations (Blank, 2013a). The founding team members use startup organizations to collaborate and search for unknown product, customer segment, and business model (Blank, 2013a). New venture founders often recruit founding teams charged with discovering and validating the previously unknown product, customer, and business model. After raising enough capital for product development, the founding team members begin to build the company, hire managers, and supervisors to execute the company business plan (Blank, 2006). Mishra (2015) posited that high growth technology startup firms face many risks including technology, market, capital, and team risks. Technology entrepreneurs often emerge with an untested product, untested market, untested technology, and untested entrepreneur's initial business ideas are generally guesses at best. Efficient risk mitigation is important to the success of all technology startups with growth potential (Mishra, 2015). High potential startup firms contribute to net new job creation covering various levels of personnel in

science, technology, engineering, and mathematics (Decker, Haltiwanger, Jarmin, & Miranda, 2014).

Equity financing rather than debt is the major source of external funding for high growth technology startups (Drover, et al., 2017). Startups face a financial hurdle in attempt to access capital for venture development because of liability of newness, asymmetric information, and enormous amounts needed for product development (Laursen, Masciarelli, & Reichstein, 2016). Startups that succeeded in raising capital chose investors that provided needed capital, business skills, social capital and professional contacts, and access to partnership networks (Maier, Sandner, & Geibel, 2016). Startups with growth potential depend on external funding from business angels at the seed level and venture capital firms at the development and growth phases (Zhou, Wang, Tang, & Luo, 2016). Experienced founders deliberately go after equity investment as means of getting benefits, whereas those without experience follow the path of accessing capital haphazardly.

Examples of HPTS Ventures

Uber, Facebook, Alibaba, and Airbnb are all examples of typical high potential technology ventures. These firms went from small startups to large firms with new-to-the-world ideas to grow and scale global markets (see Table 2).

Table 2

Examples of Typical HPTS Ventures

Company	Founders	Description
Uber	Travis Kalanick and Garrett Camp	The world's largest taxi company without own vehicles
Facebook	Mark Zuckerberg, Eduardo Saverin, Andrew McCollum, Dustin Moskovitz, and Chris Hughes	The world's most popular media owner creates no content
Alibaba	Peng Lei and Jack Ma	The most valuable retailer has no inventory
Airbnb	Brian Chesky and Joe Gebbia	Largest alternative supplier of short-term accommodation owns no real estate

Source: Goodwin (2015). The battle is for the customer interface

Focus on global markets. Listed founders of each firm at pre-startup intended to start small and penetrate global markets later. Innovative high technology firms start small but scaled rapidly in the early years (Rasmussen, & Tanev, 2015). One of the characteristics shared by high growth firms is the tendency to start lean while aiming for global markets where such opportunity never existed (Aulet & Murray, 2013). A key characteristic of HPTS ventures is the focus on global markets (Mishra, 2015). To discover how Uber and Airbnb started small and scaled into global markets, Blanding (2016) conducted a multiple case study of both firms and found certain similarities in their approaches. Airbnb and Uber adopted a two-sided business model and both startups launched when demand was high and supply was low. From the first 1,000 customers to 100,000 users, Uber scaled to 40 million users monthly worldwide in 2016. Airbnb successfully launched in 2008 during the Democratic National Convention in Colorado when hotel rooms were scarce.

From the first customer in 2008, Airbnb scaled into global markets with 100 million users as of July 2016 (Solomon, 2016). The founders of Airbnb and Uber realized high value problems in the hotel and taxicab industries respectively and applied *new-to-the-world* ideas to solve problems for the customer and to command competitive advantage in the different industries. Successful startups provide customers with a better product than they had, which translates to satisfied customers that enable startups to flourish.

Ownership base. It is common to refer to small business entrepreneurs as business owners because a typical small business owner is the sole owner who manages as the boss, reporting to no one. Entrepreneurs who forged and formed Knowledge based HPTSs assume the title of founders. Founders including members of founding teams, comprise of developers and contributors to the intellectual property of the new firm in exchange for some stock in the new firm (Baldwin & Henkel, 2014). Founders are people who contribute intellectually to form and launch innovative technology startup ventures, to create value for the customer that did not exist before (Aulet & Murray, 2013). Successful innovative startup founders solve high value problems for the customer using superior technology.

High potential technology startup ventures have many different ownership bases, including the founder and chief executive officer, the founding team, the board of directors, investors, employees, and other shareholders (Aulet & Murray, 2013). Founders of HPTS ventures use stock options to attract and retain talents, as receiving stock options makes the recipient own a percentage of the business. The board of

directors in high growth technology firms is responsible for determining the direction and performance of the firm on behalf of shareholders and stakeholders (Arguden, 2013). However, the effectiveness of board members depends on their qualifications, training, and experience (Arguden, 2013). When vetting potential board members, emerging firm entrepreneurs should carefully choose highly skilled and participative individuals.

A corporation is a set of contracts, not an item capable of ownership. A corporation does not belong to anyone, including the founding team, investors, shareholders or other stakeholders (Sikka & Stittle, 2017). A corporation is legally a fictitious person and a depository for sets of contracts to protect those involved (Sikka & Stittle, 2017). Shareholders are the owners of stock in the corporation governed by the board of directors who are elected by shareholders, where the board members would elect officers who manage the firm (Baldwin and Henkel, 2014). This implies that stakeholders who claim the shares of profit in the firm, regardless of the life of the firm, exercise control rights over the management of the corporation. The strategy for emerging founders is to seek legal protection for the corporation separate from themselves.

Challenges Facing Emerging Technology Firms

High potential technology startups are complex ventures, and reasons for failure are equally complex and varied (Giardino et al., 2015). Technology startup firms with growth potential are more likely to fail than succeed (Mahroum. 2016). Research findings by CB Insights (2016) based on analysis of startups that failed suggested that overall, between 75% and 90% of all categories of startups fail each year, depending on the circumstances. Among the key findings of the report, 42% of firms that failed lacked

product–market fit, 29% failed because of inadequate funding, and 23% lacked experienced founding team members. No single issue is responsible for failure of new ventures; however, some issues may work in tandem with lack of funding leading to failed startup ventures (CB Insights, 2016). Other issues that lead to failed venture include (a) lack of customer feedback, (b) stiff competition, (c) poor marketing, (d) poor timing of product release, (e) poor pivoting, and, (f) failure to pivot (CB Insights, 2016).

Hyder and Lussier (2016) identified insufficient capital, managerial and leadership incapability, and low productivity as some causes of business failure. Access to capital is critical to the survivability of any business, including startup organizations ((Rector, Fatoki, & Oni, 2016). The lack of access to sufficient capital to meet expected and unexpected financial obligations can disrupt the direction of the venture owner's dream. The lack of financial capital, especially at the early stage of a business, can contribute to the failure of a startup business along the way (Coleman et al., 2014).The most commonly reported challenges facing startup businesses are acquisition of the first paying customer and validating the problem-solution fit (Giardino et al., 2015). Although problems generated by human and financial resources are important causes of business failure, internal factors are responsible for 89% of causes of business failure (Hatten, 2014). Burke and Morley (2016) suggested that startups are temporary organizations with potential to evolve; initial ideas about product, customer, and business model are uncertain until validated for feasibility. Execution of business plan occurs at a permanent level of the company building, not at the temporary organization level.

Entrepreneurs of technology startup ventures fail because they do not innovate (Hyytinen, Pajarinen, & Rouvinen, 2015). Savage, Marlow, and Salas (2015) identified a positive link between strategies and execution versus performance. High potential technology startup founders who fail to prepare strategically and execute with precision to succeed find their business organization in decline or stagnation, if not outright failure. A startup entrepreneur is not competitive when the entrepreneur is not offering the customer more value than the competition (Hatten, 2014). Emerging entrepreneurs can learn and obviate business failure. Identifying competitive advantage, remaining flexible and innovative, cultivating a close relationship with customers, and making quality the hallmark of the new venture are approaches to avoid business failure (Hatten, 2014). Products with inferior quality do not compete favorably in the marketplace. Without proposing value not offered by competition to attract a widespread number of customers, the new business cannot create enough profit to sustain the business (Hatten, 2014). Successful entrepreneurs create products or market for which they have competitive advantage over other firms.

Often emerging entrepreneurs are aware that the time for strategizing and business planning process is during the pre-startup or seeding phase of the venture, but do not act on it (Bulley, Allan, & Baku, 2014). Once the company building becomes available, it is time for execution of strategies, not time for planning. Challenging work is an essential element in the success of a venture; however, some entrepreneurs invite failure when they ignore commitment and hard work required to run a successful business (Hatten, 2014). Hatten (2014) stated that incapable and inexperienced

employees, inaccurate estimation of cash flow, and uncontrolled capital requirements are also responsible for the failure of many startups. Most ventures fail because the founding team did not properly align business ideas to fit the product, market, and business model. Ayala and Manzano (2014) suggested that lack of business growth because of lack of capital may lead to failure. Emerging startup entrepreneurs, unaware of common causes of startup failure, may fail without working actively to identify causes of failure and avoid them.

Perceived HPTS Success Strategies

Researchers have various definitions for a business success. While some researchers use financial measurements, others use nonfinancial benchmarks to gauge entrepreneurial success. Entrepreneurial success is a construct viewed in more ways than financial and economic measurements (Fisher, Lobo, & Maritz, 2014). The ability of an entrepreneur to develop robust business relationships in the marketplace is critical to the success of any business (Crittenden, Crittenden, & Crittenden, 2014). Resourcefulness is an important component in gauging entrepreneurial success (Ayala & Manzano, 2014). Besides developing business relationships, new venture owners use other effective strategies to attract customers to the business. For instance, Compaq Computers used differentiation to separate its new product from competitors IBM and Apple. Each single unit of personal computers produced by Compaq came with a handle for portability, and the differentiation resulted in successful market demand of this model of Compaq product (Powell, 2017). Boulouta and Pitelis (2013) recommended that entrepreneurs of new ventures use niche specification to provide products or services to growing market

segments such as working parents or people 65 years and older. Fores and Camison (2016) described two major types of innovation: radical and incremental innovation. Radical innovation involves technical breakthroughs, whereas incremental innovation applies to modification of existing products.

Successful startup teams position their firms consistently well ahead of any potential competition (Drucker, 1985). In the late 1960s, Tom Monaghan created Domino's Pizza based on the home delivery model (Halus & Watson, 2015), whereas Jeff Bezos in 1995 launched Amazon.com based solely as an online bookstore (Voigt, Buliga, & Michl, 2017). Monaghan's home pizza delivery and Bezos' online bookstore were era innovative and effective niche distribution strategies that helped both firms to maintain their unique positions and revolutionized their marketplaces.

There is a direct link between leadership development strategies and business success. Top performing businesses increase the likelihood of their success by having a leadership development plan and a highly relevant business strategy (Mirocha, Bents, La Brosse, & Rietow, 2013). Successful entrepreneurs develop the most successful leadership development strategies with firm values and culture as part of their competitive advantage (Mirocha et al., 2013). Leadership is a critical element in a development plan, and business strategy is highly relevant to business success. Mueller and Shepherd (2014) argued that business success is attributable to a cognitive toolset comprised of opportunity prototypes and intuitive cognitive style expressed as the founder's growth motivation, willingness to collaborate with investors, previous management and business ownership, and level of education. Renko, Brannback,

Carsrud, and El Tarabishy (2013) attributed the success of business organizations to entrepreneurial leadership capable of influencing and directing the performances of employees towards achieving organizational goals. Startup business success is contingent on a reliable business model, social capital, and early-stage success in accessing capital from an angel investor (Spiegel et al., 2015) to grow and scale into global market.

Business success can be attributable to entrepreneurial management competencies. Cassar (2014) suggested that entrepreneurs who have experienced previous startup creation are more aware of risks to avoid, and their participation increases the likelihood of a startup venture's success. Management competencies or experience is not sufficient without enough capital to pursue organizational goals. Researchers at the U.S. Small Business Administration (2014) found that a correlation exists between capital and the success of all sizes of business including startups. Essential prerequisites for operating a successful HPTS include (a) being a female-founded startup, which outperforms male-founded startups by 63%, (b) being founded by young entrepreneurs instead of old, (c) being staffed by at least one founding team member from a top school, and (d) having experience at a top technology firm.

Certain actions and decisions entrepreneurs make or not make can increase the likelihood of startup success or failure. Organizations including HPTS ventures are a systemic network, dynamic as well as complex (Ejimabo, 2015). Sound decision-making and strategic management activities are capable of influencing creativity, growth and effectiveness, success, and organizational goal accomplishment (Ejimabo). Conversely, an organization can fail because its leaders make poor decisions. Acquisition of sufficient

capital has led to the success of many organizations and lack of access to capital has led to many failed organizations. Ride sharing company Uber and Airbnb succeeded in raising capital to grow and scale (Blanding, 2016).

Some organizations have failed despite being able to raise sufficient capital. Webvan had no problem raising enough funds from investors but failed because of poor decision making to scale prematurely (Mishra, 2015). High potential technology startup founders who make sound decisions and strategize their activities increase the likelihood of venture success. Leadership ability to make sound decision depends on knowledge about the customer, processes and activities, training and education as well as information technology (Valmohammadi, & Ahmadi, 2015). Knowledge and information technology are essential elements in a startup venture (Oh, Lee, Park, & Phillips, 2016). Identifying and selecting members of a co-founding can lead to success or failure of a HPTS venture. A founder who makes a sound decision to identify and select a co-founding team with diverse and prior startup experience and affiliations increases the likelihood of the venture success (Eesley, Hsu, & Roberts, 2013). Team members with prior startup experience and affiliations have been tested before, therefore, improving the likelihood of investors funding the venture.

Transition

Section 1 of this proposed study comprises of the specific business problem that some HPTS founders lack strategies needed to access capital to grow and scale. The research question was: What strategies did HPTS founders use to access equity capital to grow and scale? High potential technology startup founders must create products or

services that solve high value problems for a widespread number of customers to capture value for their firms. High potential technology startup founders must access enough equity capital from investors in all stages of development to grow and scale. Without enough capital, HPTS ventures cannot acquire resources essential for developing, growing, and scaling the venture into global markets.

Section 2 contained the foundational information including the role of the researcher, identification and selection of the participants, research ethics, and detailed information supporting the selected research method and design for this study. Other information in Section 2 included the data collection process including instruments, technique, organization, and analysis followed by the qualitative study criteria for reliability and validity. Section 3 included a presentation of the study findings, discussion of the study application to professional practice, and implications for social change. Additionally, Section 3 contained recommendation for action, recommendation for further study, personal reflections, and conclusions.

Section 2: The Project

The purpose of this doctoral study was to explore the strategies needed by HPTS founders to access capital to grow and scale into global markets. Section 2 covered the following topics: the purpose statement, role of the researcher, participants, research method and design, population and sampling, and ethical research. Other topics are: data collection, data analysis technique, and reliability and validity of a qualitative method to address the credibility, transferability, and dependability of research data and outcomes.

Purpose Statement

The purpose of this qualitative multiple exploratory case study was to explore the strategies HPTS founders used to access capital to grow and scale into global markets. Founders of HPTS firms are highly dependent on regional knowledge for innovative and competitive advantages, jobs, wealth creation, and economic growth (Neffke et al., 2017). This study was anchored on two conceptual models: VCIM and CDMs. The study population consisted of five HPTS firms that used certain strategies to improve capital access in the Silicon Valley, California. I selected and interviewed participants from the five firms because they successfully overcame equity capital access constraints and acquired enough funding to grow and scale into global markets. Findings of this study may contribute to positive social change including improving capital access to benefit more HPTS firms, entrepreneurs, and the business community. The survival and growth of more HPTS firms could lead to higher paying jobs, wealth creation, economic growth, and prosperity. Emerging entrepreneurs may use the findings of this study to make informed decisions that could improve capital access rather than approaching the process

haphazardly and unprepared. Additionally, the study findings could add to existing professional and academic literature on technology startup capital access to grow and scale into global markets.

Role of the Researcher

Researchers have certain roles to perform in the data collection process. The researcher is the primary data collection instrument in a qualitative study (Houghton, Casey, Murphy, & Shaw, 2013; Bourke, 2014). Sutton and Austin (2015) said that the facilitating role of the researcher enables and encourages the participants to describe their thoughts, experiences, and feelings about the event under study. A researcher's role includes managing the overall interview process ranging from locating qualified interview candidates to setting interview appointments, transcribing, coding, analyzing, interpreting, reporting, and safeguarding all research notes (Sutton and Austin, 2015) and destroying them after 5 years. Neusar (2014) suggested that researchers should endeavor to gain potential participants' trust to collect research data and provide a thick description of their experience.

Researchers design interview questions to generate rich data from participants (Peters & Halcomb, 2015). Birt, Scott, and Cavers (2016) posited that researchers use member checking to return to participants after interpreting the text of the initial interview and provide them with an opportunity to clarify whether the researchers' interpretations resonate with the participants. During member checking, participants would confirm researcher's interpretation of information initially provided during the initial interview session and expanded on their responses during member checking

session (Fusch, Fusch, & Ness, 2017) to increase the accuracy of interpreted data (Morse & McEvoy, 2014). Since the commencement of the study, I resided and still reside in the San Francisco East Bay area separated by a body of water from the Silicon Valley region and had no previous knowledge of HPTS entrepreneurial activities in the Silicon Valley. However, when I was looking to recruit interview participants I discovered there are many different meet up groups where aspiring entrepreneurs, founders, cofounders, investors, advisors, mentors, attorneys, and serial entrepreneurs congregate at various times throughout the Bay Area for startup networking events. I usually sign up to attend meet up event of my choice for networking purpose. I met some of my study participants during some of the meet up events and exchanged information. LinkedIn is the preferred form of exchanging information with people and get right to their profile. At a glance, I could verify people's identity and profile. I would follow up to ensure they met study requirements then send them invitation and informed consent form to participate.

The main responsibility of the researcher is to safeguard personal and corporate identifying data (Sutton & Austin, 2015). Erlich and Narayanan (2014) said that participants feel comfortable to respond voluntarily to interview questions when they understand that their rights and personal and corporate identifying data are safeguarded during and after the study. I completed the National Institutes of Health web-based training program titled *Protecting Human Research Participants* to ensure compliance with ethical standards and protect human research participants as well as remaining compliant with Belmont Report protocol.

In qualitative research, the researcher is the research instrument (Bourke, 2014). Personal biases of the researcher during the planning, data collection, analysis, and reporting phases of a qualitative study including experiential background and can arise and present ethical challenges likely to affect the reliability, validity, and authenticity of the findings (Fusch & Ness, 2015). By reaching data saturation, a researcher can mitigate bias concerns to enhance the reliability and validity of the findings (Fusch & Ness, 2015). Researchers engage in the process of bracketing to mitigate effects of preconceptions that may affect the research process (Sorsa, Astedt-Kurki, & Kiikala, 2015). To mitigate the effects of bias, I conducted member checking and bracketing to expose bias that I cannot easily eliminate.

The rationale for creating an interview protocol (see Appendix B) was to help me decide carefully on how best to use the limited time allotted to conduct the interview and ensure vital information were addressed and captured during the interview. An appropriate interview procedure is applicable to all interviewees to ensure that the same type of data is collected (Weissbrod & Bocken, 2016). I used interview protocol to convey important information to the interviewee including the purpose of the interview, informed consent form, benefits and risks of the study, compensation, and handling of confidential information. To gain deep insight into the participants' responses, I carefully planned and executed the interviews to collect the requisite data within the limited space of time to answer the research question.

Participants

Participants in interview-based qualitative research assist investigators in uncovering information about the phenomenon under investigation (Doody & Noonan, 2013; Myers, 2015). I used a purposive sampling approach to select five interview participants exclusively located in the Silicon Valley who founded a HPTS venture and were involved in equity finance decisions for the last 5 years. Meet up groups and LinkedIn were the useful approaches for gaining access to HPTS founders within the Silicon Valley. Only the first five participants who met the required criteria and emailed consent forms to me were contacted and scheduled for face-to-face interviews.

Prior to initiating this study, I sought permission from the Walden University Institutional Review Board (IRB). Following that, I sought permission from the candidates using informed consent forms because participation depended on informed consent. In qualitative studies, researchers provide participants with an informed consent form to meet ethical and legal requirements that protect human subjects (Mills, 2014). I informed the participants about their rights, the purpose of the study, expected duration of the study, benefits of participation, and maintaining confidential information of participants and their firms as well as voluntary participation in the study to answer the research question.

Maintaining a cordial relationship between the researcher and participants is vital to the success of the study (Yin, 2014). The relationship between an interviewer and interviewee plays a role in shaping the course and content of the study (Vahasantanen & Saarinen, 2013). One of the strategies for establishing a working relationship with

interviewees was to attend meet up events. During meet and greet sessions, I would stop by to meet, greet, introduce myself to some startup founders, and exchanged LinkedIn information for connection. Once my invitations to connect on LinkedIn were accepted, I sent out emails, introduced myself, and stated the purpose of the invitation, which was to participate in a research study. Additionally, I assured the potential participants of receiving a two- or three-page summary of the study findings upon completion if they confirmed participation in the study by emailing the consent form to me within 48 hours.

After an email confirmation from the participant, I called participants to set up appointments for the interviews, followed up with an email to confirm the interview date and time. I used a purposive sampling technique to recruit candidates who provided data sources and insights into the research question given their knowledge and experience the explored event. Researchers use purposive sampling to identify and select candidates based on their knowledge about an explored phenomenon (Wan & Ng, 2013). Purposive sampling helps researchers select participants who meet the study criteria (Leedy & Ormrod, 2013) and ensures that the sample yields information that aligns with the purpose of the study (Olsen, Orr, Bell, & Stuart, 2013).

Maintaining a cordial relationship between the researcher and participants is vital to the success of the study (Yin, 2014). The relationship between an interviewer and interviewee plays a role in shaping the course and content of the study (Vahasantanen & Saarinen, 2013). A researcher must be courteous and respect the choice of decisions of the research participants (Jarvik et al., 2014). Exhibiting excellent communication and organizational skills with participants ensure good working relationships between the

researcher and participants (Musoba, Jacob, & Robinson, 2014). Wang, Noe, and Wang (2014) suggested that researchers may decide whether participants are entitled to compensation for participating in a study or not. I collaborated with participants, maintained a good interpersonal relationship throughout the interview process, and participants were not compensated for this study.

Research Method and Design

There are three categories of research methods: quantitative, qualitative, and mixed method (Pluye & Hong, 2014). Researchers choose the research method according to the line of inquiry to achieve meaningful outcomes and an in-depth exploration of the situation calls for a case study approach (Yin, 2014). One of the challenges facing startup founders in California's the Silicon Valley is access to capital, and I am exploring certain strategies HPTS founders used to access capital to grow and scale into global markets.

Research Method

This study involved qualitative research method to explore strategies HPTS founders in the Silicon Valley used to improve capital access to grow and scale into global markets. A qualitative research method involves a systematic approach to describe the life experiences of participants to give them meaning (Juni & Mz, 2014). The goal of qualitative method is to gain insight by exploring in depth the richness and problems deeply rooted in the explored event (Juni & Mz, 2014). Researchers value qualitative research method for enabling the use of inductive and deductive reasoning to move from specific instances to generalized conclusions and generalized principles to specific conclusion respectively (Daivadanam, Ramanathan, Ravindran, Thankappan, &

Wahlstrom, 2014). Qualitative research method allows researchers to collect data from participants using interviews to understand their viewpoints and experiences about a phenomenon (Juno & Mz, 2014); and often has one overarching question such as this, "What strategies did HPTS founders use to access equity capital to grow and scale into global markets?"

A researcher using only quantitative research method, without the benefit of interviewing individuals who experienced the problem to understand what someone did or said within the organization, would have difficulty understanding the problem (Myers, 2015). Comparing qualitative research studies to police investigations, Myers argued that without investigators contacting eyewitnesses at the crime scene, willing to speak on what they witnessed and heard, such investigations would lose vital information pertaining to the event. In addition, without contacting eyewitnesses the investigation of the case may be weak, rendering investigation unreliable for the prosecution, defense, judge, and jury (Myers, 2015). A researcher gains thorough insights into complex issues in qualitative studies through direct contact with participants in their natural settings (Yin, 2014).

The essence of qualitative research method is to gain insight into the experiences of the research participants by recognizing themes among words to create a meaningful picture without compromising the richness of the insights (Leung, 2015). Increasingly, researchers are recognizing the valuable contribution by qualitative research studies in the form of knowledge (Houghton et al., 2013). Houghton et al. suggested that the value

of qualitative research method is in the differences from quantitative research method, without comparing their qualities but emphasizing the validity and reliability.

Some commonly used data collection methods comprise fieldwork with direct observation, reflective journal, and conducting semistructured open-ended interviews (Fusch et al., 2017). Often participants provide additional information through member checking when researchers return to them to clarify the meaning of the data they provided initially and not only do they sometimes agree but also expand on the initial information (Fusch et al., 2017). Researchers also collect relevant data from company archive and website (Yazan, 2015; Gok et al., 2014). Qualitative research method was a suitable technique for collecting research data from multiple data collection sources including semistructured interviews, direct observation, reflective journal, and member checks to enhance the reliability and validity of the study.

Quantitative research method is a formal, objective, and systematic procedure for gaining information about the universe; it is also a method useful in describing, testing, and examining cause-and-effect relationships (Juni & Mz, 2014). Researchers use numerical data to prove or disapprove hypotheses in quantitative research method (Clement, at al., 2014). Researchers also use the quantitative research method deductively when testing the relationship between variables and hypotheses (Pluye & Hong, 2014). Leung (2015) posited that researchers use quantitative research method to emphasize quality criteria that embody external validity, reliability, and generalizability. Quantitative research methods often have multiple questions and hypotheses. Nevertheless, a quantitative research method is not appropriate for this study because of

lack of insight into the experiences of study participants (Coenen, Cieza, Stamm, & Stucki, 2012).

Mixed methods research involves the collection of qualitative and quantitative data to create philosophical positioning (Hayes, Bonner, & Douglas, 2013). Researchers use mixed methods when the qualitative or quantitative method is insufficient by itself to understand the research topic or the research requires one method to inform or clarify another (Pluye & Hong, 2014). However, mixed methods research requires the inclusion of quantitative analysis; therefore, it is not appropriate for this study because of the absence of participants' voices.

Research Design

The research problem dictates the type of design a researcher can use. A research design is a systemic process designed to link all the elements of research explored through research questions to draw conclusions for the study (Lewis, 2015). The purpose of a research is to generate new knowledge (Stichler, 2016). Research design is a series of procedures that allows researchers to explore a problem or research question in a methodical manner to collect and analyze data to build up the validity of the research (Stichler, 2016). The function of a research design is to safeguard the evidence gathered to enable a researcher to address the research problem sufficiently (Gorard, 2013). Choosing an appropriate design—in this case, multiple exploratory case study design—allowed me to validate the conclusions deduced from the data to answer the research question.

Some of the types of qualitative designs are (a) narrative, (b) phenomenological, (c) ethnography, and (d) case study (Yin, 2014). A researcher uses narrative design to focus on individuals' stories to study wider topics and concepts such as how people cope with unemployment or illness (Ritchie et al., 2013). The purpose of phenomenological design is to understand the essence of the lived experience of study participants about an event (Beekhuyzen, von Hellens, & Nielsen, 2015). The objective of an ethnographic study is to explore cultural phenomenon which requires lengthy timelines and multiple data collection techniques (Fusch & Ness, 2015). The purpose of case study design is to explore and develop an in-depth description and analysis of multiple case studies (Cronin, 2014). Thus, of these four types of design only case study design was suitable for this study. I selected 5 participants and interviewed to explore strategies HPTS founders in the Silicon Valley used to improve capital access to grow and scale into global markets.

Saturation refers to the point where the data collected during interviews can no more result in additional information (Morse, Lowery, & Steury, 2014). Fusch and Ness (2015) suggested that researchers should pay attention to when data saturation is reached to enhance the validity of the study. A researcher uses follow-up member checking interviews to obtain in-depth data and reach data saturation (Fusch, 2015). I conducted member-checking by repeatedly reviewing and interpreting interview transcripts, writing each question after another followed by a corresponding one paragraph synthesis of participant's response and presenting a hard copy of the synthesis to each participant and asking if my interpretation resonated with the participant's or if there was additional

information to enhance the credibility of the study. I continued to replicate the process until there was no additional data to collect, no new themes, no new coding, and the ability to replicate the study.

Population and Sampling

The population of this qualitative multiple exploratory case design consisted of HPTS founders in the Silicon Valley, California. Researchers clearly describe a study population as well as inclusion and exclusion parameters likely to contribute to the reliability, validity, and understanding of the study (Palinkas, et al., 2015). This study required a purposive sampling of HPTS firms for the startup founders, active in making equity finance decisions for the last 5 years. A researcher implements purposive sampling, also known as judgment sampling, based on the knowledge and professional experience of selected participants to answer the research question (Leedy & Ormrod, 2013; Shorten & Moorley, 2014). Researchers use purposive sampling to select participants who can supply rich, in-depth information and knowledge of the event (Kaczynski, Salmona, & Smith, 2013). Anney (2014) suggested that researchers meet rigor and trustworthiness for a research study by obtaining thick and rich data or an extensive set of details about the methodology and context included in the research findings. I used purposive sampling of HPTS firms in the Silicon Valley to select five founders from five different firms that participated willingly and imparted their knowledge and experience to answer the research questions.

Saturation refers to the point where the data collected from interview participants (Marshall et al., 2013), follow-up member checking interviews (Fusch, 2015), and

reflective journal (Anney, 2014) can no longer contribute substantially to additional information. Researchers reach data saturation when no new data are expected to alter or enhance the study findings (Morse, Lowery, & Steury, 2014). Fusch and Ness (2015) suggested that data saturation is important to content validity and failure to reach data saturation compromises data quality. Researchers reach data saturation when data becomes repetitive, without new themes, and no new coding is feasible (Fusch & Ness, 2015). A researcher evaluates the quality of data desired for collection against potenital uses to adopt a purposive sampling strategy (Guetterman, 2016). I ensured data saturation by collecting data from all indicated sources including face-to-face semistructured interviews, follow-up member-check interviews, direct observation, and notes from reflective journal until no additional information emerged to answer the research question.

Determining an appropriate sample size for a qualitative research study was important to this multiple exploratory case study design. Sample size planning for a research study involves a systematic effort in selecting adequate number of participants to satisfy some stated goal or to answer a research question (Cleary, Hayter, & Horsfall, 2014). The adequacy of sample size of participants requires a researcher to be insightful as too few participants may compromise rich and thick data and too many interviewees may result in superficial volumes of data (Cleary et al., 2014). A convenience sample size can mitigate bias and result in an in-depth exploration of the situation (Fugard & Potts, 2015; Gile et al., 2015). Sample size in a qualitative study must reach the number of

participants needed to meet the data saturation protocol without additional or new data (O'Reilly & Parker, 2013).

The criteria for selecting eligible interview participants for this study included being a founder of a HPTS firm in the Silicon Valley, California and active in making equity finance decisions for at least 5 years. I used a small sample size of five participants to conduct interviews for data collection. Additionally, I applied other sources of data collection techniques including follow-up member check, direct observation, and reflective journaling to increase the reliability of the data collection process in answering the research question. This population was appropriate for the multiple exploratory case study to explore the strategies HPTS founders used to improve capital access to grow and scale into global markets.

Researchers use triangulation to enhance the validity of data by cross-verifying data from two or more sources (Yu, Abdullah, & Saat, 2014). Some data collection techniques included semistructured interviews, notes from direct observation, reflective journal, and member checking. There are four types of triangulation including investigator, data, theory, and methodological triangulation (Fusch et al., 2017). Researchers use (a) investigator triangulation to correlate study findings from multiple researchers, (b) data triangulation to correlate study findings from people, time, and space, (c) theory triangulation to cross-verify multiple theoretical strategies, and (d) methodological triangulation to cross-verify multiple methodologies to add depth to data collection (Fusch et al., 2017). This study was not about correlating data from multiple researchers, multiple theoretical strategies, or multiple methodologies except about

methodological triangulation to cross-verify all viewpoints of the data collected to extrapolate the meaning inherent in the data, mitigate personal bias, and develop a clear understanding of the research problem.

Participants feel free in sharing information when the interview is scheduled at a convenient time and in the comfort of their environment (Ritchie, Lewis, Nicholls, & Ormston, 2013). I conducted the face-to-face interview at an agreed upon location, convenient for me and the participants without visual or acoustic noise, and at a closed-door setting. All participants felt free in sharing information leading to strategies for improving HPTS capital access to grow and scale.

Ethical Research

Informed consent is a research protocol that reflects the essential principle of respect for human subjects (Rowbotham, Astin, Cummings, & Greene, 2013). Musoba et al., (2014) said that the predominant ethical convention in contemporary research requires a fair treatment of research participants. Researchers use informed consent form as a protective mechanism against undue harm to participants; also, to disclose potential benefits of the study (Gillies et al., 2015). After receiving approval from IRB, I identified potential participants who met the study criteria, invited them through e-mail to volunteer for the study, and attached the informed consent form. I explained the background, purpose, significance of the study, the voluntary nature of the study, risks and benefits, compensation, and confidential and privacy issues in the consent form. Participants could decline the invitation or withdraw from participation at any time either by written or verbal notification without any penalty.

I sent out the consent form to provide participants the opportunity to make an informed decision and avoid feeling pressured to participate in the study. By replying via e-mail with the words, "I consent, I am agreeing to the terms described above" participants were admitted to the study. No minor children or mentally challenged persons were included among the research participants and no participant was compensated for participating in the study.

Sanjari, Bahramnezhad, Cheraghi, and Fomani (2015) stated that assigning a unique code for participant identification accessible only to the researcher ensures confidentiality and privacy. Participants feel comfortable to respond to interview questions when researchers can assure them of adequate protection during the process (Southgate & Shying, 2014). To ensure adequate protection of participants, I masked their names and research organizations using alphanumeric coding system (P-1 to P-5) to maintain confidentiality and privacy.

Researchers abide by ethical guidelines about the use of human subjects throughout the duration of the research study (Heron & Skinner, 2013). I abided by the Walden University ethical research guidelines regarding the use of human subjects during the research process. Prior to the start of every interview session, I laid out and followed the checklist on Interview Protocol (see Appendix B) and manually stamped the day, date, time, and the title of each participant alongside the already assigned code on research interview log. I took permission from each interviewee to audio-record their responses for instant reviews and subsequent transcription for interpretation and member checks.

My final doctoral study manuscript includes Walden University's IRB approval number 10-23-18-0472070. I will e-mail a two-page copy of the research findings to each participant within a week of the final approval of this study. I have stored the hard copy of the data from the interview manuscript in a fire-proof file cabinet under-lock-and-key with the electronic files saved on my computer hard drive and an external hard drive safeguarded with a password. Often, I would test and verify the backup file on the secondary storage system containing the electronic data and hard-copy to make sure the storage system is working to continue to protect the confidentiality and privacy of individuals and companies then delete the electronic files and shred hard copies after 5 years.

Data Collection Instruments

Chan, Chien, and Fung (2013) described the researcher as the instrument for data collection and analysis at all levels of a qualitative research study. Some of the primary sources of data collection in qualitative research are focus groups, direct observations, individual interviews, and reflective journaling (Petty, Thomson, & Stew, 2012). Semistructured face-to-face interviews are a systematic approach used by qualitative researchers to probe and listen to individuals to collect data from their conversations regarding a phenomenon (Ok Jong & Kwan Jung, 2015; Doody & Noonan, 2013). Researchers use semistructured face-to-face in-depth interviews that enable participants to respond to preset and open-ended questions (Jamshed, 2014). Researchers conduct member checking by returning to the participants with the text of the initial interview to verify the accuracy of the interpreted data and increase the reliability of the information

(Morse & McEvoy, 2014). For this study, data collection also included direct observation (Yin, 2014) and reflective journal (Everett, 2013). Researchers use methodological triangulation to cross-verify multiple methodologies to increase the depth of data collection (Fusch et al., 2017). I used methodological triangulation to cross-verify all data viewpoints to extrapolate the meaning inherent in the data, mitigate personal bias, and develop a clear understanding about the research problem. The data collection process included interviews and audio-recording of participant responses during each of the 30-45 minutes interview sessions. I used the semistructured face-to-face interviews to collect data from interviewees with the aid of my Samsung Note 4 digital audio recorder to store information for transcription.

Data collection involves direct interactions with individuals or group of individuals through open-ended interview questions and discussions (Myers, 2015). Such individual or group interactions afford the data collection instrument the opportunity to gather information about the phenomenon under investigation (Petty et al., 2012). Asking open-ended questions allows participants to respond to interview questions without hesitation to elaborate their answers (Friborg & Rosenvinge, 2013). I asked open-ended interview questions (see Appendix A) and collected data from participants based on experiences and perceptions founders as founders of HPTS firms about the strategies used to improve capital access to grow and scale into global markets.

A researcher playing the role of data collection instrument intensifies the inevitability of dissemination of interest, values, and emotions during data collection phase of a research (Chan et al., 2013). Yu et al. (2014) stated that a total detachment of a

researcher's personal perceptions is unattainable in research. To mitigate personal bias, researchers use convenience sample size of participants with no previous personal and professional relationship (Giles, et al., 2015) and reach data saturation without additional information to enhance the reliability and validity of the study findings (Fusch & Ness, 2015). I selected and interviewed a convenience sample size of 5 HPTS founders with no previous personal or professional relationship about the phenomenon under investigation. Additionally, I used the semistructured face-to-face interviews to explore participants' experiences and perceptions while observing, documenting, and describing their responses to ensure credibility, transferability, dependability, and confirmability of the study findings.

Researchers use member checking to return to interview participants to compare what they understand to have been said or meant by the interviewees to ensure researcher's interpretation is accurate (Houghton et al., 2013). Researchers use member checking as a quality control procedure to improve the accuracy, credibility, and validity of interpretation (Birt et al., 2016). I used member checking to enhance the reliability and validity of data collection instrument by returning to participants to ensure that my interpretation of what participants said or meant was accurate. Researchers use transcript review after writing-up the interview transcript word-for-word, provide a printed copy to the participant and ask if the content is correct and make necessary edit, if applicable, to ensure the accuracy of participant's responses (Houghton et al., 2013). However, transcript review is not as rigorous a technique compared to member checking as a method for recording participant statement during the interview (Fusch, 2015). I verified

the accuracy of data collected from participants to enhance the validity and reliability of the final analyses and conclusions of the study.

Data Collection Technique

The primary data collection instrument in qualitative studies is the researcher (Bernard, 2013). In qualitative research, data collection technique is a systematic and structured with scientific approach used by researchers to collect data from participants concerning a phenomenon of study in their environment (Cleary et al., 2014). Data collection technique varies and may comprise of interviews, and direct observations (Yin, 2014), member checking (Fusch, 2015), and reflective journal (Everett, 2013). I used the semistructured, face-to-face, open-ended interviews, direct observation, member checking, and notes from my reflective journal as data collection technique for this study.

Quality assurance measures are as important as quality control measures in qualitative research. A researcher takes steps to prepare an interview protocol, a list of issues including questions to be explored during interview sessions (Patton, 2015). I contacted the first 5 participants from different firms who returned their consent forms to schedule interviews; followed-up and communicated the schedule (day, date, time, and location) by e-mail, and confirmed their availability a day before the interview. On the day of the interviews, I met with each participant at the scheduled time and location, exchanged greetings with handshake before settling down for the interviews. Prior to the start of the interviews, I went through the interview protocol checklist (see Appendix B), restated critical issues about the study, purpose, significance, the voluntary nature of the interview without compensation, and request for permission to audio-record the session.

Leedy and Ormrod (2013) suggested that researchers create data collection instruments or reuse already designed tools. Albuquerque, Ramos, de Lucena, and Alencar (2013) described the use of audio recorders as indispensable in capturing interview dialogue for instant replay and transcription. I used two Samsung Note 4 audio-recorders during each interview session to avoid loss of data from a single equipment, turned them on simultaneously and manually stamped the date, time, and participant identification code to capture the interview dialogue. I read out each question to interviewee, asked some follow-up questions where necessary as well as listening, observing the body-language, and making reflective journal entries. At the end of each interview session, I turned off the audio-recorders off to protect the data, and thanked participants with a handshake.

Researchers use semistructured, face-to-face, open-ended interview questions to focus on cases under investigation and gain insights into participants' perspectives (Chan et al., 2013). Advantages of semistructured face-to-face data collection method include: (a) high return rate, (b) relatively flexible to conduct, (c) can involve reality, and (d) controlled answering order (Alsaawi, 2014; Alshenqeeti, 2014; Wyse, 2014). Disadvantages of data collection techniques include: (a) cost, (b) quality of data dependent on interviewer ability and skill, (c) manual data entry, and (d) small sample size (Doody & Noonan, 2013; Sud & Thelwal, 2014; Wyse, 2014).

Member checking is a validation technique often used by researchers to explore the credibility of their study findings by returning the data to participants for verification of accuracy and whether the data resonates with their experience (Birt et al., 2016), and

whether there was additional information (Fusch & Ness, 2015). As the data collection instrument, I used member checking to return to interviewees to verify the accuracy of data collection and additional information, if necessary, to answer the research question.

When a researcher and participant face each other, any dialogue is conducted beyond verbal expression including facial and body language and the researcher documents the observation on a field note (Pawlowski, Andersen, Troelsen, & Schipperijn, 2016). I observed participants' facial and body-language expression, documented the expressions to gain insight to their knowledge and experience about the research question. A researcher keeps a reflective journal during the research process to record what they learn and develop to return to, in the future (Bassot, 2016). I kept a reflective journal and recorded what I learned and developed during the interview process for future references. I have stored the hard copy of the data from the interview manuscript in a fire-proof file cabinet under-lock-and-key, saved the electronic files on my computer hard drive and an external hard drive protected with a password, and will delete the electronic files and shred hard copies after 5 years.

Data Organization Technique

Researchers organize qualitative data into themes to gain understanding of the data and patterns that emerge (Yin, 2014). I used several steps to protect the truthfulness and veracity of the data organization technique. An Audit trail refers to a systemic recording or documentation of activities maintained by a researcher from the beginning of a research project through the development to the reporting stage of a research study (Hoque, Covaleski, & Gooneratine, 2013). I kept a reflective journal essentially as a data

organization technique. Researchers maintain journals as tools of the trade to document activities and gain access to rich qualitative data during the research (Everett, 2013). I used reflective journal to store and organize research data in a manner that will answer the research question.

Qualitative researchers use a research log to take notes and keep track of research activities, potential problems, and questions that may arise (Kuther, 2015). Maintaining a research log is a good research practice (Layder, 2013). The organization of the writing process requires the research log to accommodate ideas, questions, changes, orienting concepts, and issues for future research (Clancy, 2013). I maintained a research log throughout the research project to track activities, problems, questions, concepts, and changes that arose during the study.

I used the semistructured, open-ended face-to-face interview questions to gain insights into the explored event. Using audio recording system, I captured and digitally stored participant responses to questions and discussions and transcribe them into textual data using Microsoft word. Audio recording systems are important qualitative research tools used by researchers to capture, playback, and store data collected from participants' interview responses (Paulus, Dempster, & Lester, 2014; Thissen, 2013; Portero & Puig, 2016).

Qualitative researchers choose and follow a clear file naming system to organize research data (Guo, Alves, & Porschitz, 2013; Johnston & Jefferyes, 2013). I assigned alphanumeric codes from P1 to P5, representing five participants, to conceal individual and firm identify. NVivo 12 Plus allows researchers to organize data from interviews,

track, classify, store, and identify themes for analysis (Bazeley & Jackson, 2013). Poulis, Plakoyiannaki, and Poulis (2013) concluded that NVivo 12 starter software adds credibility and methodological rigor often unrecognized in qualitative case studies. I implemented the use of NVivo 12 starter to organize participants' responses and to track, classify, and store soft copies of data in a password-protected external drive and hard copy in a safe, fireproof filing system. No other individual will gain access to any data stored with respect to this study. I will preserve all data for five years and thereafter shred and destroy it.

Data Analysis

The purpose of this qualitative exploratory multiple case study research was to explore the strategies HPTS founders used to access capital to grow and scale. The overarching research question for this study was: What strategies did HPTS founders use to access capital to grow and scale? The multiple data collection methods for this study included semistructured face-to-face open-ended interviews, field notes based on direct observation, member checking, and reflective journal. In case study design, member checking provides utmost benefits for reliability and validity of the study (Fusch, 2015).

The data analysis section of this study comprised of the following five-step process, (a) the compiling phase, (b) the disassembling phase, (c) the reassembling phase, (d) the interpreting phase, and (e) the concluding phase (Fusch, 2015). Researchers create new knowledge through research by following a logical sequence that leads to an unanswered question (Graue, 2015). A researcher uses a data analysis approach that ensures transparency and rigor in the study findings (Ward, Furber, Tieney, & Swallow,

2013). A brief discussion of the logical and sequential process for the data analysis section of this study follows.

The compiling phase of the data analysis involved the organization of data into a logical format to create a database. The disassembling phase involved the breaking down or reducing the compiled data into core themes and concepts. Additionally, the reassembling process involved the clustering and categorizing of themes and concepts into sequences and groups. Furthermore, the interpretation stage involved the creation of narratives from the sequences and groups for drawing conclusions to the study findings.

A researcher conducts member checking by (a) reviewing interview transcripts, (b) writing out each question with a synthesis of participant's response, and (c) sharing a copy with the participant to check for accuracy and possibility of additional information (Birt et al., 2016; Fusch, 2015; Richards, Eberline, & Templin, 2016). During the interpretation stage, I wrote out each question followed by a brief paragraph of the synthesis of participant's response, provided a print copy to the participant and asked if the synthesis represented my interpretation of the initial interview or if there was additional information. I continued the member checking process until there was no new data to collect leading to improving technology startup capital access to grow and scale into global markets.

Researchers pay close attention to the choice of qualitative data analysis software used because the same data collected from interviews can result in different findings based on the type of software (Sotiriadou, Brouwers, & Le, 2014). The major function of computer assisted qualitative data analysis software including NVivo is not to analyze

data rather to assist in the analysis process (Zamawe, 2015). Hilal and Alabiri (2013) stated that NVivo qualitative data analysis software is the best tool developed for organizing and assisting in the process of data analysis of interviews transcript, field notes, textual sources and including images, videos, and audio files.

Mind mapping is an essential data analytical tool used by researchers in analyzing large quantity of research data with various connected topics or themes (Kotob, Lee, & Richardson, 2016). Parikh (2016) suggested that mind mapping is a brainstorming technique that enables the user to deconstruct complex topics to create a graphical representation of subtopics and themes. A researcher uses mind mapping technique to organize thoughts or themes, create ideas, and focus on discussion to achieve learning purposes (Cheng, Hu, & Chen, 2012; Kotob et al., 2016). I used NVivo 12 Plus mind mapping tool to enable me process and create a visual presentation which I relied on to connect key themes in the literature review, conceptual model, and report the findings of this study.

Reliability and Validity

Researchers use rigorous data collection protocols to entrench reliability and validity in qualitative studies (Cronin, 2014). Grossoehme (2014) stated that researchers can establish reliability by documenting research procedures during the process in a reflective journal. Researchers validate study findings by performing creditability, transferability, and confirmability tests and conducting member check to entrench validity throughout the research process (Noble & Smith, 2015). Reliability and validity criteria in quantitative studies are synonymous with dependability, credibility,

transferability, and confirmability in qualitative studies (Anney, 2014; Fusch, 2015). I used some protocols within reliability and validity criteria to ensure trustworthiness in this study including data saturation, transferability, member checking, methodological triangulation, and rich and thick data to answer the research question.

Reliability

Reliability refers to reaching the same conclusions by adopting the same processes used by a proceeding investigator or researcher under similar settings (Grossoehme, 2014). Leung (2015) suggested that reliability is consistent with replicability of the procedures and findings of a study. Researchers use reliability tests to check for errors and biases; quality in qualitative research is not similar in quantitative study concerning reliability and validity (Yin, 2014). Paying attention to quality is important because conducting research studies that use best practices can lead to richer and better understanding of the event under investigation (Grossoehme, 2014). I used data saturation, transferability, member checking, methodological triangulation, rich and thick data to ensure trustworthiness to achieve reliability in answering the research question.

In qualitative research, data saturation must occur to improve the reliability of the study findings (Fusch & Ness, 2015). Researchers achieve data saturation when there is sufficient information to replicate the study, without additional information, no new themes, and no further coding feasible (Fusch & Ness, 2015). In depth analysis and repetitive reviews of the transcripts are a valuable process to achieve data saturation (Cope, 2014). A researcher may use follow-up member checking interviews to collect in

depth data and reach data saturation for a small census samples of five companies in a study (Fusch, 2015). I chose a small census sample of 5 participants from five companies for this study and used member checking interviews to obtain in depth data to assist in reaching data saturation till there was no additional information, no new theme, and no new coding was feasible to answer the research question.

Qualitative studies are often specific and the findings applicable to an environment or small group of people, making it difficult for a researcher to generalize or transfer the findings of a study to other situations and populations (Pandey & Patnaik, 2014). Additionally, Pandey and Patnaik (2014) suggested that a researcher uses thick descriptions to achieve external validity by providing sufficient and detailed description of a phenomenon to evaluate the extent which the conclusions are transferable to other settings, time, situations, and people. The researcher cannot achieve transferability of a study except the reader and future researchers (Fusch & Ness, 2015). The responsibility of demonstrating that a set of findings applies in another situation rests more on the reader and a future researcher to make the transfer than the original researcher (Marshall & Rossman, 2016). I used thick description to achieve external validity by describing in detail the lack of capital access faced by HPTS founders for the reader to evaluate the extent which the study findings and conclusions are transferable to other clusters except the Silicon Valley to answer the research question.

Trustworthiness is the core of a high-quality research study and member checking is a mechanism for exploring the credibility of study findings (Birt et al., 2016). Thomas and Beh (2015) suggested that conducting member checking ensures the reliability of a

qualitative study. Researchers use member checking as a quality control mechanism to improve the accuracy and dependability of data analysis and interpretation (Birt, et al., 2016). Member checking is a useful tool in case studies for providing maximum benefits for reliability of a study (Fusch, 2015). I reviewed and interpreted the transcript of the initial data collected from participant, wrote and synthesized participant's responses in one paragraph, presented a printed copy of the synthesis to the participants. I asked participants if the synthesis resonated with them or if there was additional information. Two participants disconfirmed sections of their answers on two different questions and made appropriate corrections. I continued the process until there was enough information to replicate the study with no new data, no new themes, and no additional data to code to answer research question.

Thomas and Beh (2015) suggested that conducting triangulation entrenches reliability in qualitative studies. A researcher uses methodological triangulation in case study design to ensure the validity of data to ensure the credibility of the study findings (Ritchie et al., 2013). Methodological triangulation refers to cross-verification of the consistency of findings generated by various data collection methods (Pandey & Pantaik, 2014). In addition, Pandey and Pantaik (2014) posited that different data collection methods can produce complimentary data on the same phenomenon but often these data can diverge, and the point of divergence can create the most insights, becoming a great interest to the researcher. Multiple data collection methods for this study comprised of semistructured interviews, follow up member-check interviews, and reflective journal. I used methodological triangulation to cross-verify data from semistructured interviews,

follow-up member checking interviews, and reflective journal to ensure credibility of the study in answering the research question.

Rich and thick data refers to dense, highly textured, and contextualized qualitative data which may be small but provided such data offer an incredible depth of meanings and stories (Latzko-Toth, Bonneau, & Millette, 2017). A researcher collects rich and thick data, detailed and complete enough to maximize the ability to find meaning and provide credibility to study findings (Latzko-Toth et al., 2017). In case study, a researcher can use rich and thick data as a strategy to entrench rigor in the study outcomes (Leung, 2015). A researcher uses rich and thick data to address confirmability and vividness in qualitative research study (Cope, 2014). I used rich and thick data to offer depth of meanings, ensure credibility of the findings, and address confirmability of the study to improve technology capital access to grow and scale into global market.

Validity

In qualitative research, the quantitative validity of study outcomes is synonymous with dependability, trustworthiness, credibility, and transferability (Noble & Smith, 2015). Researchers use validity to produce accurate and valid results for a research study (Ritchie et al., 2013). A study has no validity except the data is accurate and truthful (Fusch et al., 2017). A researcher uses certain strategies to achieve validity and the strategies to enhance validity of this study include transferability, methodological triangulation, rich and thick data, and member checking to answer the research question.

Transferability in qualitative research is synonymous with generalizability or external validity in quantitative research and refers to the extent that study findings

generated in a context can hold true in another setting without loss of meaning in the findings (Anney, 2014; Houghton et al., 2013). Transferability is often the responsibility of the reader doing the generalizing, not the researcher, because of the nature of qualitative studies the data may not transfer (Fusch et al., 2017). A researcher mitigates concerns about generalizability by using quality data collection, analysis techniques, and member checking during the study to enhance the transferability of the study outcomes (Fusch et al., 2017). I mitigated concerns about generalizability of this study by using quality data collection techniques as well as sharing data interpretations with participants to validate meaning and whether the interpretation resonates with their experience to ensure validity in answering the research question.

Triangulation is valuable tool researchers use to enhance the validation of data by cross-verifying data through multiple sources (Carteret al., 2014). There are four types of triangulation including data triangulation, investigator triangulation, theory triangulation, and methodological triangulation (Carter, et al., 2014). Methodological triangulation is the most frequently used type of triangulation by researchers to cross-validate consistency of findings generated by various data collection techniques to ensure validity of a study (Pandey & Pantaik, 2014). In multiple exploratory case study design, a researcher can use methodological triangulation to cross-verify data collected from multiple sources of data collection methods to test the validity of data and enhance the validity of the study results (Ritchie et al., 2013). I used methodological triangulation to cross-verify data from semistructured interviews, field notes during direct observation,

and member checking to enhance the validity of exploring HPTS capital access to grow and scale into global markets.

Rich and thick data refer to quality and quantity of data respectively (Fusch & Ness, 2015). Validity is important in research studies and refers to credibility in qualitative studies; a researcher obtains rich data by seeking thick description from writing extensive notes, collecting participants' personal accounts, and compiling narratives from transcribed interview recordings (Doody & Noonan, 2013). Rich data is detailed, focused, and reveals participant views, feelings, intentions, contexts, and structures of their lives (Doody & Noonan, 2013). A qualitative researcher uses rich and elaborate description in narratives to enable the reader to visualize the lives and experiences of the participants through the context of the interview (Yilmaz, 2013). Rich data comprises of many intricate layers, detailed and nuanced whereas thick data consists of a lot of data with depth (Fusch & Ness, 2015). I combined rich and thick data description in the narrative of this study to allow readers to visualize the experience of the participants through contexts, details, emotions, and voices during semistructured face-to-face interviews to validate the findings of this study.

A researcher uses member checking as a quality control mechanism to improve the accuracy and dependability of data analysis and interpretation (Harvey, 2014). Member checking also known as participant validation technique enables a researcher to enhance the accuracy and credibility of qualitative research (Houghton et al., 2013). Researchers use member checking to reach data saturation until there are no additional information, themes, coding, and the ability to replicate the study (Fusch & Ness, 2015). I

reviewed and interpreted interview transcripts, wrote each question followed by one paragraph of a succinct synthesis, presented a printed copy of the synthesis to the participant and asked if the synthesis resonates with the participant or if there was additional information to enhance the credibility of the study. Two participants did not confirm my interpretation of their responses but re-worded my interpretation and I continued the process until there was no more new data to collect, no new themes, no new coding, and the ability to replicate the study.

Transition and Summary

Section 1 included an introduction to the problem about some HPTS founders' lack of strategies to improve capital access to grow and scale into global markets. Section 2 comprised of the purpose statement, the role of the researcher, the participants, a detailed description of the selected research method and design, population and sampling, reliability and validity, data instruments, data collection, organization, and analysis. Using NVivo 12 Plus was vital to entrenching reliability and validity in the study as well as expediting the analysis process. I used qualitative NVivo 12 Plus software to simplify the time-consuming process of gathering, organizing, storing, analyzing, finding insights, and uncovering connections in datasets within the study. Section 3 included the findings, application to professional practices, implications to social change, recommendations for action, recommendations for further study, and reflections as well as drawing a conclusion to the study.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative exploratory multiple case study was to explore the strategies HPTS founders used to access capital to grow and scale into global markets. The research question that guided this study was: What strategies do HPTS founders use to access equity capital to grow and scale? Semistructured interviews of five participants from five firms in the Silicon Valley led to data collection to answer the research question that resulted in eight main thematic findings. The themes were (a) capital constraint, (b) identification of potential investors, (c) collaboration, guidance, and support, (d) investment potential, (e) investment thesis, (f) measurement of success, (g) passion and preparedness, and (h) prevention of stock dilution.

The findings of this study aligned with the existing professional and academic literature and conceptual framework for this study. I used member checking to check for accuracy and reached data saturation without yielding additional information, themes, and coding. The review of notes from direct observation and reflective journals corroborated interview responses without yielding additional information. I used methodological triangulation to cross-check all viewpoints involving the data collected to extrapolate the meanings inherent in the data, mitigate personal bias, and develop a clear understanding of the research problem.

Presentation of the Findings

The purpose of this qualitative exploratory multiple case study was to explore the strategies HPTS founders used to access capital to grow and scale into global markets.

The overarching research question of this study was: What strategies did HPTS founders use to access capital to grow and scale into global markets? Based on participants' responses to interview questions, eight themes emerged from the study findings including (a) capital constraint, (b) identification of potential investors, (c) collaboration, guidance, and support, and (d) investment potential. Other themes that emerged included (e) investment thesis, (f) measurement of success, (g) passion and preparedness, and (h) prevention of stock dilution. I used member checking to check for accuracy, reliability, and validity of the study and reached data saturation without yielding additional information, themes, coding, and the ability to replicate the study. The review of notes from direct observation and reflective journal corroborated interview responses without yielding additional information. I used methodological triangulation to cross-verify and test the validity of the study to allow for data saturation. The findings of this study aligned with the existing professional and academic literature on technology startup capital access and the conceptual framework for this study.

Emergent Theme 1: Capital Constraints

The general business problem identified for this study is lack of capital access; specifically, some HPTS founders lack the strategies to access capital to grow and scale into global markets. This study was explored to understand the strategies successful founders used to improve capital access. Kaplan (1995) suggested that the purpose of HPTS ventures is to deliver a wide range of high-quality products or services made superior by technology to solve customer problems. Without capital to develop products or services that create value for customers, startups cannot capture value for the firms and

deliver for shareholders (Slavik & Bednar, 2014). One of the resources necessary for the success of HPTS firms is the availability of enough capital (Kaplan, 1995). A startup may fail without enough capital.

The findings of the study, capital constraints emerged as Theme 1, represents an overarching problem that may hinder technology startup development, growth, and scaling into global markets. Most HPTS are constrained by lack of enough capital to meet unexpected and expected financial obligations and alter the growth trajectory of new ventures (Simic, 2015). Some founders of HPTS ventures in the Silicon Valley undertake ventures with insufficient capital, posing significant hurdles to the development of the new business. A nexus exits between capital and success associated with all business sizes, including startups (U.S. Small Business Administration, 2014). The small business entrepreneur faces constraints in accessing traditional lending institutions including banks for investment capital due to asymmetric information and liability of newness (Aulet & Murray, 2013). Financial constraints hinder the possibility of initiating innovative businesses (Nieto, Santamaria, & Fernandez, 2015).

The findings of this study, capital constraints emerged as Theme 1, can hinder the development, growth, and scaling of young firms from penetrating into global markets. P1 indicated that “the dream of having a business almost came to a halt when funds from personal savings, family, and friends diminished.” P2 stated, “Lack of capital was challenging for us, but this is what you built a company solve and overcome problem and succeed as entrepreneur (sic).” P3 stated, “one very big investor we found, we prepare all the meeting, and when we were right there we start to talk about funding, the first we

consider a problem because we discovered what really this person claimed was not really the situation (sic).” he investor turned down the proposal for funding because of lack of track record and the liability of newness to the Silicon Valley. P3 represented a venture firm that migrated from Italy to the Silicon Valley as a go-global firm. Typically, firms that have access to capital from business angels are often successful in gaining access to venture capital funds in the Silicon Valley. P4 said, “when we needed to execute the development phase activities we couldn’t procure and test the prototype of minimum viable product (MVP) because we lacked the capital.” P5 said, “Our main concern at the time was insufficient capital, that almost crippled the business.”

Capital constraint does not only limit new firms from developing, growing, and scaling into global markets but also hinders creation of jobs, wealth, and economic growth. Lack of capital is a growth barrier that limits hiring of workers and creating more net new jobs (Ghani, Martelanc, & Kayo, 2015). Capital restraints can limit a firm’s production capacity to meet market demand and affect maximization of profit, with potential to cause business failure (Ayala & Manzano, 2014). Capital constraints have limiting effects on the venture’s ability to solve high-value problems for the customer, recruit experienced founding team members, and availability of investment capital (Hechavarria, Mathews, & Reynolds, 2016). Rector et al. (2016) said that the absence of capital, especially at the early stage, constricts the survivability of HPTS ventures and may lead to business failure.

Successful founders mitigate the effects of emergent Theme 1, capital constraint, by proposing to equity investors as a strategy to improve capital access and exchanging

some stock in the startup for essential resources including capital, ideas, and support (Kaplan, 1995). Blank (2013a) said that access to enough capital can improve the survivability of a new venture especially at the early stage with prospects for growth, which needs equity capital for product development, prototyping, and testing and later growth stage production activities. Some startups who exchanged company stock with equity investors for capital as a means of developing, growing, and advancing to global market experienced an elevated level of success (Hogan, Hutson, & Drnevich, 2016). Additionally, having the full commitment of the investor translates to a win-win situation for the entrepreneur as well as the investor. Investors often provide the added incentive of steering the venture towards achieving a favorable ROI, as they are usually 100% vested in the initiative (Hogan et al., 2016). However, some businesses can also fail after the acquisition of adequate capital (Aspray et al., 2013), suggesting that capital constraints may not necessarily lead to business failure.

The findings of this study, capital constraints emerged as Theme 1, aligned with the existing professional and academic literature and the conceptual framework for this study. I used member checking to check for accuracy and reached data saturation without yielding additional information, themes, coding, and the ability to replicate the study. The review of notes from direct observation and reflective journal corroborated interview responses without yielding additional information. I used methodological triangulation to cross-check all viewpoints regarding the data to extrapolate meaning, mitigate personal bias, and develop a clear understanding of the research problem.

Emergent Theme 2: Identifying Potential Investors

The level of risks and uncertainties associated with startups in the initial stage may be a deterrent for potential investors (Cannone & Ughetto, 2014). Startup founders are often the first investors in their ventures before funds from friends and family for gestation phase activities (Gregson, 2014; Mikic et al., 2016; Khan, 2015; Kumar & Rao, 2015). Apart from these informal sources of startup capital, startup venture success depends on identifying potential sources of external investors and requirements to propose for acquisition of capital at the early-stage (Spiegel et al., 2015).

The findings of the study, identifying potential investors emerged as Theme 2, represents a strategy for improving capital access to grow and scale into global markets. Responses from P1, P2, P4 and P5 confirmed the use of informal method to acquire the initial funding from personal saving, family and friends before business angel and venture capital firms for development and growth state activities. P1 stated, “I saved some money when I first thought about starting my business then had some friends and former co-workers to join me, so they came up with money. Later, someone took a chance on us to step to the next level, subsequently we got a VC to invest at the production level.” P2 responded, “I used my personal money to start before asking family members and friends to tip in. That was not enough to carry us to through the next level of activity, so we had to turn to business angel and later the VC.” P4 stated, “The barrier was lack of sufficient capital especially when we needed to execute development phase activities. We couldn’t procure and test the minimum viable product because we lacked capital. It was time to look for investors who can invest as well as guide and collaborate

with us." P5 responded, "I started from using my personal funds, family and friends for the startup. By the time I needed money for prototype we ran out of money and had to look for a business angel and funds for product manufacturing from the VC." In addition to funds from personal saving, family and friends, business angel and venture capital firms, institutional investors such as pension fund managers, life insurance companies and banks also provide equity capital for HPTS ventures (Edelen, Ince, & Kadlec, 2014). However, some of these institutions such as banks do not provide funding for technology startups (Gregson, 2014 2016) until after company building (Blank, 2006).

The findings of this study, identifying potential investors emerged as Theme 2, aligned with the existing professional and academic literature and the conceptual for this study. I used member checking to return to participants to check for accuracy and reached data saturation without yielding additional information, themes, coding, and the ability to replicate the study. The review of notes from direct observation and reflective journal corroborated interview responses without yielding additional information. I used methodological triangulation to cross-check all viewpoints of the data collected to extrapolate the meaning inherent in the data, mitigate personal bias, and develop a clear understanding of the research problem.

Emergent Theme 3: Collaboration, Guidance, and Support

Collaboration is a value creation process that benefits business organizations (Al-Tabbaa, Leach, & March, 2014). Risks and uncertainties are inherent in knowledge-based ventures and equity investors commit to the practice of guidance to mitigate risks and uncertainties (Billings, Jennings, & Lev, 2015). Venture capital firms typically invest in,

as well as, support risky startup ventures (Bocken, 2015). Founders who succeed chose investors who provided not only the needed capital but also professional collaboration, contacts, and access to partnership networks (Fourti & Affes, 2013). Equity capital investors are growth partners and business builders who exchange capital for stock as well as taking active participation to collaborate to build and grow new ventures (Mishra, 2015). Investors look for opportunities to invest in HPTS ventures and collaborate to achieve a defined and pre-determined business purpose (Gupta, Pienta, Tamersoy, Chau, & Basole, 2015).

The findings of this study, collaboration, guidance, and support emerged as Theme 3, represents a strategy to improve capital access to grow and scale into global markets. Eighty percent of participants in the study desired to attract investors who were willing, not only to invest in their startups but also collaborate, provide guidance and support to mitigate risks, uncertainties and promote the survivability of their young firms. P1 noted, “I needed investor not only to fund our startup but also one with expertise, network, and guidance without losing control of the company.” P2 responded, “I made the determination to choose based on investor’s track record of collaborating, supporting and mentoring entrepreneurs.” P4 noted “I determined the investor to work with based on expertise, track record of funding within the industry, guidance and collaboration beyond the provision of capital.” P5 stated, “I was looking for an investor, mentor, and guide at the same time.”

Mueller and Shepherd (2014) suggested that HPTS venture success can be attributable to the founder’s growth motivation and willingness to collaborate with

investors for capital, guidance and support to bring new-to-the-world products and services into global market. The movement of HTPS entrepreneurs towards the Silicon Valley is not only for the availability of equity capital, but also, for harnessing intellectual support (Ketchen & Sandler, 2015; Mishra, 2015). Mishra (2015) stated that investors, as a rule, prefer collaborating with management teams who are flexible and willing to refine their business strategy to mitigate risk, provide a higher level of ROI, and a successful exit strategy. Startup founders should collaborate with investors not only for funding but also for management guidance and support to develop, grow and scale into global market. Theme 3 is an important strategy for improving technology startup capital access to grow and scale into global market.

The findings of study, collaboration, guidance, and support emerged as Theme 3, aligned with the existing professional and academic literature and the conceptual models for this study. I used member checking to return to participants to check for accuracy and reached data saturation without yielding additional information, themes, coding, and the ability to replicate the study. The review of notes from direct observation and reflective journal corroborated interview responses without yielding additional information. I used methodological triangulation to cross-check all viewpoints of the data collected to extrapolate the meaning inherent in the data, mitigate personal bias, and develop a clear understanding of the research problem.

Emergent Theme 4: Investment Potential

The success of HTPS ventures depends on the founder's drive and commitment to identify and access capital from equity investors by producing a compelling investment

proposal attractive to the investors (Spiegel et al., 2015). The founder's strategy to accomplish the core objective of the venture is to exchange some shares of stock in the venture with equity investors for ideas, financial capital, and human resources to carry out activities essential for the success and profitability of the new firm (Kaplan, 1995). Equity investors are interested in three elements and startup founders who seek capital from investors must demonstrate how the new firm can deliver the three elements to improve capital access: excellent growth potential, exceptional ROI, and exit strategy (Mishra, 2015). Businesses with widespread number of customers rarely fail, except for lack of customers. Blank (2006) emphasized the creation of customer development model to deliver a repeatable, scalable, and profitable business. Without presenting evidence of creating value for a widespread number of customers as well as capturing value for the firm (DaSilva & Trkman, 2014), HPTS cannot improve capital access to grow and scale into global market.

The findings of this study, investment potential emerged as Theme 4, represents a strategy for improving technology startup capital access to grow and scale into global markets. Participants P1, P2, P4 and P5 noted they used the strengths of their market size, higher rates of ROI, and the initial public offering (IPO) as exit strategy in addition to experienced and skilled management team to attract investors to fund their proposals. P1 noted,

> We showed there was a significant growth potential for our product to create high ROI. We decided early to opt for the initial public offering as the exit strategy. With growth and scalability our revenue was expected to increase with ROI

> increasing with the value of the firm at the same time. We're still a private company but IPO will be our exit strategy someday. We have a committed management team to help us meet our goal.

P2 stated, "Our projected market size was large with limited competition for a higher level of ROI. Our exit strategy is IPO. If we were going to succeed, we better had a great management team and we did." P4 stated,

> We projected our product would be well received in the market by a large customer base as we keep growing and we communicated that to investors to compel them to invest for a higher rate of return on investment. We communicated that our exit strategy would be IPO.

P5 stated,

> Our business envisioned getting bigger and bigger because the problem we solve affects a sizeable number of people around the world to create a high level of return on investment. Going IPO someday is still our goal helped by a very experienced and skilled management team.

Excellent growth potential. Startup entrepreneurs should use SWOT (strengths, weakness, opportunities, and threats) analysis to conduct and provide a situation analysis of the startup and introduce the growth potential of a frim to investors as evidence of arriving at a projected growth. A SWOT analysis is an effective strategy often used by organizations including emerging startups use to assess their ventures and arrive at a projected growth of the new firms (Brooks, Heffner, & Henderson, 2014). Leiber, Stensaker, and Harvey (2018) suggested that the first step in the process of strategic

management involves the assessment of a firm's strengths and weaknesses versus opportunities and threats to attain a fit between internal and external capabilities. McFarlene and Curran (2015) stated that a SWOT analysis is a tried and tested strategic analytical tool often used by business organizations especially at the initial stage to evaluate the firm's internal and external business environment.

A SWOT analysis is a strategic management tool for emerging firms to identify and understand the internal and external environments of a firm relative to their strengths and weaknesses as well as opportunities and threats (Kapoor & Kau, 2017). The internal aspect of SWOT analysis relates to the strengths and weaknesses of the startup suggesting that the founder will convert the firm's weaknesses to strengths and threats to opportunities since the founder has some level of control. The external environment relates to how a startup founder assesses and identifies the opportunities offered by the market and the threats the venture must face in the global market; indicating that the founder will take full advantage of those opportunities while mitigating the threats which the founder has little or no direct control (Kapoor & Kau, 2017).

ROI. The value of a firm is typically measured by ROI, the valuation of the firm and management of capital investment (Worster, Weirich, & Andera, 2017; Lazzati & Menichini, 2018). Organizations use ROI to analyze the value of an investment, whether it is good for the investor or worth the investor's time (Phelps, 2018). Equity investors make or lose money based on the dynamics of the firm; as business value decreases or increases so does investment value decrease or increase; therefore, emerging founders must present what the investors can earn as a return on their investment by establishing

the present and future value of their ventures (Mishra, 2015). As a rule, no one cashes out any amount of stock in the venture prior to going public (Kaplan, 1995). Therefore, the strategy is to attribute the present value of the firm to future earnings (Tayeh, Al-Jarrah, Tarhini, 2015) since the details of any proposal often depend on the valuation of the startup as a key determinant of the amount of capital to be exchanged with the quantity of stock to be traded and the expected ROI. The founder must measure and present the ROI analysis to potential investors as part of the proposal and show what they can earn based on the present and future value of the firm (Tayeh, Al-Jarrah, Tarhini, 2015), for the startup to improve capital access to grow and scale into global markets.

Exit strategy. Exit strategy represents the last phase in the startup process for both the HPTS founders and investors who regard the exit phase as the main focal point of creating a profitable and viable venture (Pisoni & Onetti, 2018). Equity investors and entrepreneurs make investment decisions and identify the length of their involvement in a startup venture to maximize the opportunities of success and the value of their new business to cash in on their investment (Guo, Lou, Perez-Castrillo, 2015). Successful HPTS founders intended from the beginning to benefit from the financial value built by the firm at a reasonable future to return investors' capital (Pisoni & Onetti 2018). Therefore, emerging founders should properly plan the exit phase during the early-stage of the startup process to give potential investors options to harvest the financial value created by the startup to improve capital access.

Exit strategies for equity investors include initial public offerings (IPO), sale of all the shares of the company, purchase of the investor's shares by a third party or

acquisition, and buyback of the investor's shares by the company (Cotei & Farhat, 2017). Arora, Fosfuri and Roende (2018) said that while too few startups are acquired early, most startups plan to exit through acquisitions by large firms, suggesting that emerging firms must commit to exit either early or late. Startup acquisitions are shaped by the innovative strengths of the firm and employment growth, thus, startups with high quality products and innovations are the most favorable targets for acquisition (Cotei & Farhat, 2017).

Equity investors have distinctive characteristics and requirements to ensure risk mitigation and ROI to add value to portfolio companies (Gompers, Kaplan, & Mukharlyamov, 2015). Investors conduct due diligence for a comprehensive evaluation of investment proposals to identify and measure the integrity of deals, risk mitigation, and ROI (Croce, Tenca, & Ughetto, 2016). One scholar suggested that the success of HPTS ventures depends on efficient risk mitigation (Mishra, 2015). Investors reject business proposals for reasons linked to entrepreneurs' characteristics, poor management team, and lower levels of profitability (Croce, Tenca, & Ughetto, 2016). Simic (2015) and Mishra (2015) encouraged emerging entrepreneurs to present a compelling proposal with integrity that will pass the test of risk mitigation, ROI, and exit to reach and exceed the stage due diligence, integrity, risk mitigation, and ROI to convince investors to fund their deals.

The findings of the study, investment potential emerged as Theme 4, aligned with the existing professional and academic literature and the conceptual models for this study. I used member checking to return to participants to check for accuracy and reached

data saturation without yielding additional information, themes, coding, and the ability to replicate the study. The review of notes from direct observation and reflective journal corroborated interview responses without yielding additional information. I used methodological triangulation to cross-check all viewpoints of the data collected to extrapolate the meaning inherent in the data, mitigate personal bias, and develop a clear understanding of the research problem.

Emergent Theme 5: Investment Thesis

Investment thesis is a tool often used by HPTS founders to make definitive statements on deal proposals to investors on how their investments will create value for the customer, capture value for the firm and add value to investors' portfolios (Mishra, 2015). Caiazza and Ferrara (2016) suggested that an investment thesis is a tool when used by entrepreneurs, establishes future venture priorities, appropriate milestones, and maintenance of a rapid response team to increase a founder's likelihood of obtaining capital access. Investment theses with regards to capital funding are typically directed by investors' requirements (Mishra, 2015). Startup entrepreneurs often use investment thesis to make a compelling rationale to attract potential investors' attention to fund their ventures (Stein, 2017). Investment thesis is about the venture that fits investor's investment portfolio, the rationale to make investment (Bocken, 2015)

The findings of this study, investment thesis emerged as Theme 5, represents a strategy to improve technology startup capital access to grow and scale into global markets. P1 and P2 mentioned using investment thesis a strategic tool in packaging a

proposal to investors for capital acquisition to improve capital access to grow and scale into global markets. P1 responded,

"for additional information, I have been there and done that, so I would encourage anyone to put extra time and effort to prepare and create an exceptional investment thesis. Ask your accountant or attorney for help, it will pay off." P2 said, "founders should collaborate with their accountant to assist them in creating investment thesis that is closely aligned with the business model as this is a critical aspect of the proposal for creating the exposure founders desire."

Mishra (2015) asserted that the first tool of the VCIM is the investment thesis. Investment thesis highlights a firm's product or service, reviews the trends, prospects, and company strengths to provide the rationale for investing in a venture. Elements of an investment thesis underscore a firm's strategic priorities, lists appropriate milestones, and names a team responsible for addressing rapid and ad hoc developments (Caiazza & Ferrara, 2016). The likelihood of securing investment funding improves significantly when an investment thesis is used as a strategy in a proposal to investors for capital acquisition.

The findings of study, investment thesis emerged as Theme 5, aligned with the existing professional and academic literature and the conceptual models for this study. I used member checking to return to participants to check for accuracy and reached data saturation without yielding additional information, themes, coding, and the ability to replicate the study. The review of notes from direct observation and reflective journal corroborated interview responses without yielding additional information. I used

methodological triangulation to cross-check all viewpoints of the data collected to extrapolate the meaning inherent in the data, mitigate personal bias, and develop a clear understanding of the research problem.

Emergent Theme 6: Measurement of Success

All HPTS ventures are not alike; some access equity capital and succeed, some raise equity capital and fail fast and at the same time, some startups bootstrap and succeed without external capital. Raising adequate capital can increase the probability for startup founders to succeed; however, successful capital acquisition does not necessarily lead to business success (Maier, Sandner, & Geibel, 2016). For instance, Louis Border successfully raised $1.2 billion and amassed several investors to support his Webvan venture to sell and deliver groceries to customers within a 30-minute window, and failed because of premature scaling (TenBrink, Keller, & Gelb, 2017). Vien (2015) argued that raising too much capital can be as disastrous as lack of capital access.

The findings in this study, measurement of success emerged as Theme 6, represents a strategy for improving technology startup capital success to grow and scale into global market. All participants articulated their intentions that obtaining funds for their ventures were a stupendous achievement; however, the management of the funds was equally critical to the success of their ventures. P1 articulated “We got investors to fund our deals but that was just the beginning until we successfully executed our plan and applied the funds to grow and scale.” P2 responding “it was a breakthrough for us to get funding hut it wasn’t time yet to celebrate until we turned another corner with scale production and subsequent profit.” P-3 measured success in terms of getting funded as

well as gaining learning experience. “Of course, the standard answer is if I received the money, I am successful [laughs]. In any meeting, I try to learn at least something, ask for feedback, and understand the mechanism.” P4 responded, “we successfully acquired the funds and strategized to leverage the resources and generated opportunities for growth, success with a generous ROI.” P5 stated that “we measured success not only by getting funding but also by the successful execution of the plan for positive result.”

Studies from the literature review, which discussed perceived HPTS success strategies and examples of HPTS ventures were directly related to Theme 6. Wasserman (2016) asserted that innovative ventures can succeed in raising sufficient capital and still lower the value of the company because the founders are not flexible in adjusting some strategies. Conversely, Yamakawa, Peng and Deeds (2013) found that many startup founders who experienced failure, learned from their experiences and return to raise investment capital for the growth and scaling of subsequent ventures into the global market. Startup founders do not measure their success by having access to adequate capital only, rather, they hold a holistic view of the venture, transitioning from a risky to a profitable and viable business. Successful entrepreneurs improve the odds of getting investments funded with investment thesis. Entrepreneurs who used investment thesis to focus on a firm’s strategic priorities including specific milestones and a well-prepared team to deliver on the milestones (Caiazza & Ferrara, 2016), succeeded in improving capital access. Investors do not invest in product or service that is not proprietary (Foster, Garrett, & Shastri, 2016).

The findings of the study, measurement of success emerged as Theme 6, aligned with the existing professional and academic literature and the conceptual models for this study. I used member checking to return to participants to check for accuracy and reached data saturation without yielding additional information, themes, coding, and the ability to replicate the study. The review of notes from direct observation and reflective journal corroborated interview responses without yielding additional information. I used methodological triangulation to cross-check all viewpoints of the data collected to extrapolate the meaning inherent in the data, mitigate personal bias, and develop a clear understanding of the research problem.

Emergent Theme 7: Passion and Preparedness

Renko and Tarabishly (2015) suggested that passion is intense positive feelings experienced by individuals that engage in business activities, with direct influence on entrepreneurial pursuit as well as the results. Entrepreneurial passion serves as the foundation for new venture creation (Uy, Jacob, & Gielnik, 2016), without which entrepreneurs cannot survive the uncertainties inherent is running HPTS ventures (Mishra, 2015). Entrepreneurs who demonstrate a higher standard of perceived entrepreneurial passion, presenter preparedness, and presentation designs may capture investors' attention resulting in capital access (Galbraith, McKinney, DeNoble, & Ehrlich, 2013). Entrepreneurial passion signals intense commitment to the new venture (Srivastava, Oo, Sahaym, & Allison, 2018).

The findings of this study, passion and preparedness emerged as Theme 7, represents a strategy for improving technology startup capital access to grow and scale

into global market. P1, P2, P3, P4 and P5 discussed how passion and preparedness contributed to improving their ventures' capital access to grow and scale into global markets. Based on Theme 7, P1 stated,

the most important feature I can tell you is: prepare, prepare, and prepare, demonstrate passion for the product not only during the elevator pitch presentation but throughout the overall proposal process. I started my pitch stating who we are, what problem we are solving and for who, time to market, and profile of the management team.

P2 noted that pitching the proposal with passion reassured the investors of the drive to succeed. P3 stated, "there is nothing like over-preparation because the more I prepared, the more I became passionate and confident about my presentation." P4 noted that founders "should understand there is no substitute for adequate preparation in every stage of the investment proposal." P5 noted, "I was so passionate about coming up with the product to solve customer problem and that was the key feature in my presentation pitch that influenced investor's decision to fund our company. Secondly, there is no alternative to preparedness."

Drnovsek, Cardon and Patel (2016) agreed that entrepreneurial passion triggers meaningful and creative business outcomes associated with venture growth. Murnieks, Cardon, Sudek, White, and Brooks (2016) revealed that traditional equity investors value passion and tenacity when evaluating entrepreneurs for investment purposes. Garrido-Moreno, Lockett, and Garcia-Morales (2015) suggested that technology and organizational readiness are key drivers to successful knowledge management activities.

Tasnim, Yahya, and Zainuddin (2014) found that passion drives entrepreneurship, that the more an entrepreneur is passionate, the greater the likelihood of business success. Weber, Geneste, and Connell (2015) found that preparedness is an important strategy for growth success. Successful startup entrepreneurs share similar traits including passion and preparedness to change the world while exploiting the change as an opportunity to solve customer problem.

The findings of this study, passion and preparedness emerged as Theme 7, aligned with the existing professional and academic literature on technology startups, and the conceptual framework for this study. I used member checking to return to participants to check for accuracy and reached data saturation without yielding additional information, themes, coding, and the ability to replicate the study. The review of notes from direct observation and reflective journal corroborated interview responses without yielding additional information. I used methodological triangulation to cross-check all viewpoints of the data collected to extrapolate the meaning inherent in the data, mitigate personal bias, and develop a clear understanding of the research problem.

Emergent Theme 8: Prevention of Stock Dilution

Every HPTS venture is initiated with 100% stock in the firm. However, every instance the founder trades the company stock in exchange for capital, or stock options are issued to the management team, co-founders, new hires, the stock in the company decreases (Zabala & Josse, 2014). To protect the value of stock in the venture and prevent stock dilution, the founder raises only the capital needed for the venture to avoid weakening the firm and guard stock value (Kaplan, 1995; Zabala & Josse, 2014).

Risks are inherent in technology startup ventures (Tanev, Rasmussen, Zijdemans, Lemminger, & Svendsen, 2015), among such risks are equity investment incentive-alignment risks when entrepreneurs propose capital acquisition to investors (Mishra, 2015). Equity firms prefer increase in the share of their stock in a venture, not decrease (Li, 2015). Extreme dilution of stock in startups leaves the founders without enough incentives to trade capital in exchange for stock to meet the critical needs of the venture of the new firm including expected and unexpected expenses.

The findings in the study, prevention of stock dilution emerged as Theme 8, represents a strategy for improving technology startup capital access to grow and scale into global market. P2 through P5 were unanimous on how they prevented stock dilution in their various firms, except for P3. P3 approached the strategy of preventing stock dilution with an anti-dilution clause to protect the investor from equity dilution that may result from issuing of stock at a lower price to later shareholders than early investors originally paid. P3 stated,

> Yes, we have anti-dilutional agreement for the main founder. It is a positive part to my company, since we started the discussion with investor after two years in the market. Technology is technology, is innovation so go ahead fast, we cannot wait for investor capital money and waste opportunity. So, we started to reply the customers after the product [or production], we started to concentrate more to sell the product. It is long term a good choice because when I sit with a VC and they say is this anti-dilution agreement and I say yes this is my request, they cannot say no. We have more margins to negotiate.

P2, P4, and P5 articulated their preference to bootstrapping by "raising only the capital needed for specific business purposes."

A key role of HPTS founders is efficient risks management (Mishra, 2015). Therefore, startup founder must effectively protect and increase the value of the shares of stock in the venture for shareholders to cash out at the exit phase (Kaplan, 1995). As the number of outstanding shares in a firm increases, shareholders' stock dilutes or decreases. Investors shy away from startups without outstanding number of shares in a firm because there are no incentives for investors in such firms.

The findings of the study, prevention of stock dilution emerged as Theme 8, aligned with the existing professional and academic literature on technology startup capital access, and the conceptual framework for this study. I used member checking to return to participants to check for accuracy and reached data saturation without yielding additional information, themes, coding, and the ability to replicate the study. The review of notes from direct observation and reflective journal corroborated interview responses without yielding additional information. I used methodological triangulation to cross-check all viewpoints of the data collected to extrapolate the meaning inherent in the data, mitigate personal bias, and develop a clear understanding of the research problem.

Applications to Professional Practice

The identification of strategies for improving technology startup capital access is crucial for startup founders to grow and scale into international market. Most emerging venture firms lack sufficient capital to develop, produce, and market their products (Simic, 2015). Inaccessibility to external capital can hinder the survival of new

businesses and may contribute to business failure (Coleman, Cotei, & Farhat, 2014; Rector, Fatoki, & Oni, 2016). Unlike established firms, emerging ventures face challenges dealing with untested products, customers, and business models that may result in product rejection and business failure (Blank, 2006). The findings of this study aligned with the conceptual models used in this study: efficient risk management and ROI. Investors evaluate deal proposals to ensure their resources of time and money are worth the risk structured in the proposals, while providing the founders incentives to entice sustained activities (Mishra, 2015).

Some startup founders' initial business idea is often an educated guess and deal with highly uncertain and untested products, customers, and business model (Blank, 2006). Successful startup founders search for and conduct tests of their initial ideas to ensure *customer-product-market* fit as well as a scalable and repeatable business model unlike established firms using the seven steps of the scientific methods (Blank, 2006). Fewer than the 5% of investment proposals received that passed the stage of due diligence are considered suitable for investment, causing increasing concern for HPTS industry to develop, produce, and market their products (Simic, 2015). High potential technology startup founders who can access external capital improve the odds of growing and scaling their ventures and the odds of gaining capital access improve with risk reduction and exceptional rate of ROI (Mishra, 2015; Verner, Brereton, Kitchenham, Turner, & Niazi, 2014). Magni (2015) stated that entrepreneurs with products that solve customer high value problems can prevent product rejection in the market and increase the rate of ROI. Study findings might assist emerging *entrepreneur-founders* to gain a

better understanding of the strategies for improving capital access to grow and scale into global markets.

Implications for Social Change

Knowledge based startup activities and processes drive innovation in the U.S. with impact on global economy (Maier, Geibel, & Sandner, 2016). For over three decades, venture capital industry has dominated the financing of some innovative U.S. companies, financing 60% of the largest firms that grow and scale into global market including Apple, Google, Intel, Fedex, Facebook, and Microsoft (Strebulaev & Gornall, 2015). However, despite providing mentorship, strategic guidance and network access most of the VC-backed firms fail while some have outstanding success. In 2014, VC industry raised over $31 billion for young and innovative HPTSs, employing four million people (Strebulaev & Gornall, 2015). The findings of this study could contribute to positive social change through emerging founders identifying strategies for improving technology startup capital access to grow and scale into global markets.

Simic (2015) stated that lower than 20% of investment proposals received and reviewed by angel investors reach the stage of due diligence considered for suitable investment with less than 5% approved for investment after much scrutiny. The adoption of these strategies could affect social change by influencing startup founders to improve capital access to grow and scale into global markets. Approving more investment proposals will increase more startup firms growing and scaling into global market, creating more jobs and personal wealth and economy growth. The findings of this study could assist emerging technology firms to adopt strategies that could impact HPTS

capital access, create value for customers and capture value for firms and stock option for the benefit of the employees and by extension their families and communities.

The findings from this study might be of great benefit to the Silicon Valley, the state of California and the global community; the increase in the rate of deal proposals approved could result in the in-flow and out-flow of more funds into the Silicon Valley and global communities to pay for tradable jobs around the world to benefit families, local community centers, and schools, courtesy of individuals who benefit from the small contract jobs. The global technology startup communities could also gain valuable knowledge from the study findings about strategies to improve technology capital access to grow and scale into global markets. The study findings may contribute to the wealth of knowledge about capital access.

Scholars and researchers may utilize the findings of this study to explore a better insight about the strategies HPTS founders used to improve capital access to increase venture growth and scalability into global market. Improving technology startup capital access to grow and scale into global markets would not only create flow of funds into the Silicon Valley region but also create jobs, individual wealth, corporate wealth, economic wealth both in the local and global community. The funds that flow into the region can establish public parks, new schools equipped with computers, introduce and expand more technology short courses in community colleges for skill acquisition and more centers for kids to how to learn coding. Learning to code can improve a child's networking, critical thinking, problem-solving, creativity, and processing skills needed in the workplace.

Recommendations for Action

Emerging entrepreneurs must set aside time and effort to conduct a requirement-gathering session during the pre-startup phase to strategize and plan because once the firm is up and running, the execution of the strategies and plans must begin and no time for planning (Bulley, Allen, & Baku, 2014). Knowledge-based startups, unlike other forms of startup entrepreneurship, require different approaches to meet early and long term needs of the ventures including human, financial, physical and intellectual resources (Fairlie, Morelix, Reedy, & Russel, 2016). Startup founders must acquire these resources and combine them in ways that will allow the startup to operate sustainably until the sales of product or service achieve positive cash flow to cover all expenditures without equity investment (Allen, 2015). However, most startups are hindered by lack of capital for operation and development, causing entrepreneurs to turn to equity investors for external capital as well as collaboration, guidance, and support. Emerging entrepreneurs should consider the following recommendations for action when initiating a startup venture, keeping in mind this is not an exhaustive list.

Human resources. These types of resources comprise of individuals such as the founding team, advisors, mentors and independent contractors (Allen, 2015). Emerging entrepreneurs are encouraged to consult their attorneys and financial advisors on asset protection issues, tax advantages, and estate planning and selection of appropriate business form (U.S. Internal Revenue Service, 2016). Startup entrepreneurs are also encouraged to consult attorneys to assist in choosing appropriate legal entity in anticipation of engaging venture capital firms in a bid to raise capital as some choices of

legal entities can restrict new firms from raising capital from public offerings (Hopson & Hopson, 2014).

Physical assets. These types of assets include equipment, inventory, and office or plant space (Allen, 2015). The acquisition of business assets including Inventory, office equipment, and business location are all important assets for business operation. Startup ventures are risky and disruptive; one approach investors use to ensure proper management of risks is by conducting due diligence of information provided by the firm seeking capital acquisition (Cole & Lysiak, 2017). Investors conduct thorough investigation of the firm before starting negotiations (Cole & Lysiak, 2017), and move forward towards negotiation when satisfied that everything item on the checklist is correct (Abor, 2016). Emerging entrepreneurs should document and preserve a checklist of all physical assets of the new firms in preparation for due diligence procedure.

Financial resources. The financial resources of a new firm consist of cash, equity, and debt (Allen, 2015). The initial startup capital typically is raised from personal savings, family and friends (Gregson, 2014). Most startups raise equity capital from business angel and venture capital firms (Drover, et al., 2017). Debt may include money the new business owes to the company vendors subject to verification by investors during the due diligence process. Emerging entrepreneurs are encouraged to maintain a detailed accounting record of these resources as doing so may impact capital access for new firms.

Intellectual resources. Intellectual resources include brand name, logo, patents, copyrights, licenses, and intellectual proprietary (Allen, 2015). Knowledge-based ventures are driven by intellectual resources, a set of intangibles including resources,

capabilities, and competencies that drive startup performance, and value creation (Rompho, 2018). Successful entrepreneurs combine these vital resources efficiently to enhance the growth of new ventures (Allen, 2015). Emerging entrepreneurs should also adopt the use of these vital resources for competitive advantage.

Launching a startup. Startups are small business (Blank, 2006). However, startups are not a small version of a large corporation that emerging entrepreneurs can start with the execution of the business plan since entrepreneurs' initial ideas are guesses, the customer-product-market are unknown and untested new entrepreneurs. Therefore, knowledge-based startups are temporary organizations for the founding team to utilize in searching and discovering the customer–product–market fit as well as a scalable and repeatable business model (Blank, 2006). Lindkvist and Stjernberg (2016) stated that successful startup founders suspend the execution of the business plan until the discovery and validation of the product or service features, customer segment, and business model, all of which remain unknown initially, by testing each idea before hiring managers, supervisors, and employees to execute the business plan.

Scientific method. Ketokivi and Choi (2014) argued that researchers must have access to the logic that generates the conclusion and premises that support it as a characteristic of transparency. The discovery and validation processes for customer-product-market fit follow a familiar methodology known as the scientific method (Blank, 2006). Scientific method can take a variety of forms, typically consisting of hypothesis formulation, testing, and pivoting or modification, systematic observation, testing,

practically they are similar in nature. The seven basic steps of a typical scientific method to adopt any founding team can adopt are as follows:

High potential technology startup ventures are typically managed and controlled by the founding team who work collaboratively to accomplish tasks depending on previous startup experience (Klotz et al., 2014). The first step in the process of scientific method is to identify the problem through the formulation of problem or research question. In this case, the founding team should be curious to know what need or problem does their firm intend to solve for the customer; whether the customer has a need for the product, whether the new business idea will yield success for the firm, and if the business model has product-market fit? The second step in the process is for the founding team to formulate hypotheses as a statement that proposes to answer to the research question. The founding team can provide explanation at this stage whether they are in business to solve this type of customer need or problem. Additionally, the team should state the predicted findings of the formulated hypothesis in measurable terms. The third step in the scientific method involves observing and testing of each hypothesis formulated to see whether is acceptable or not. Gathering as much information as possible can help the founding team to prove whether the stated hypothesis is acceptable or not. The steps involved in hypothesis testing include writing the hypothesis, creating an analysis plan, analyzing the data, and interpreting the result.

The fourth step of the scientific method involves the organization the data to explain or interpret the data and whether the experiments and observations support hypothesis. Data results can also be represented in form of raw data, or graphs to provide

general summarization of the data. The fifth step is to draw conclusions often in the form of a statement that explains or summarizes the research and result of the experiment. At this stage the founding team should be able to provide answers to the research question and state whether the data supported hypothesis or not.

In step six, if the answer is “no” or if the observation and experiment do not support the hypothesis, the search to uncover why hypothesis failed begins followed by pivoting, a process that starts all over the seven steps from the beginning until both observation and experiment support the hypothesis (Blank & Dorf, 2012). If the answer is “yes,” then the founding team should draw conclusions about the customer, problem-solution, product-market fit, and business model. The seventh and final step in the process involves the communication of the findings for informed product development process by the founding team and building the startup to grow and scale.

Some emerging entrepreneurs in knowledge-based business approach the process of launching their startups haphazardly; launching a startup requires precise instructions for every required process, skipping one can result in a catastrophic failure (Blank, 2006). Startups are typically managed and controlled by the founding team who work collaboratively to accomplish tasks depending on previous startup experience (Klotz, Bradley, Busenitz, & Hmieleski, 2014). Startups with serial entrepreneurs or experienced team members who work previously in startups succeed more than inexperienced founding teams, suggesting that emerging entrepreneurs must carefully assemble the founding team to improve capital access.

The study findings are critical to emerging founders, academicians, and researchers for a better understanding of knowledge-based business processes and practices for improving capital access to grow and scale into global markets. I will disseminate the findings of this study at conferences, seminars, *Meet Up* groups, literature publications, share with network affiliates to stimulate learning in the fields of innovation and technology entrepreneurship.

SWOT analysis. The first step in the process of strategic management of a new venture is to assess the new firm's strengths and weaknesses versus opportunities and threats to match a fit between internal and external capabilities (Leiber, Stensaker, & Harvey, 2018). New business organizations often conduct a SWOT analysis during the early phase to assess and understand their internal and external environments with regards to the strengths, weaknesses, opportunities, and threats facing the new businesses (McFarlene & Curran, 2015; Kapoor & Khan, 2017). In a SWOT analysis, the internal environment relates to the strengths and weaknesses of the startup where the founder has control to convert the firm's weaknesses to strengths and threats to opportunities. Conversely, the founder has no control in the external environment but assesses the opportunities offered by, as well as, identify the threats facing the venture in the global market to take full advantage of the opportunities while mitigating the threats facing the firm (Kapoor & Kau, 2017). Emerging entrepreneurs are encouraged to conduct a SWOT analysis of their firms to illuminate the excellent potential of their ventures in the interest of approaching investors for capital access.

Wolf and Terrell (2016) reported that high potential technology startup employed nearly 17 million people in 2014, accounting for 12% of total job output and contributing to almost 23% of U.S. economic output. Startups in the Silicon Valley cut across all industries faster than other technology clusters around the world (Gupta & Wang, 2016). Emerging entrepreneurs must be aware that the time for strategizing and business planning process is during the pre-startup phase of the venture, because after company building managers and supervisors are hired to executive the business plan (Bulley, Allan, & Baku, 2014). Based on the findings from this study, my recommendation is that emerging technology founders do the following:

The study findings are critical to emerging founders, academicians, and researchers for a better understanding of knowledge-based business processes and practices for improving capital access to grow and scale into global markets. I will disseminate the findings of this study at conferences, seminars, *Meet Up* groups, literature publications, share with network affiliates to stimulate learning in the fields of innovation and technology entrepreneurship.

Recommendations for Further Research

The purpose of this qualitative multiple exploratory case study was to explore the strategies HPTS founders used to access capital to grow and scale into global markets. Some in-coming students of Walden University DBA program lack potential research agenda for furthering scholarly deliberations about the business problem. This study was limited to certain issues that were out of my control, as the research instrument. I

recommend those issues for further research to new students without research agenda to improve technology startup capital access to grow and scale into global market.

This research was limited to cross-sectional, qualitative, and multiple exploratory case study involving HPTS firms in the, California. I recommend for further research a longitudinal study, mixed methods, diverse set of participants (early and late stage founders, equity investors, advisors, mentors, serial entrepreneurs) and more than one technology cluster at various locations. The study was also limited to the sample size of five firms. I recommend for further research, the adoption and use of large sample size with the potential to generate various themes. Inexperienced researchers often face significant challenges in organizing participants' statements into themes to gain a deeper insight to the event. I recommend for further study, an experienced researcher to use a wide sampling and quantitative approaches over an extended amount of time to explore strategies for improving technology capital access to grow and scale into global markets.

This study is limited by biases that can affect the study findings and conclusions. I recommend for further study, that researchers take steps to engage in the process of bracketing to mitigate personal biases. This study was limited by community business partners' access denial to researcher to reach study candidates with potential to affect data collection. Unless a researcher has a good networking relationship with community business partners, I recommend for further research, the use of networking sites such as LinkedIn to identify and directly contact potential participants.

In this study, I focused on the traditional sources of equity capital for HPTS venture investments. I recommend for further study, an exploration of FinTech firms as

an alternative source of venture funding and compare the advantages with the traditional equity capital access to grow and scale into global markets.

Reflections

I applied the qualitative multiple case study to explore the strategies for improving technology startup capital access to grow and scale into global markets. The Walden University doctoral research process enhanced my research capability and expanded my worldview to gain a better understanding about mapping or aligning each detail and intricacy to the rubric as required by the doctoral research program. This doctoral study program has been helpful because I have learned and improved on several skill-sets. My analytical and problem-solving skills, including written and oral communication, interpersonal, information and research management, self, organization, and project management skills have been enhanced by this program have been enhanced by this program. This doctoral program has enhanced my scholarly as well as professional knowledge about equity financing, innovation, technology entrepreneurship, and strategies for improving capital access to grow and scale into global market.

I reflected on iteration and pivoting as inherent properties in a research study, especially with the dynamism of information emanating from technology industries. I learned through this program, that biases are inherent in every research and one can only mitigate bias, not eradicate it. I used purposive sampling approach to select from five HPTS firms, which successfully overcame equity capital access constraints and acquired enough funding to grow and scale into global market. I used qualitative multiple exploratory case study design to conduct a semistructured face-to-face interview for data

collection to answer the research question. After transcribing and interpreting the data, I returned for member checking to ensure my interpretation was correct and kept notes on a reflective journal where I documented some of what I directly observed during the interview sessions. I conducted methodological triangulation to cross-verify multiple methodologies to add depth to data collection (Fusch et al., 2017).

I was surprised at the data that emerged from one of the participants which varied from other participants. The firm is a *go-global* startup from Italy that already procured the minimum viable product or prototype before migrating to the Silicon Valley. The firm's founder was culture-shocked to find venture capital investors in the Silicon Valley use efficient management of capital acquired from angel investor during the development stage to grant capital access to a founder for growth stage activities. In this case, the go-global from did not have that record and I interpreted this as an unusual proposal as the founder spent more time looking for investors than was necessary. When a founder has access to capital from business angels, the founder is often successful in gaining access to venture capital funds to grow and scale into international market. Although the go-global venture had excellent investment potential, funding was still required for growth activities. Other than this experience, the study findings aligned with the professional and academic literature on strategies for improving technology capital access to grow and scale into global markets.

Conclusion

The purpose of this qualitative multiple case study was to explore the strategies for improving technology capital access to grow and scale into global markets. I collected

data from 5 participants in five HPTS firms, the overarching theme was capital constraint including seven subthemes that emerged from the thematic analysis of the data collected from the face-to-face interviews and observation, member checking, and reflexive journal: (a) collaboration, guidance, and support; (b) identification of potential investor, (c) investment potential, (d) investment thesis, (e) measurement of success, (f) passion and preparedness, and (g) prevention of stock dilution.

The study findings aligned with the conceptual models, VCIM and CDM and indicated that HPTS founders used certain strategies for improving technology startup capital access to grow and scale into global markets. The ability of HPTS founders to identify certain requirements and acquire them to combine and operate until sales of the product achieve positive cash flow to cover all expenditures without equity investment is critical (Allen, 2015). The required resources include (a) human resources, comprised of individuals such as the founding team, advisors, and independent contractors; (b) physical assets, involving equipment, inventory, and office or plant space; (c) financial resources, which consist of cash, equity, and debt; and (d) intellectual resources, including brand name, patents and copyrights, licenses, and proprietary knowledge (Allen, 2015). The findings of this study supported the professional and academic literatures on venture capital access strategies (Harel & Kaufmann, 2016; Madrid-Guijarro, García-Pérez-de-Lema & Van Auken, 2016). Emerging founders should employ these strategies for improving technology startup capital access to grow and scale into global market.

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Appendix A: Interview Questions

Participants will answer the following questions:

1. What barriers have HPTS founders faced when accessing equity capital for business investment and scale?
2. What strategies did you use to access equity capital to invest and scale your startup?
3. How did you measure the success or failure of these strategies?
4. As a technology startup founder, how have you determined which equity capital firm to access for capital?
5. What key features on your presentation deck have influenced an investor's decision to provide equity capital access and scale your company?
6. In what ways did you meet investors' demands for risk mitigation and ROI to secure capital?
7. How did you protect the value of stock in your business by accessing equity capital?
8. What additional information can you provide on ways to improve startup firms' access to capital?

Appendix B: Interview Protocol

The interview protocol will consist of the following seven steps:

1. Opening statement: Greet participant, introduction (me first, then participant).
2. Participants expected to have read the consent form and provided their consent through e-mail within 48 hours, assenting to participate in the study. I will show appreciation by thanking participants who agree to participate in the study. In addition, I will provide participants information about the member checking process due to follow completion of transcription and interpretation of the data. Further, I will set up appointment with participants to assist with member checking procedures to ensure the reliability and validity of the data.
3. I will provide participants with a print-out (hard copy) of the informed consent letter for their record.
4. I will audio-record the interview with a voice stamp of the date, time, and location of the interview.
5. I will identify the sequential representation of interviewee's name such as "Participant P1" on the audio recorder form, interview form, and document same on the file I will maintain prior to commencing the interview.
6. All participants will be allowed sufficient time to respond fully to each predetermined question and follow-up or probing questions, if necessary.
7. Upon completion of the interview, I will thank each participant for their time and contribution to the study.