## Impact of Social Media on the Success of Technological Entrepreneurial Ventures



#### Author

#### Zamah Bukhari

Registration Number

## NUST201464623MCEME35614F

Supervisor

#### **Dr Muhammad Tahir Nawaz**

DEPARTMENT OF ENGINEERING MANAGEMENT

COLLEGE OF ELECTRICAL & MECHANICAL ENGINEERING

NATIONAL UNIVERSITY OF SCIENCES AND TECHNOLOGY

ISLAMABAD

OCTOBER, 2017

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#### Author

#### Zamah Bukhari

## Registration Number

#### NUST201464623MCEME35614F

A thesis submitted in partial fulfillment of the requirements for the degree of MS Engineering Management

## Supervisor

Dr Muhammad Tahir Nawaz

Thesis	Supervisor	's Signature:	
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## **Declaration**

I certify that this research work titled "Impact of Social Media on the Success of Technological Entrepreneurial Ventures" is my own work. The work has not been presented elsewhere for assessment. The material that has been used from other sources it has been properly acknowledged / referred.

Signature of Student Zamah Bukhari NUST201464623MCEME35614F

## **Language Correctness Certificate**

This thesis has been read by an English expert and is free of typing, syntax, semantic, grammatical and spelling mistakes. Thesis is also according to the format given by the university.

Signature of Student Zamah Bukhari NUST201464623MCEME35614F

Signature of Supervisor

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## Acknowledgements

The process of research could have been not possible without the constant blessing of Allah Almighty. I can't thank enough for the support and courage Allah Almighty bestowed me with to complete the task.

My utmost gratitude is for my Supervisor Dr Muhammad Tahir Nawaz for his constant support and motivation. I'm extremely thankful to Dr Faheem Qaisar Jamal for his guidance and help. I'm obliged by my complete GEC members for assisting throughout the process of research.

I want to thank especially Zunaira Sajjad for her help in the research phase and all friends and family.

Dedicated to my family and friends like family, without their incredible
support and encouragement, the work of this extent could not have been
imaginable

#### **Abstract**

Business methods and practices have changed due to advancement in technology. The tools of technology have brought a paradigm shift in the business techniques. Social media has now become a significant factor for the entrepreneurs for entrepreneurial growth and development. The study discusses the impact of Social Media on the success of technological entrepreneurial ventures in Pakistan. Entrepreneurial success is dependent on uniqueness, innovation and adoption of new methods for survival. Social media is a powerful medium which influences the business and lives these days. Survey based study is carried out to collect the data from entrepreneurial ventures through in-person filled questionnaires to infer the results of research. The sample of research includes the entrepreneurial ventures of software industry in Pakistan. The research studies the impact of social media practices of marketing, branding, networking and communication on the entrepreneurial success. Statistical analysis of correlation and regression is performed on the data to study the association between success and social media. The results show that strong impact of social media is found on the success of entrepreneurial ventures. The strongest significant relationship is found between social media communication and networking with the technological entrepreneurial growth and success. The study reflects the importance of social media in business growth. Social media is an effective and efficient tool for the promotion and success of business. Social media acts the basic strategic factor of entrepreneurship. Social media can help in the value creation and innovation process of entrepreneurial ventures.

**Keywords:** Technology Entrepreneurship, Social Media, Entrepreneurial Success, Social Media practices

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#### **CHAPTER 1**

#### INTRODUCTION

#### 1.1. Background

Technology innovation is a process of continuous evolution. The new innovative methods and practices are introduced with innovative products which makes the existing technology outdated. The developments in the field of business keep on changing. Few technological developments sustain in the business market due to continuous innovation. Social media is one factor in the business field which has longer life due to its impact and continuous evolving nature. Social media comprises all the networking sites and websites for information purposes. Social media provides a medium to communicate and share the information. The customer feedback regarding choices and interests is shared over social media. The open access to views and opinions leads to creativity and innovation which helps in the business as information is easily available. Social media has tools which are the networking sites and communication forums (Tapscott & Willaims, 2007).

The networking through social media helps in the finding of resources and usage of resources to maximum extent for the initiation and survival of entrepreneurial ventures. The networking helps in finding the financial assistance and maintaining good relations with the experienced people of the field. The networking helps in finding all kinds of resources which involves capital, technology, human resource, strategy and planning etc. (Zontanos & Anderson, 2004).

Business owners hardly possess the quality, skill and knowledge all combined that is needed to expand the business and its horizon. The business enterprise expansion is dependent in

a vital way on the networking. For networking, there is a need to find suitable people with required skill set, knowledge and expertise to carry out the tasks. These factors work for the benefit of organization or company. The business environment is impacted largely with social networking and gains and benefits can be obtained if social networking is exploited well. Social media gives the limit of sky for exploring social networking for business expansion and benefit. The flexibility of social networking tools can be beneficial in different aspects. The number of audience increases, the customer service is increased, the products and performance is enhanced and favorable practices related to pricing are followed.

The new era of technology has changed the marketing techniques and practices that are followed. The marketing plans followed for the product or service type of industry have become more efficient and advanced. The continuous innovations in the tools and practices makes firms and organizations deal with the unexpected situations. The marketing practices are defined by the invention of internet in this era of technology. Internet defines the process of interactivity and all forums of interaction which impacts the marketing strategies as well. The pattern of communication has completely changed with the innovation of internet. Social media provides a medium to communicate and interact with the customers and the number of customers increases with this practice. Communication with customers has been redefined with easy and efficient method (Smith & Tylor, 2004).

The social media influences the entrepreneurs and consumers equally. The significance of social media can be determined by the customers and entrepreneurs equally. According to statistics the Facebook users are nearly 800 million and active users on the daily basis are 250 million. The social media includes other social networking sites, video sites and blogs as well. the statistics reveal that 3.5 billion content items are shared through social media. The social media gives a

medium and channel of communication to entrepreneurs and consumers. To take maximum advantage of social media for marketing and growth of business, entrepreneurs are needed to understand the significance the usage methods of social media (Digital Buzz, 2012).

The social media can be used for the effective marketing and promotional strategy. The social media can be used for the efficient communication and customer satisfaction can be achieved. For the social media marketing the product or service existence on the media is significant. This allows in determining the consumer trends and demands. The existence and sustainability of entrepreneurial ventures is linked to continuous innovation and employment of new methods of business is vital for entrepreneurs (Cruz-Cunha, 2011).

Social media provides a medium of social networking which is cost effective in nature and is employed by the entrepreneurs. Social media is not the impactful factor for large organizations but can prove a significant factor for the promising entrepreneurs. Social media becomes a reason for the increase in the customer base due to direct communication with the customers. The survival and increase in the business is seen due to increase in the product sales and increase in the demand. The production and promotion of new products with social media had become easy and effective (Fruhling & Digman, 2000).

Social media resources aid in finding new business endeavors and prospects which can lead to the success of any entrepreneurial venture (Porter, 2011).

Social media helps in the communication of customers and entrepreneurs. With the social media interactivity, the number of customers increases. Customers become loyal to a product and customer satisfaction is achieved with the easy direct connectivity between consumers and product providers. The communication between the ventures and customers has been made possible due

to social networking sites. Social media has helped in the communication of information, promotional activities and customer satisfaction through direct feedback and demand analysis. Social media is a medium which creates new business associations and the older relationships are maintained (Mangold & Faulds, 2009)

The major task is the one to one communication between the customers and organizations. various social networking sites are used for the communication purpose to study the opinions and feedback of the customers. The customer loyalty and satisfaction can be achieved if the transparency is maintained between the firms and consumers. New methods of marketing and audience engaging methodologies can be used for the promotion of products. Social media marketing acts as the bridge in finding new customers, opportunities of growth and product development (Smith & Taylor, 2004).

Social media marketing has transformed and has increased the number of customers over social media communication and networking websites due to continuous innovation in the social media platforms. The business survival and success is dependent on the new marketing and business strategies followed. It is imperative for the entrepreneurs to employ the innovative methods of business and marketing for sustainable business ventures (Kotler & Armstrong, 2011)

#### 1.2. Rational of Research

Pakistan is a country with 191.71 million populations and 59% of population is between the age limit of 15-64 years. The public sector is unable to create job market for whole community. It's the need of time that success level model of technological entrepreneurship is introduced and people are motivated to take part in entrepreneurial ventures.

The GDP and HDI of Pakistan is low ("Pakistan", 2015). Pakistan is the country with second largest youth of the world. The youth of Pakistan needs positive outlets for the utilization of energy. The youth can be motivated towards entrepreneurship and successful entrepreneurial ventures can be initiated. This will increase the human living standard of people HDI and GDP.

In Pakistan, most of the time youth spends on social media and its getting into addiction. Here, in research the purpose is to reduce the gap between the entrepreneurial theories and practical implications of the theories.

Social Media has redefined the business methods, the research is carried out to study the impact on success of particularly technological entrepreneurial ventures.

#### 1.3. Problem statement

The medium of social media has redefined the business methods and techniques. In this new age of technology social-media is used for the marketing, branding and business promotions. The digital marketing techniques employ the social media for business success. The entrepreneurial culture is changing and trend of entrepreneurship is increasing. Social media is globally used for business these days. Although in Pakistan the trend of social media usage is lacking in entrepreneurial ventures. The lack of social media use in business and entrepreneurial ventures affects the success of business as it is used for promotion and marketing. The business growth is effected if appropriate new methods of technology are not employed in business of technology. The purpose of the research is to study the impact of social-media on technological entrepreneurial ventures and how the success of the ventures is influenced by the social media. The entrepreneurial ventures in the field of technology that includes software development and application development will be analyzed for the study of impact of social media. In Pakistan the

trend of entrepreneurship is positively increasing therefore, the target will be startups and entrepreneurial ventures in the region of Islamabad-Pakistan. Pakistan is a developing country so the ventures of entrepreneurship will be analyzed if new methods of business using social-media are used. Moreover, how social media creates an effect on the business will be studied as well.

#### 1.4. Research Questions

The research questions are mentioned below:

- What is the impact of social media on the success of technological entrepreneurial ventures?
- What is the effect of social media communication on the growth of technological entrepreneurial ventures?
- What is the effect of social media networking on the growth of technological entrepreneurial ventures?
- How social media marketing influences the growth of technological entrepreneurial ventures?
- What is the effect of social media branding on the success of technological entrepreneurial ventures?

#### 1.5. Research Objectives

Following are the research objectives of the study carried out:

 To study the impact of social media on the success of technological entrepreneurial ventures.

- To study the impact of social media communication on the success of technological entrepreneurial ventures.
- To study the impact of social media networking on the success of technological entrepreneurial ventures.
- To study the impact of social media marketing on the success of technological entrepreneurial ventures.
- To study the impact of social media branding on the success of technological entrepreneurial ventures.

#### 1.6. Significance of Research

Research has been carried out on the topic of Entrepreneurship and Social Media. Work has been done for SMEs, but it is to be worked upon that how sustainability and management of technological start-up venture can be improved with social media. There is no research in the region which studies the impact on success of technology startups and specifically software based with SM maneuvered technology related entrepreneurial venture.

#### 1.6.1. Relevance to National Needs

Following are the relevance of entrepreneurship with the national needs:

- It will help youth to take initiative for innovative ventures.
- It will create new business and job opportunities
- Channelizing energy of youth by using social media as a constructive tool.
- It will improve the stand-alone income from private sector.

#### 1.6.2. Advantages

Following are the advantages:

- Booming Software Industry
- Efficient use of Social Media
- Enhanced Economy
- New Market Niche Creation by Successful Entrepreneurial Ventures
- Stability
- Motivation

#### 1.6.3. Areas of Applications

Following are the areas of application:

- Engineering Management
- Entrepreneurship
- Social Media
- Economy
- Technology Management

#### **1.7. Summary**

The chapter discusses the basic idea of the study. The problem is defined and background to the problem is presented. The objectives and of the study are explained. The chapter describes why the research has been carried out on the topic and the importance of the following research. The research questions and relevance of the research with problem is discussed in the chapter.

#### **CHAPTER 2**

#### LITERATURE REVIEW

The chapter describes the background of the topic through the researches that have been carried out already. The chapter includes the concepts that are used in the study for research purpose and influence the research preposition in major ways.

#### 2.1. Entrepreneurship

The resources are the defining factor of entrepreneurship. The effective management and employment of the suitable resources leads to successful and sustainable entrepreneurial ventures. The resources can be of any form which includes capital investment, technological upgrades, skilled and trained human resource. Social media provides new chances for entrepreneurship. It offers finding new resources and methods to use the existing resources in effective way which boosts the entrepreneurship (Dodd.et al., 2002).

In entrepreneurship team work is promoted at all levels. The power is transferred to lower levels as well, as they play part in decision and strategy making as well. The successful organizations are the ones in which team work and organizational goals are objectivity. People work in unison to achieve the goals of organization as aim. The relations and contacts established in entrepreneurship is kind of resource which helps in achieving the defined goals of entrepreneurial ventures (Burt, 1992).

Entrepreneurial relations involve the contacts with other larger bigger firms, the people with expertise who help in the initiation of entrepreneurial ventures and other people who belong to the entrepreneurial fraternity (Hansen, 1995).

An entrepreneurial venture can stability run and remains sustainable on the basis of availability of resources. All kinds of resources are important for entrepreneurship which includes fiscal and human capital, technology and business strategies. The importance of resources is signified by the resource theory as well (Aldrich, 1986).

The exploitation of the opportunities available in entrepreneurship increase with the access to resources. The application on the chances available also increases. (Davidson & Honing, 2003). The three basic resources that are important are the capital investment, updated technology and skilled human resource. The equipped social network is effective for the exploitation of the opportunities and deployment of resources. If the access to appropriate contacts isn't possible the opportunities of entrepreneurship can get wasted and process of initiation of any venture gets lagged (Shane & Eckhardt, 2003).

Entrepreneurs are the leaders of the marketplace. The entrepreneurs are the source of job creation and creating opportunities. The efforts of entrepreneurs have changed the global economy and entrepreneurship is considered one of the most significant factor for the economic development (Kuratko, 2016).

Entrepreneurs survive in the market because of innovation and value creation. The entrepreneur is not the owner of small business only. Entrepreneur finds the opportunities out of problems and takes risks for the innovative success (Schaper, Volery, Weber & Gibson, 2014).

#### 2.2. Social Networking

The most influential factor in the creation and initiation of entrepreneurial venture is social networking (Baines, 1998). The social networks in the business sector involves all types of contacts and relations involving different resources like technology, human and information. The networks include the network of organizations and institutions as well (OECD,2000).

The most significant aspect of entrepreneurship is social networking. Social networking allows the interactivity among the entrepreneurial community. Social networking facilitates the communication between the promising entrepreneurs and sources of supplies (Johannisson, 1988; Larson 1991). The development process of entrepreneurial ventures heavily relies on the resources available. The resources are the core for the production and development of the entrepreneurial ventures. It demands strategy, plan, technology and people to execute the plan but importantly raw materials are required for production purpose (Teece, 1987). The networking grows with the social networking. The growth in the networking creates better sales opportunities. The resources are found and exploited with the help of social network which makes the entrepreneurial ventures successful (Hansen, 1995).

The existence of the entrepreneurial ventures relies on the effectiveness of social networking. Social networking provides a resource of interactivity between the entrepreneurial community. The associations among firms and organization are created with social networking. The communication in the process of development and initiation proves beneficial for the entrepreneurial ventures (Staber, 2001). Social networking allows the easy access to information of the market, new business opportunities. The information of the market is beneficial for the

business growth and success and is fetched through networking only (Barnir & Smith, 2002; Greve & Salaff, 2003).

Networking acts as an asset for the entrepreneurs. The entrepreneurial network may include the contacts from different organizations, people from similar firms, workers and friends from earlier jobs. The network of the entrepreneurs can be extended to acquire the information necessary for entrepreneurial ventures from people having more expertise and experience. The placement of the entrepreneurs plays a significant role in the entrepreneurial venture in the social network. The knowledge acquiring becomes easy and efficient due to position in the social network (Granovetter, 1973).

In the entrepreneurial process the social network facilitates through communication of significant information. The information flow is necessary for the entrepreneurial ventures and stability also achieved with the utilization of information in the entrepreneurial activities (Stuart, Toby & Sorenson, Olav, (2005). The entrepreneurial process involves multiple phases and stages. The communication and networking is usually at the highest at the initial phase of planning of the entrepreneurial venture (Greve & Salaff, 2003).

The gaps are possible in the social network and entrepreneurs. The removal of gaps and establishment of relationships in the network is of central importance for the emerging entrepreneurs (Burt, Kilduff & Tasseli, 2013).

The importance of some entrepreneurial bonds is more significant than rest of the bonds. It is significant to know the importance of relationships and how the relationship contact will transform over the time (Greve & Salaff, 2003).

The importance of the social networks in different phases of entrepreneurship is different.

The social network is vital in the or pre-startup stage of entrepreneurship (Butler & Hansen, 1991).

Social

The functionality of the social network changes according to phases of entrepreneurship. Very large network of relations are used when the entrepreneurial venture is planned to start-up. In the initial phase for taking advise and for decision making the strong social connections are utilized which are trust-worthy (Butler, John, Hansen, Gary, 1991).

Entrepreneurs utilize the social networks for decision making and problem solving. The strategies for business and success are formulated with the help of people in the professional and personal circle. The entrepreneurial outcomes can be dependent upon the type and quality of social networks as well. the quality and type can differ on the basis of gender as well (Robinson, Sherry & Stubberud, 2009).

The analysis of operational features of social networks in the entrepreneurial process is significant for the researchers, policy formulators' and entrepreneurs. The way in which entrepreneurs manage the social network and control the social resources to reach and access other available resources is the one of the main issues faced by entrepreneurs in the whole process of entrepreneurship (Granovetter, 1985) All contacts in the social network are not significant but the relationships which help in the growth of the entrepreneurial venture are of importance (Granovetter, 1992).

Social networks act as facilitator for the economic activity. The opportunities of the business increase and chances of entrepreneurial success also increase. The entrepreneur or the

emerging entrepreneur interacts with people of different organizations and people dealing with the similar entrepreneurial ventures (Fornoni, Arribas, & Vila, 2012).

Networking allows the entrepreneur to utilize the resources which are necessarily not under the ownership of the entrepreneur. The accessibility of the resources helps in the achievement of the entrepreneurial goals and objectives defined by the entrepreneur. The achievement of goals is itself success for the entrepreneur (Hansen, 1995).

The networking between the entrepreneurs' social network helps the emerging entrepreneur with the human and financial resources. The availability and access to resources is made by the people in the circle. The entrepreneurs can be provided with the help through experience and expertise. The relationships and networking can help in managing the angel investment for the entrepreneurial venture (Diaz, Cristina & Sara, 2009).

The social network can help in getting the funding for the entrepreneurial venture. The advantage of incubation programs is to provide the opportunities for financial resources. The angel investments and seed funding can be found with the expansion of the social network. The financial resource can help in the growth and stability of entrepreneurial venture (McQuaid, 2000).

The destruction of the business is possible if the contacts are not employed in the effective and efficient way. the lack of social networking can lead to the lack of accessibility of other resources which are vital for business functioning and growth. The contacts are to be maintained if the financial resources are to be acquired from the people in the social network (McQuaid, 2000).

The investors of the entrepreneurial ventures tend to take shares in the ventures in which the investment is done. The social networking allows the building of trust between the investor and entrepreneur (Stuart & Sorenson, 2005).

The social network allows the investors to check the credibility of the entrepreneurs. The transparency is maintained as no information gaps are possible in the closely knit social network. The investors can invest into entrepreneurial ventures when referred or come across through friends about the investment opportunity (Stuart & Sorenson, 2005).

#### 2.3. Marketing

The entrepreneurial ventures are established and survived due to presence of certain significant factors. Marketing is one major aspect of business survival and sustainability. The business opportunities have expanded in the new age of marketing (Bresciani & Eppler, 2010).

The most commonly and easy to use technique is word of mouth specially in the new entrepreneurial ventures (Stokes & Lomax, 2002). Entrepreneurship follow the certain practices of business of small medium enterprises and employs other resources of entrepreneurship as well (Walsh & Lipinski, 2009).

The smaller organizations use the method of word of mouth technique to attract the customers as the marketing strategy (Stokes & Lomax, 2002). The entrepreneurial activity involves the networking, technology and resources which are benefitting for the economy and follows some principles of Small medium enterprises in a favorable way (Walsh & Lipinski, 2009).

The marketing of products and service to the consumers and maintenance of good customer relationship for future loyalty and profits earning is the goal of any business. social media facilitates the marketing objectives of the firms in gaining profits and building healthy customer relationship. The purpose of marketing is to introduce the customers with the products or service being offered and sustainability of good relationship with consumers (Reijonen, 2010)

The prospects of business marketing have increased with the presence abundant amount of resources. The small business can employ the word of mouth and networking as the marketing prospects. The business is not dependent on the network of the firm or organization but the networks and relations of customers and consumers influence the business as well. new customers are attracted through word of mouth. The technique makes the product more reachable to customers through talks and words of recommendations. The networking in marketing is significant for the entrepreneurial ventures in the phases of start-up, progress and expansion. The small enterprises are dependent on the personal contacts. The economic system supports the features of small enterprises (Walsh & Lipinsik, 2009).

The new customers are attracted through word of mouth and good words recommended by the existing consumers. The good recommendation from the customers becomes more reliable than sources available for business. (Stokes & Lomax, 2002).

The technique of word of mouth involves the discussion regarding product, the campaigns and words used for promotion the social networks used for the marketing purposes. This marketing technique involves the themes and concepts of word of mouth method of marketing which involves satisfying the customers, discussion with customers and providing them honest information regarding the products. The technique involves the spreading of information regarding the product, responding to the customers according to concerns and demands. The opinions of the consumers are monitored and what image of the product is projected is analyzed as well.

According to surveys conducted in USA and UK word of mouth is the most significant and impactful marketing technique for small enterprises. The image of the product or service change according to the information and demand of the customers for the product or service.

The small firms face issues related to the marketing as well. though, word of mouth and networking aid the small enterprises for business and marketing yet the issues are not sorted completely. The solution to the marketing challenges is social media. Social media when used for marketing is less costly and requires less level of expertise for business. The entrepreneurial ventures are not equipped with huge amount of financial resources at the start-up phase like bigger organizations. social media marketing helps in overcoming the challenge of budget for entrepreneurs (Gilmore, Carson, Donnell., & Cummins, 1999).

The entrepreneurial growth and success is also dependent upon the marketing practices followed. The marketing strategies for the entrepreneurial ventures in the initiation phase vary from the bigger running organizations. The ventures in the start-up phase utilize the marketing practices and startegies which are cost effective and more interactive in nature.

The concept of integrated marketing is utilized. It constitutes the concepts of marketing and promotion, interactivity and feedback of customers on direct communication basis. The interactivity with customers is used to gain maximum benefit (Grunig & Grunig, 2001).

The marketing dimension has changed with the social media existence. Social media allows to redefine the promotional strategies of business. Social media facilitates in communication between the business and customers, the development and maintenance of good customer relationship. Social media makes a way for the communication of customers with each other which allows sharing of opinions and demands. The methods of marketing have changed with the social media tools. The power of information and interaction is distributed to lower level of organizations and is not limited to the executives' level. Social media had changed the distribution of information methodologies in the marketing scenario (Mangold & Faulds, 2009)

The marketing technique of relationship marketing focuses on the customer relationship. The relationship with customers are established and opinions and demands are learnt and less focus is given to the sales in comparison to customer focus (Peppers, Rogers & Dorf, 1999).

The relationship value is created between the business and customers as the close networking is shared through social media marketing. The personal interaction with the customers allows to achieve customer loyalty and dedication and satisfaction of customers is attained as well. There is a need to incorporate social media in the strategy of business and complete planning of all phases of entrepreneurial ventures. Social media helps in establishing the relationships with customers in the establishment phase. Usually the small organizations have short-term implementation plans and long-term market plans which becomes questionable (Coviello, Brodie & Murno, 2000).

#### 2.4. Social Media

Social Media provides a medium to the firms to gauge the customer needs and maintain relationship with the customers in an effective way. Social media helps the entrepreneurial ventures to extend and maintain the social network. The purpose of any business is to increase the customer base and to make the masses aware regarding the product/service. Social media is a platform where multiple customers are present on various social networking sites which makes the connectivity with prospective customers easy (Halligan, Shah & Scott, 2009).

Social media includes applications that are internet based and developed for web 2.0. the technological core of the applications is same as of other web applications. The applications are used to share the user content created (Kaplan & Haelein, 2010). Web.20 gives the capacity to communicate in two-ways. The customer demands can be learnt and responded accordingly. The

queries of customers can be sorted with one-to-one interaction over the internet (Fournier & Avery, 2011). In this modern era of technology, the use of social media has been increased by the customers and organizations as well (Jones, 2010).

Social media supports multiple applications and services. The selections of applications and web-services becomes a tedious task. The social media includes the social networking sites like Facebook, LinkedIn; micro-blogs which includes Twitter and more; video websites like YouTube and more; review and rating sites like Amazon and similar. According to statistics Facebook active users are more than 800 million and nearly 50% are active daily (Facebook, 2011). According to CEO of twitter the registered members on the site are nearly 200 million with active members of 50million on daily basis. The twitter supports around 230 million tweets daily (Tylor, 2011).

Social media is a source to provide new chances of business which prove to be beneficial. The response to customers has improved with the use of social media. The direct communication provides more satisfaction to customers. Social media influences both kind of organizations smaller and large scale (Kaplan & Haelein, 2010).

Social media provides direct connectivity with the customers. Even the people associate with the higher level of the organizations can into customer opinion details and feedback given by the customers directly about a product or service. Social media social networking sites have increased the engagement of the users in the products and communication and interactivity has become easier. (Reyneke, Pitt & Berthon, 2011).

Social media acts as a tool for promotion of the business and creation of new business ideas. Online word of mouth is created through the customers. The social media networking sites

helps in advertisements and promotion of products. In the entrepreneurial ventures, social media is used as the tool of marketing strategy due to customer engagement and creation of new business opportunities (Reyneke et al., 2011). In the entrepreneurial process reaching to the customer base in effective way is a complex task (Small Business Trends, 2011).

Social media has changed the tools and practices of communication with the customers. The modern technological entrepreneurial ventures use social media for effective interactivity between the customers and organizations. Social media acts as an aid to build effective relationship with the customers. The efficiency of the relationship is established by understanding the demands of the customers and realizing the customer demand trends. Social media provides the opportunity to interact directly to the customers and high chances of projecting the image of products through customer mutual interaction. The organizations have to monitor the opinions generated about the product in the masses, the control of social media content and information regarding the product/service positive or negative is not possible so the solution left is to use social media for responding to consumers and interaction with the customers to formulate positive image of the product/service (Mangold & Faulds, 2009).

Social media allows the customers to interact with one another. The interactivity among the customers acts as the extensive word of mouth strategy. The communication between the consumers is hard to control but can be influenced so that positive image of the image generated and perceived by the consumers can benefit the organization through increase in the sales by increment in the customers and earning the customer loyalty (Mangold & Faulds, 2009)

Social media helps to interact with the family and friends. The social media has made connectivity easier and social networks are extended with the use of social media. In the current age, the analysis of social network is carried out termed as social network analysis. The social

networks and relationships of people are analyzed in terms of level of connectivity shared between people. The relationships are analyzed in terms of mathematical calculations and visually (Krebs, V., 2008). Social network analysis helps in determining the significant relationships and determining the significant strategies for business which can prove fruitful for the emerging entrepreneurs.

The word social media can include all the computer based tools (systems and social media platforms) which transmit the information and knowledge related to human relations.

The term social-media is complex and have various meanings. The social media involves three basic social terms cognition, communication and community which all leads to collaborative work Fuchs, 2017). For team work and organizational goals achievement the collaboration is significant.

Social media has redefined how the customers and sales department interact. The social media can be used to gauge the impact of product and customer trends. The social-media is employed by the sales people to study the customer behavior which may lead to effective responsiveness and performance level of sales people in satisfying the customers (Agnihotri, Dingus, Hu & Krush, 2016).

Social media helps in the management of the customer relationship management. The capability of the interactivity leads to the customer engagement through social media. The customer relationship performance level of the firms and organizations is positively influenced with social media (Trainor, Andzulis, Rapp & Agnihotri, 2014).

#### 2.5. Entrepreneurial Success

The resources are the key factor in the growth of any entrepreneurial venture. The effective management of the resources and utilization to optimum level is necessary for the business success. The process of success starts with the availability and deployment of resources, chances of business are availed and good relations are maintained in the work environment. By following all the steps an entrepreneurial venture treads on the path of success (Aldrich & Zimmer, 1986). Entrepreneurs interaction leads to formulation of new contacts which helps in the resource finding and management. The resource management is the key factor of business survival. The busniess progresses only if continuous innovation is introduced and importance is given to innovative methods. The success of any venture is dependent upon the innovation and resource management (Hansen, 1995).

The resources found to the entrepreneurs makes a way for the entrepreneurial success. The new business chances are to be explored so that business can flourish. The chances of business growth and expansion are in direct relation with the availability of resources and how easily resources are accessed (Alvarez & Busenitz, 2001).

There is no proper definition of success. Success is complex term involving different theories and a mixture of multiple definitions. One definition of success cannot cover the whole concept of success. The sustainability and expansion can be termed as entrepreneurial success. The ventures with greater sales than expenditures are considered successful too. There are different factors that contribute to the growth off entrepreneurial ventures (Martinez, Aldrich, 2011).

The growth of entrepreneurial ventures is positively influenced by the social networks as the networking leads to acquiring of information and resources. The resources acquired are used to innovate and create value in product/service and growth of the venture is achieved (Littunen & Niittykangas, 2010).

Social networking is one of the major contributing factor towards the success of entrepreneurial ventures. Networking and business success shares a significant association with each other in direct proportionality (Chattopadhay, 2008).

The success of entrepreneurial venture is dependent on the complete process of entrepreneurship from initiation to continuous innovation in the products. The success is also dependent upon the leaders running the organizations, people belonging to entrepreneurial ventures and the level of networks maintained (Greve & Salaff, 2003).

The success of entrepreneurial process depends upon how well the emerging entrepreneurs manage the resources. The resources of all kinds technological, financial, human and social play an important role in the success of entrepreneurial ventures. The social media and networking has become significant specially with the advent of social networking sites like Facebook, Twitter and LinkedIn. The social networking has a vital role in the process of entrepreneurship, its development and success. The networking allows discovery of new opportunities and creation of new opportunities in sales, profits and job creation.

The entrepreneurial venture success and process of entrepreneurship are significantly associated with social networks. The importance of social network in the entrepreneurial process cannot be denied (Granovetter, 1973). The factors that influence the entrepreneurship in a positive are the size of the social network, the diversity among the people and backgrounds in the social network, the combination of good and very good ties and the amount of redundancy in the network

(Licht & Amir & Jordan, 2006). The relationships maintained in the social network in terms of strength and number are important for the entrepreneurial process as well (McQuaid, 2000).

The unexpected success in entrepreneurship open new gates for innovation. The most less risky innovation is in the case of unexpected success. Otherwise innovation in entrepreneurship is most likely. But most of the times the opportunity of innovation is neglected (Drucker, 2014).

# **2.6. Summary**

The chapter discussed the concepts of entrepreneurship, social networking, marketing, social media and entrepreneurial success. The concepts are explained through past researches in the history. The importance and relevance of the concepts to the study is explained. The literature presented creates a foundation for the research that is carried out.

#### CHAPTER 3

#### THEORETICAL FRAMEWORK AND RESEARCH DESIGN

The chapter discusses the theoretical framework of the study carried out. The pictorial representation of the framework is discussed to reflect the independent and dependent variables. The relationship and proposed outcomes of the theoretical framework will be discussed. The chapter will shed light on the research design of the problem under consideration. The population selection and sampling techniques chosen for the study will be discussed, the type and approach used to carry out the study will be elaborated in detail in the following chapter.

The medium of social media has redefined the business methods and techniques. In the new age of technology social media is used for the marketing, branding and business promotions. The digital marketing techniques employ the social media for business success. As the entrepreneurial culture is changing and trend of entrepreneurship is increasing, the purpose of the research is to study the influence of social media on the growth of technological entrepreneurial ventures. The entrepreneurial ventures in the field of technology that includes software development and application development will be analyzed for the study of impact of social media. In Pakistan the trend of technology entrepreneurship is positively increasing therefore, the target will be startups and entrepreneurial ventures in the region of Islamabad-Pakistan. Pakistan is a developing country so the ventures of entrepreneurship will be analyzed if new methods of business using social-media are used. Moreover, how social media creates an effect on the business will studied as well.

#### 3.1. Theoretical Framework

The theoretical framework gives the pictorial representation of the variables involved in the research study as shown in the figure. The cause and effect produced under certain circumstances with modifiers and mediators is presented for the better understanding of the study. The research involves the independent variables which constituted on the factors of business employing social media. The variables are Networking, Communication, Marketing and Branding. The impact of the variables in perspective of social media is studied. These variables determine the impact social media communication, networking, marketing and branding on success of entrepreneurial venture. The dependent variable is Social Media Success which encompasses the effect of social media on business success factors.

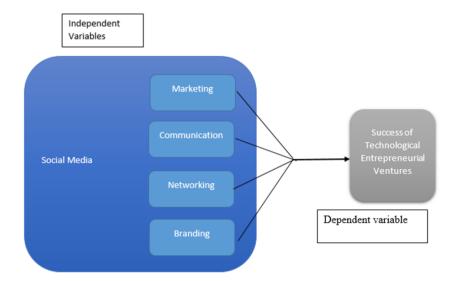


Figure 1. Pictorial representation of Theoretical Framework

## 3.2. Hypothesis Relationship

### 3.2.1. Main Hypothesis

H<sub>0</sub>1: Social media has no significant relationship with the success of technological entrepreneurial ventures.  $\rho_{(SM:TEV)} = 0$ 

H<sub>A</sub>1: Social media has significant relationship with the success of technological entrepreneurial ventures.  $\rho_{(SM; TEV)} \neq 0$ 

## 3.2.2. Subsidiary Hypothesis

H<sub>0</sub>2: Social media communication has no significant relationship with the success of technological entrepreneurial ventures.  $\rho_{(SMC: TEV)} = 0$ 

H<sub>A</sub>2: Social media communication has significant relationship with the success of technological entrepreneurial ventures.  $\rho$  (SMC: TEV)  $\neq 0$ 

H<sub>0</sub>3: Social media networking has no significant relationship with the success of technological entrepreneurial ventures.  $\rho$  (SMN: TEV) = 0

 $H_A3$ : Social media networking has significant relationship with the success of technological entrepreneurial ventures.  $\rho_{(SMN;\,TEV)} \neq 0$ 

H<sub>0</sub>4: Social media marketing has no significant relationship with the success of technological entrepreneurial ventures.  $\rho_{(SMM; TEV)} = 0$ 

 $H_A4$ : Social media marketing has significant relationship with the success of technological entrepreneurial ventures.  $\rho_{(SMM: TEV)} \neq 0$ 

H<sub>0</sub>5: Social media branding has no significant relationship with the success of technological entrepreneurial ventures.  $\rho_{(SMB; TEV)} = 0$ 

H<sub>A</sub>5: Social media branding has significant relationship with the success of technological entrepreneurial ventures.  $\rho_{(SMB: TEV)} \neq 0$ 

#### 3.3. Research Instrument

Research instrument is the measurement device used for research purpose. There are different types of instruments of measurement. The instrument of research employed in the current study is questionnaire. In a survey based research usually questionnaires are used as the measuring instrument (Lydread, 1991).

"The questionnaire includes 20 items which are closed ended in nature. The items of the questionnaire cover the survey questions related to communication, networking, marketing and branding and how social media influences the business success components of the entrepreneurial ventures. The questionnaire collects the responses on the Likert Scale values ranging from 1 to 5 with options scaled from Strongly Disagree to Strongly Agree respectively. The questionnaire is developed through adaptions from multiple sources of research" (Bukhari & Jamal, 2017). The questionnaire is tested through a pilot study and validated for survey purpose.

For research, it is vital that the research instrument employed valid and reliable. To measure the correct information and with correct amount of precision reliability and validity of the research instrument is carried out. There are different types of validation like Face validity, Construct validity and content validity (Del Greco, Walop & McCarthy,1987). The questionnaire is validated through concept of face validity.

#### 3.3.1. Face Validity

Face validity of any questionnaire is significant for the measurement of correct results (Nevo, 1985).

For this very reason the questionnaire is validated through the experts in the industry and people associated with the field entrepreneurship and social media.

### **3.4. Operational Definitions**

#### 3.4.1. Entrepreneurship

Entrepreneurship involves creation of new organization and the owners and managers are termed as the entrepreneurs. Entrepreneurship is the exploitation of opportunities while facing the risks in creation of value (Carton, Hofer, & Meeks, 1998).

Entrepreneurship covers different concepts and themes. The entrepreneur is the individual having the capacity and ability to initiate the organization. The theme of innovation projects that the product or service produced through entrepreneurship should be innovative and new in its formation. The entrepreneurial ventures can be profit generating and non-profit generating as well which gives birth to concept of social entrepreneurship. Entrepreneurship deals with the theme of uniqueness which means that unique product is to be created (Gartner, 1990).

### 3.4.2. Successful Entrepreneurial Ventures

The entrepreneurial ventures which have less gap between theory and implementation turn out to be successful. The research proves that industry having good communication and links with universities prove to be more successful (Siegel, & Wessner, 2010).

The success of any entrepreneurial venture depends on multiple factors. The management techniques employees in managing the entrepreneurial venture define the success of the venture. The success of entrepreneurial venture is dependent upon the techniques and methods used for the business to create innovation and uniqueness. The correct time and place

for the action or decision regarding the start and smooth working of the venture also defines the success of the entrepreneurial venture. The team and connections for the work also contribute to the success of entrepreneurial ventures (Vesper & Karl H., 1990).

Success of any entrepreneurial venture cannot be determined by the single determinant. The success of the entrepreneurial venture is dependent on the networking of the team. The social network plays significant role in the success of entrepreneurial ventures as it helps in the exploitation of resources and opportunities. The team plays role in the success of entrepreneurial ventures as the team works in unison to achieve the organizational goals efficiently and performance level increases. The ability of any organization to run stably in the market is also a contributor to the success of entrepreneurial venture. The organization which don't die after the creation and constantly innovate and create value lead to the success of venture. The abilities and experience of the entrepreneurs and their managerial skills influence the success of entrepreneurial ventures as well (Sharir, & Lerner, 2006).

The social interaction, communication plays a significant role in the success of any entrepreneurial venture. The management of any entrepreneurial venture is efficient if the gaps are not found in the communication among different departments. The goals can be communicated effectively and conflicts can be resolved effectively with better interaction among the resources. The success of entrepreneurial venture is dependent on the interactivity and communication (Lechler, 2001).

#### 3.4.3. Social Media as business tool

The term social media constitutes two words social and media. Being social means to connect and interact with the people and bond socially with living beings. As it is the human nature

that one has to build social connections for life existence and survival. The second word in the term is media. Media refers to the medium through which the communication and interactivity happens. The media used to bond with people around you and establishing good social connections with them. According to the survey 99% people state that the social media will have significant impact on the business. In this modern era, the social media defines the techniques, methods of business and strategies and planning for the success of business. Social media acts as the technique, tool and strategy for business these days (Safko, 2012).

In the age of technology Social media is used in personal lives and in the business lives as well. the overall strategy of the business is defined by the social-media and its usage. The use of social media is not limited to the marketing and promotions of the business rather it is the vital tool for the business success. Social media doesn't deal with one department of the business rather social media comes in direct contact with the customers, opportunities, resources planning and strategy and human resource. The social media defines the success of any business venture partially as social media in itself is the success factor for the business. the business venture small or big both categories of business employ new tactics for business success (Qualman, 2013).

#### 3.4.4. Independent Variables

The independent variable of the research is the variable which influences other factors in research process. The variable is changed and influence is measured which is caused on the dependent variable.

#### 3.4.4.1. Communication

The effective communication is significant for the success for entrepreneurial venture. The business factors which are analyzed are mentioned below.

- Acquisition of information related to business venture.
- Aid in managing HR of business venture.
- Evaluation of opportunities.
- Management of resources (labour, financial, technological)
- Performance level of business venture.
- Growth of business venture.
- Awareness about entrepreneurship

### **3.4.4.2. Networking**

Networking is the process in which individuals or teams associate to carry out the organizational goals. For successful entrepreneurship, social-networking plays the vital role. The elements which are analyzed in the networking variable are mentioned below,

- Technology demand and usage in the entrepreneurial venture.
- Hindrance in innovation of entrepreneurial venture.
- Creation of value in products/service.
- Discovery of new business opportunities.

#### **3.4.4.3. Marketing**

Marketing is the technique used for maintaining good customer relationship and for promotion of product/service to gain growth in the business venture. The process of marketing influences different business conditions which define the success and growth of the venture. Different factors of the business which contribute to success of entrepreneurial venture are analyzed which are mentioned below.

- Productivity of entrepreneurial venture.
- Sales of product/service.
- Business strategy of any venture
- Exploitation of business opportunities.
- Purchase intentions of people.

#### **3.4.4.4. Branding**

Branding is the procedure of creating value of the product/service. Branding is the process which creates innovation and significance of the product. Effective branding leads to business growth and success and factors contributing to venture success are analyzed which are listed below.

- Customer loyalty towards a product.
- Uniqueness in product/ service.
- Creation of higher brand attitudes.

### 3.4.5. Dependent Variables

The variable in the research which is influenced and cause is produced in the variable is measured. The dependent variable is the effect produced through the cause (independent variable).

#### 3.4.5.1 Social Media Success

Social-media is a medium used for communication and networking. The modern age has redefined the business paradigm and business strategies, techniques and tools have completely changed. Now social media is integral part of business strategy and defines success of any entrepreneurial venture. The success of entrepreneurial venture by the use of social media acts as

the dependent variable. The impact of social media on entrepreneurial success is studied through the relativity between the independent and dependent variable.

Social Media has become a revolutionary tool and technique for the entrepreneurial ventures. The success of any entrepreneurial venture is dependent upon the effective usage of social-media. The entrepreneurial success is dependent upon, uniqueness, innovation and value creation. The factors of success are achieved in the technology industry if new methods of business are employed.

## 3.5. Research Approach

The research defines the methodology used for the research. The approaches of research are categorized into four approaches. Qualitative research, Quantitative research, Logical and Theoretical research and participatory research. The research approach for any study is chosen according to topic and resultant to be acquired (Bradley, Curry, & Devers, 2007).

Qualitative approach of the research is used for the analysis of human behaviors and social beliefs. The research which intends to dig into behavioral studies and realties tend to use qualitative type of research. The research is inductive in nature in which the theories are formulated and research is carried out to determine if the experiences and results confirm the theories (Lotto, 1986). The research moves from specific concepts to generalization of the concepts. The research approach is termed as bottom- up approach as well (Miles & Huberman, 1994).

Quantitative approach of research is used data is collected through different methods, statistical functions are performed and conclusions are drawn from the statistical results. The hypothesis is formulated and statistical outcomes of the data makes the decision regarding the acceptance or rejection of the hypothesis. The statistical analysis proves the relationship between

the variables as assumed in the hypothesis. The quantitative approach of research tends to move from general to specific in nature. The deductive reasoning is employed in the quantitative approach of research (Cramer, Bryman, & Michael Strang., 2005).

"The research involves the impact of social media on entrepreneurial ventures of technology domain, therefore, quantitative approach of study is employed for the research. The data is collected through different sources and statistical operations are performed on the collected data to derive the outcomes" (Bukhari & Jamal, 2017). The outcomes of statistical analysis give the validation of one of the hypothesis formulated for the research purpose.

#### 3.6. Research Method

Different types of researches are carried out depending upon the problem faced and the solutions proposed. The research type defines the procedures and processes to be carried out to obtain the outcomes. Applied type of research is carried out to solve the problems of daily life. The research practically solves the problem by creating the solutions like the medicines or vaccines developed for illness.

The basic type of research is carried out to investigate the scientific questions. The research doesn't focus on developing the solutions rather the scientific questions are investigated and researchers find the answer to the questions to increase the knowledge.

There is correlational type of research investigates the relationship between the variables.

The research is not intended to determine the effect and cause relation between variables rather correlation is determined only.

Descriptive research deals with the problems that we deal in daily life and research is carried out in quantitative manner. The impact of the variables in the research is studied and cause and effect relationship is established.

As the research is quantitative in nature and impact of social media is studied. Descriptive type of research is carried out. The data is collected and statistical operations are performed on data to get the desired outcomes. The research outcomes suggest to reject or accept the hypothesis. The descriptive research will perform the statistical analysis related to descriptives of the data, correlation regression. The statistical analysis will establish the causal relationship between the variables.

#### 3.7. Research Design

The common design used in social sciences for research is cross-sectional design. The research is carried out by selecting a cross-section of population to study the issue or problem under consideration. The design is suitable for getting the overall picture of the situation during the time of research process. The cross-sectional design of study is cross-sectional in terms of population and time.

Cross-sectional design of study is opted for this study. The cross-sectional research collects the data from the same sample in single interval of time. The statistical operations are performed to determine the causal effect of the variables over time. This type of research helps in studying the impact of independent variables over dependent variable. As in the current research, impact of social media is studied over the success of entrepreneurial ventures. The data is collected from software based entrepreneurial ventures in Pakistan from capital Islamabad. The difference of statistical analysis of data collected through different startups and running ventures, the

significance of association between the independent and dependent variables gives the impact of social media.

### 3.8. Population

The research is carried out by collecting data from a population. The population is collection of all the elements of the research (Sekaran, 2003).

The population selected for the research includes the entrepreneurial ventures working in the software technology domain. In Pakistan, the business paradigm is changing and awareness regarding entrepreneurship is increasing. The trend of technological entrepreneurial ventures is increasing positively.

"For research, the technological entrepreneurial ventures in the region of Islamabad are chosen which are nearly 200 in number. The entrepreneurial ventures which have been running for six months since the existence of entrepreneurial venture are chosen as these are considered successful. Moreover, the entrepreneurial ventures are used as a population having least 5 members in the startup organization ("P@SHA | Facts & Figures", 2012). The entrepreneurial ventures are chosen for collection of the data that deal with software development (Web-sites, Games, Mobile phone applications) for creating problem solutions and Android/I-phone application development. There are technological entrepreneurial ventures from NUST CIE and Software Technology Park Islamabad which are analyzed for the research purpose" (Bukhari & Jamal, 2017).

## 3.9. Sampling Design and Size

A sample is chosen from population to determine the properties of the population. The sample is the portion of the population which contains the elements of the population for study. The sample contains multiple items and each item of the sample termed as subject (Sekaran, 2003).

The sampling method defines the way a sample is selected form the population for data collection. The sampling method is categorized into two techniques. Probability sampling and non-probability sampling. Probability sampling is when the elements of the population have known chances of selection in the sample.

Simple random sampling is used for the data collection in the research process. The population has N number of objects and sample has n number of items. The probability of selection of an item is equal likely. This technique of sampling is termed as simple random sampling (Kothari, 1990).

For the population of around 200 entrepreneurial ventures in the Islamabad region, the sample size found is 132 or more with confidence level of 95% and margin of error as 5%. The questionnaires were distributed to 170 respondents for data collection and were received from 143 respondents. The usable questionnaires were 137 in number. The average number of employees in each entrepreneurial venture is around 7. The n/N ratio if calculated for 200 organizations (200\* 7 = 1400) is 137/1400 = approx. 10.

#### 3.10. Data Collection Method

"Different methods of data collection are used in the research process. Survey method is used for the data collection in the research. The survey is carried out with the help of a structured survey questionnaire. The questionnaire contains 20 items" (Bukhari & Jamal, 2017). The items

are the questions pertaining to communication, networking, marketing and branding and relativity with business success factors like sales, profit, growth in business, customer loyalty, value creation, innovation, strategy change and more (Hedges, Gurevitch, & Curtis, 1999). It is imperative to choose the sample size small and get higher response rate for reliable research.

"The questionnaire was distributed among 170 respondents and 143 questionnaires were received back from the respondents. The complete questionnaires were sorted and found to be 137. After the removal of outliers and discrepancies the data items left are 125. The response ratio if calculated for the responses obtained of survey turns out to be 84.11%. The questionnaires of survey were distributed in person and were collected after filling in-person as well to ensure the reliability of data collected" (Bukhari & Jamal, 2017).

### **3.11. Summary**

The chapter describes the problem faced and why the research is carried out. The theoretical framework is explained pictorially for the better understanding which involves the independent and dependent variables of the research study. The independent variables are communication, networking, marketing and dependent variable is social media success. The hypothesis relationship is explained in the section and operational definitions are explained. The scientific methodology and procedures followed to complete the research are explained in this section. The chapter of the thesis description regarding the approach and type of research. The instruments and techniques used for the research are mentioned as well. The section covers the details regarding the population selection and sampling techniques for collection of the data. The tools and technique used for performing the survey is covered in this section as well.

#### CHAPTER 4

#### **DATA ANALYSIS**

The section covers the data analysis of collected data. The statistical operations performed to find the outcomes of research study are presented in this chapter. The results to different statistical analysis will be projected that will signify the results expected. The statistical analysis will produce verdict for the research hypothesis to be accepted or rejected.

### 4.1. Reliability Testing

### 4.1.1. Pilot Study

Pilot study of any experiment or research is significant as it determines the feasibility of research or project. The pilot study is the introductory examination of the sample and outcomes expected out of study to be carried out.

The pilot study has been carried out to make sure that the samples collected form the population for research are reliable and valid. The reliability of the data is ensured by calculating Cronbach alpha. The pilot study tests the feasibility of complete study by carrying out the small scale study. The instrument of the measurement is tested for reliability and validity with the help of pilot study.

The Cronbach alpha measures the consistency and reliability of the scale. The value of Cronbach alpha defines the reliability. The value greater than 0.5 is reliable and consistent. The value of calculated alpha is the co-efficient of reliability.

The Cronbach alpha value is mentioned below. The number of sample are 41 taken for the pilot study and value of alpha, co-efficient of reliability reveals that consistency of scale. The value

of alpha is 0.843 which is higher than 0.6 for all 20 items of the questionnaire reflects the consistency among the questionnaire items of research and further full scale research can be carried out.

Table 1
Pilot Study Reliability Statistics

Instrument	Cronbach's			
	Alpha			
Pilot Study				
Social media	.767			
Success TEV	.784			

## 4.1.2. Sample Reliability Testing

"The reliability of the complete sample is tested through Cronbach alpha. The whole sample is considered for reliability test. The value of Cronbach's alpha is 0.705 which is acceptable for the feasibility of the study" (Bukhari & Jamal, 2017).

Table 2
Reliability Statistics of Sample

Instrument	Cronbach's			
	Alpha			
Main Research				
Social media	.745			
Success TEV	.705			

## 4.2. Demographics

"The demographics will give statistics related to population and sample of research. The demographics covers the details about the Gender ratio, Age, Education, Qualification and

Designation of sample of population studied for research purpose which are shown in the demographics table 3. The table for organization demographics is given in the appendix.

The frequency analysis of sample gives the Gender distribution statistics reveal that 97 respondents are male with 70.8% and 40 respondents are female with 29.2% working in the technological entrepreneurial ventures.

The number of respondents' form age range of 21-25 years is 72 and 52.6% of total sample percentage. The number of respondents' form age range of 26-30 years is 43 and 31.4%, The number of respondents' form age range of 31-35 years is 13 and 9.5%, The number of respondents' form age range of 36-40 years is 8 and 5.8%, The number of respondents' form age range of 41-55 years is 1 and 0.7%. The higher percentage of respondents lie in the range of age limit 21 years – 25 years. The youth is working technological entrepreneurial ventures in greater number.

The analysis shows that frequency of respondents at Bachelor level of education is 101 and 73.7% of total percentage of the sample. The respondents from MS level of education are 35 with 25.5% and only one respondent belongs to Ph.D. level of education having frequency 1 and 0.7% of out of total sample. Respondents with the bachelor level of education are greater in number working in technological entrepreneurial ventures.

The respondents' frequency at junior and officer level is 15 and 10.9%, respondents working at associate and executive level of designation are 80 and 58.4%, respondents working at level of team lead and assistant manager are 17 and 12.4%, respondents belonging to manager level of designation are 14 and 10.2% and CEOs of entrepreneurial ventures are 11 and 8.0% of total percentage of the sample. Respondents working at associate and executive level of education

are greater in number associated with technological entrepreneurial ventures" (Bukhari & Jamal, 2017).

Table 3

Demographics Details (Gender, Age, Qualification, Designation)

		Frequency	Percent	Cumulative Percent
Gender	Male	97	70.8	70.8
	Female	40	29.2	100.0
	Total	137	100.0	
Age	21 - 25 years	72	52.6	52.6
	26 - 30 years	43	31.4	83.9
	31 - 35 years	13	9.5	93.4
	36 - 40 years	8	5.8	99.3
	41 - 45 years	1	.7	100.0
	Total	137	100.0	
Qualification	Bachelors, BE, BSCS, BSIT	101	73.7	73.7
	MS, MCS, MPhil	35	25.5	99.3
	PHd	1	.7	100.0
	Total	137	100.0	
Designation	Officer, Junior developer	15	10.9	10.9
	Executive/Associate	80	58.4	69.3
	Team-Lead/Asst Manager	17	12.4	81.8
	Manager	14	10.2	92.0
	CEO	11	8.0	100.0
	Total	137	100.0	

# **4.3. Descriptive Analysis**

"The statistics table 4,5 shows the basic statistical analysis of demographics and Independent and dependent variables of the study. The mean, mode median, variance, standard

deviation, skewness and ranges are calculated for different variables of the study" (Bukhari & Jamal, 2017).

Table 4
Descriptive Analysis

	N	Mean	Std. Error of Mean	Median	Mode	Std. Deviation	Variance	Skewness
Gender	137	.29	.039	.00	0	.456	.208	.925
Age	137	1.72	.081	1.00	1	.947	.896	1.550
Qualification	137	1.27	.039	1.00	1	.462	.213	1.273
Designation	137	2.46	.092	2.00	2	1.078	1.162	1.070
Organization	137	13.53	.558	15.00	17	6.532	42.663	120
Market	137	3.1577	.04608	3.2000	3.20	.53930	.291	.046
Communication	137	3.5235	.04429	3.5714	3.57	.51835	.269	.133
Networking	137	3.5547	.04449	3.6000	3.80	.52074	.271	605
Branding	137	3.4988	.066332	3.3333	3.33	.74110	.549	087
SM	137	3.4361	.03731	3.4500	3.35	.43668	.191	188

Table 5

Descriptive Analysis

	N	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis	Range	Minimum	Maximum
Gender	137	.207	1.161	.411	1	0	1
Age	137	.207	2.763	.411	5	1	6
Qualification	137	.207	.215	.411	2	1	3
Designation	137	.207	.404	.411	4	1	5
Organization	137	.207	-1.044	.411	24	1	25
Market	137	.207	.406	.411	3.00	1.60	4.60
Communication	137	.207	.555	.411	3.14	1.86	5.00
Networking	137	.207	.347	.411	2.80	1.80	4.60
Branding	137	.207	518	.411	3.33	1.67	5.00
SM	137	.207	.795	.411	2.75	1.85	4.60

The histograms Figure 16 -29 in Appendix A with curves reflect the normal distribution of gender, age, qualification, designation and organization. "The mean for Gender is 0.29 and standard deviation is 0.456. The mean of Age is 1.72 and standard deviation is 0.947, the mean of qualification is 1.27 and standard deviation is 0.462. The mean of designation is 2.46 and standard deviation is 1.078. The mean of the organization is 13.53 and standard deviation is 6.532, the mean of marketing is 3.16 and standard deviation is 0.539, the mean of networking is 3.55 and standard deviation is 0.521.

The mean of branding is 3.50 and standard deviation of 0.741. The mean of communication is 3.52 and standard deviation is 0.518. The mean of success through social media is 3.44 and standard deviation is 0.437" (Bukhari & Jamal, 2017).. The histograms are showed in the Annexure.

### 4.4. Statistical Analysis of Correlation

For carrying out the correlational analysis of independent and dependent variables boxplots of the variables are plotted to check for the outliers. The figure 2 reveals that outliers are found in the box-plots. The outliers are removed from the data and sample size is reduced from 137 to 125 as shown in figure 3.

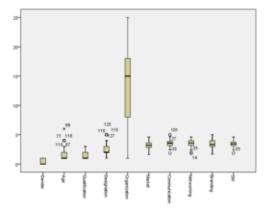


Figure 2. Box-plot with outliers

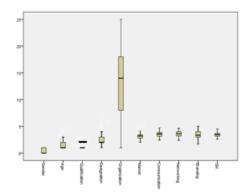


Figure 3. Box-plot after removal of outliers

"The Pearson correlation table 6 shows the relationship significance between the dependent and independent variables. The significance of the impact of the social media on success of entrepreneurial ventures is analyzed through the correlation table. The coefficients of person correlation measure the linear association of the variables. The scatter-plots of the correlation variables are shown in the Appendix A, figure 26 - 29. The plots are shown with best fit lines.

The correlation between success and social-media marketing is .679\*\*

The correlation between success and social-media communication is .864\*\*

The correlation between success and social-media networking is .750\*\*

The correlation between success and social-media branding is .645\*\*

All the values are significant and strong association is found between success of entrepreneurial ventures and social media techniques of business that includes marketing, branding, communication and networking.

The strongest association is found between communication and success of entrepreneurial venture and we can deduce that effective communication is significant for success of entrepreneurial ventures" (Bukhari & Jamal, 2017).

Table 6
Pearson Correlations

		Market	Communication	Networking	Branding	SM		
Market	Pearson Correlation	1						
Communication	Pearson Correlation	.398"	1					
Networking	Pearson Correlation	.337	.672	1				
Branding	Pearson Correlation	.275	.441	.267"	1			
SM	Pearson Correlation	.679	.864	.750"	.645"	1		
*. Correlation is significant at the 0.05 level (2-tailed).								
**. Correlation is significant at the 0.01 level (2-tailed).								

### 4.5. Regression Analysis

Regression analysis is a modelling technique which establishes the relationship between the independent and dependent variables. In linear regression, the dependent variable is one and independent variables can be one or more. As the entrepreneurial success is dependent upon multiple independent variables, the impact of independent variables one by one is studied

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through linear regression analysis (Kutner, Nachtsheim, Neter, & Li, 2005; Comte, & Johannes, 2012; Seber, 2003).

### 4.5.1. Regression Analysis of Marketing & Success

The Pearson correlation is given by the value of r=0.679 which shows the relationship between social media marketing and success of entrepreneurial ventures.

"The summary of the table shows the  $R^2$  value of 0.462 and adjusted  $R^2$  value 0.457 and explains that variance in the data exists with 46.2 %" (Bukhari & Jamal, 2017).

The usefulness of the regression model is given through ANOVA table in which the p value is expected to be <0.05. "The value of F=105.414 and sig is 0.000 less than the critical value of alpha that is 0.05 which proves that effect is statistically significant" (Bukhari & Jamal, 2017).

The market represents the predicting variable and while the constant gives the height of regression line when Y-axis is crossed. B defines the values for regression equation. The tables give t-values and two tailed p-values for significance. The alpha value used is 0.05. "The coefficient for market is 10.267 and Sig= 0.000 (p-value) which means the effect is significant as the p-value is less than 0.05" (Bukhari & Jamal, 2017) as shown in tables 7, 8, 9. The histogram and Probability plot satisfies the condition of normality. The scatter plot fulfills the condition of homoscedasticity as the variance remains the same along the best fit line. The histogram, probability plot and scatter-plot are given in the figures 4,5,6 below. The regression equation for market variable can be stated as:

Success  $_{\text{TEV}} = 0.512 * \text{Market} + 1.82.$ 

Table 7
Summary (Regression Market)

Model	R	R	Adjusted	Std. Error	Change Statistics				
		Square	R Square	of the	R Square	F	df1	df2	Sig. F
				Estimate	Change	Change			Change
1	.679ª	.462	.457	.28994	.462	105.414	1	123	.000

a. Predictors: (Constant), Marketb. Dependent Variable: Success TEV

Table 8
ANOVA (Regression Market)

Mo	de1	Sum of	₫£	Mean	F	Sig.
Ь		Squares		Square		
	Regression	8.862	1	8.862	105.414	.000b
1	Residual	10.340	123	.084		
L	Tota1	19.202	124			

a. Dependent Variable: Success TEV
 b. Predictors: (Constant), Market

Table 9
Coefficients (Regression Market)

Model			dardized icients	Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	(Constant )	1.820	.160		11.401	.000
	Market	.512	.050	.679	10.267	.000

a. Dependent Variable: Success TEV

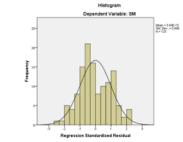


Figure 4. Histogram (Regression Market)

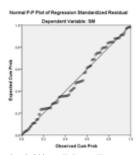


Figure 5. Probability Plot (Regression Market)

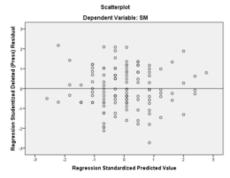


Figure 6. Scatter plot (Regression Market)

# 4.5.2. Regression Analysis of Communication & Success

The Pearson correlation is given by the value of r=0.864 which shows the relationship between social media communication and success of entrepreneurial ventures.

The summary of the table shows "the  $R^2$  value of 0.747 and adjusted  $R^2$  value 0.745 and explains that variance in the data exists 74.7 %" (Bukhari & Jamal, 2017).

The usefulness of the regression model is given through ANOVA table in which the p value is expected to be <0.05. "The value in sig column is 0.000 less than the critical value of alpha that

is 0.05 with F= 363.196 which proves that effect is statistically significant" (Bukhari & Jamal, 2017).

The communication represents the predicting variable and while the constant gives the height of regression line when Y-axis is crossed. B defines the values for regression equation. The tables give t-values and two tailed p-values for significance. The alpha value used is 0.05. "The coefficient for communication is 19.058 and Sig= 0.000 (p-value) which means the effect of communication over success is significant as the p-value is less than 0.05" (Bukhari & Jamal, 2017) as shown in tables 10, 11,12. The histogram, probability plot and scatter-plot are given in the figures 7, 8, 9 below. The histogram and Probability plot satisfies the condition of normality. The scatter plot fulfills the condition of homoscedasticity as the variance remains the same along the best fit line. The regression equation for communication variable can be stated as:

Success  $_{\text{TEV}} = 0.720 * \text{Communication} + 0.898$ 

Table 10
Summary (Regression Communication)

Model	R	R	Adjusted	Std. Error	Change Statistics				
		Square	R Square	of the	R Square	F	df1	df2	Sig. F
				Estimate	Change	Change			Change
1	.864ª	.747	.745	.19873	.747	363.196	1	123	.000

a. Predictors: (Constant), Communication

Table 11

ANOVA (Regression Communication)

Mo	odel	Sum of Squares	df	Mean Square	F	Sig.
	Regression	14.344	1	14.344	363.196	.000b
1	Residual	4.858	123	.039		
	Total	19.202	124			

a. Dependent Variable: Success TEV

b. Dependent Variable: Success TEV

b. Predictors: (Constant), Communication

Table 12
Coefficients (Regression Communication)

Mod	del	Unstandardized Standardized Coefficients Coefficients		t	Sig.	
		В	Std. Error	Beta		
	(Constant)	.898	.134		6.687	.000
1	Communicatio n	.720	.038	.864	19.058	.000

a. Dependent Variable: Success TEV

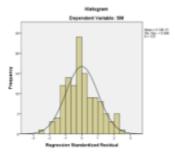


Figure 7. Histogram (Regression Communication)

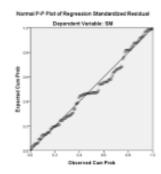


Figure 8. Probability Plot (Regression Communication)

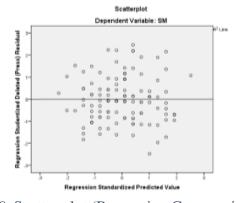


Figure 9. Scatter plot (Regression Communication)

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## 4.5.3. Regression Analysis of Branding and Success

The Pearson correlation is given by the value of r=0.645 which shows "the relationship between social media branding and success of entrepreneurial ventures.

The summary of the table shows the  $R^2$  value of 0.416 and adjusted  $R^2$  value 0.411 and explains that variance in the data exists 41.6 %.

The usefulness of the regression model is given through ANOVA table in which the p value is expected to be <0.05. The value of F= 87.580 and Sig=0.000 less than the critical value of alpha that is 0.05 which proves that effect of branding over success is statistically significant" (Bukhari & Jamal, 2017).

The branding variable represents the predicting variable and while the constant gives the height of regression line when Y-axis is crossed. B defines the values for regression equation. The tables give t-values and two tailed p-values for significance. The alpha value used is 0.05. "The coefficient for branding is 9.358 and Sig= 0.000 (p-value) which means the effect of branding over success is significant as the p-value is less than 0.05" (Bukhari & Jamal, 2017) as shown in tables 13, 14, 15. The histogram, probability plot and scatter-plot are given in the figures 10, 11, 12 below. The scatter plot fulfills the condition of homoscedasticity as the variance remains the same along the best fit line. The histogram and Probability plot satisfies the condition of normality. The regression equation for branding variable can be stated as:

Success  $_{\text{TEV}} = 0.352*$  Branding + 2.211

Table 13

# Summary (Regression Branding

Model	R	R	Adjusted	Std. Error	Change Statistics				
		Square	R Square	of the	R Square	F	df1	df2	Sig. F
				Estimate	Change	Change			Change
1	.645ª	.416	.411	.30197	.416	87.580	1	123	.000

a. Predictors: (Constant), Branding

b. Dependent Variable: Success TEV

Table 14

# ANOVA (Regression Branding)

Model		Sum of	₫£			Sig.
		Squares		Square		
	Regression	7.986	1	7.986	87.580	.000b
1	Residual	11.216	123	.091		
	Total	19.202	124			

a. Dependent Variable: Success TEV

b. Predictors: (Constant), Branding

Table 15

# Coefficients (Regression Branding)

Mod	lel		dardized icients	Standardized Coefficients	t	Sig.
		В	Std. Error			
1	(Constant	2.211	.134		16.545	.000
1	Branding	.352	.038	.645	9.358	.000

a. Dependent Variable: Success TEV

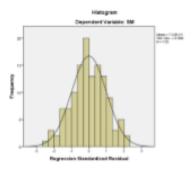


Figure 10. Histogram (Regression Branding)

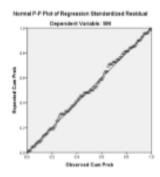


Figure 11. Probability Plot (Regression Branding)

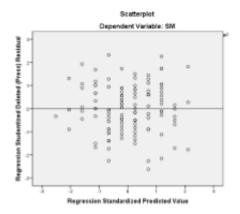


Figure 12. Scatter plot (Regression Branding)

## 4.5.4. Regression Analysis of Networking & Success

"The Pearson correlation is given by the value of r=0.750 which shows the relationship between social media communication and success of entrepreneurial ventures.

The summary of the table shows the  $R^2$  value of 0.562 and adjusted  $R^2$  value 0.559 and explains that variance in the data exists 56.2 %.

The usefulness of the regression model is given through ANOVA table in which the p value is expected to be <0.05. The value in sig column is 0.000 less than the critical value of alpha that is 0.05 which proves that effect is statistically significant and F= 157.906." (Bukhari & Jamal, 2017).

The networking represents the predicting variable and while the constant gives the height of regression line when Y-axis is crossed. B defines the values for regression equation. The tables

give t-values and two tailed p-values for significance. The alpha value used is 0.05. "The coefficient for networking is 12.566 and Sig= 0.000 (p-value) which means the effect of social media networking over success of entrepreneurial ventures is significant as the p-value is less than 0.05" (Bukhari & Jamal, 2017) as shown in tables 16, 17, 18.

The histogram, probability plot and scatter-plot are given in the figures 13, 14,15 below. The histogram and Probability plot satisfies the condition of normality. The scatter plot fulfills the condition of homoscedasticity as the variance remains the same along the best fit line. The regression equation for networking variable can be stated as:

Success  $_{\text{TEV}} = 0.606 * \text{Networking} + 1.278$ 

Table 16
Summary (Regression Networking)

Model	R	R	Adjusted	Std. Error	Change Statistics					
		Square	R Square	of the	R Square	F	dfl	df2	Sig. F	
				Estimate	Change	Change			Change	
1	.750ª	.562	.559	.26145	.562	157.906	1	123	.000	

a. Predictors: (Constant), Networking
 b. Dependent Variable: Success TEV

Table 17
ANOVA (Regression Networking)

Model		Sum of Squares	₫£	Mean Square	F	Sig.
	Regression	10.794	1	10.794	157.906	.000b
1	Residual	8.408	123	.068		
	Tota1	19.202	124			

a. Dependent Variable: Success TEV

b. Predictors: (Constant), Networking

Table 18
Coefficients (Regression Networking)

Model		Unstar	ıdardized	Standardized	t	Sig.
		Coefficients		Coefficients		
		В	Std. Error	Beta		
Γ.	(Constant)	1.278	.173		7.371	.000
1	Networking	.606	.048	.750	12.566	.000

a. Dependent Variable: Success TEV

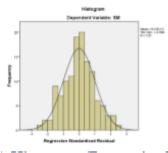


Figure 13. Histogram (Regression Networking)

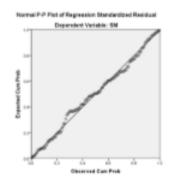


Figure 14. Probability Plot (Regression Networking)

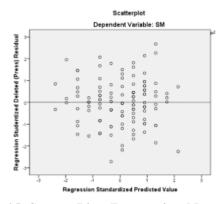


Figure 15. Scatter Plot (Regression Networking)

## 4.6. Independent Sample t-test

The test was carried out to determine whether the startups and other running organizations are equally influenced by social-media or otherwise.

The independent sample t-test is used to carry out the comparison of entrepreneurial ventures (startups and mature/running organization) under the study. Independent sample t-test determines the significance between the two means. The results are presented below:

The means and standard deviation is given for both categories of entrepreneurial ventures. The significance value is 0.917 for t-statistics of -1.001 which is greater than the p value of 0.05 nd the values are clearly insignificant. The value of sig(2-tailed) is determined from the condition of equal variances assumed. The sig 2-tailed value is 0.319 which is greater than significant p value of 0.05 and proves that there is no significant difference between the means. So, it is assumed the difference in the means of variables is due to chance as information given in tables 19, 20. This concludes that social media influences the both categories of entrepreneurial ventures in terms of success.

Table 19
Summary Independent Sample test

	Type of Organization	N	Mean	Std. Deviation	Std. Error Mean
SM1	Running/Mature Company	63	3.3946	.39966	.05035
52112	Startup	62	3.4672	.41030	.05211

Table 20
Comparison of Entrepreneurial Ventures and Social Media

		Levene's Test for Equality of Variances				t-test	for Equality	of Means		
		F	Sig.	t	d£	Sig. (2- tailed)	Mean Difference	Std. Error Difference	Confidence Interval of th Difference	
SMI	Equal variances assumed Equal	.011	.917	1.001	123	.319	07253	.07245	.21593	.07087
SIVII	variances not assumed			1.001	122.780	.319	07253	.07246	.21597	.07090

# 4.7. Hypothesis Testing

# 4.7.1. Main Hypothesis

**Hypothesis 1:** Social media has no significant relationship with the success of technological entrepreneurial ventures or vice versa.

 $H_{O}1: \rho_{(SM; TEV)} = 0$ 

 $H_A1: \rho_{(SM; TEV)} \neq 0$ 

The correlation between social media (communication, networking, marketing and branding) and success of technological entrepreneurial ventures are significant values (.864, 750, .679, .645 respectively) which shows strong correlation between social media

and success. The strong relationship between the variables is further signified by ANOVA tables.

The relationship of social media and success of technological entrepreneurial ventures is significant (P (.00) < 0.05 significant level) for social media (communication, networking, marketing, branding). On this basis, the above-mentioned null hypothesis is rejected. Hence its recognized that Social media has significant relationship with the success of technological entrepreneurial ventures and alternative hypothesis is accepted.

## 4.7.2. Subsidiary Hypothesis

**Hypothesis 2:** Social media communication has no significant relationship with the success of technological entrepreneurial ventures or vice versa.

$$H_02$$
:  $\rho$  (SMC; TEV) = 0

H<sub>A</sub>2: 
$$\rho$$
 (SMC; TEV)  $\neq$  0

The correlation between social media communication and success of technological entrepreneurial ventures is .864 which shows strong correlation between the two variables. The strong relationship between the variables is further signified by ANOVA table 21 given below:

Table 21
Regression Communication

Model	Sum of Squares	₫£	Mean Square	F	Sig.
Regression	14.344	1	14.344	363.196	.000b
Residual	4.858	123	.039		
Total	19.202	124			

The table shows that the relationship of social media communication and success of technological entrepreneurial ventures is significant (F= 363.196; P (.00) < 0.05 significant level). On this basis, the above-mentioned null hypothesis is rejected. Hence its recognized that Social media communication has significant relationship with the success of technological entrepreneurial ventures and alternative hypothesis is accepted.

**Hypothesis 3:** Social media networking has no significant relationship with the success of technological entrepreneurial ventures or vice versa.

 $H_03: \rho_{(SMN; TEV)} = 0$ 

 $H_A3: \rho_{(SMN; TEV)} \neq 0$ 

The correlation between social media networking and success of technological entrepreneurial ventures is .750 which shows strong correlation between the two variables. The strong relationship between the variables is further signified by ANOVA table 22 given below:

Table 22
Regression Networking

Model	Sum of Squares	<b>df</b>	Mean Square	F	Sig.
Regression	10.794	1	10.794	157.906	.000b
Residual	8.408	123	.068		
Total	19.202	124			

The table shows that the relationship of social media networking and success of technological entrepreneurial ventures is significant (F=157.906; P(.00) < 0.05 significant level). On this basis, the above-mentioned null hypothesis is rejected. Hence its recognized

that Social media networking has significant relationship with the success of technological entrepreneurial ventures and alternative hypothesis is accepted.

**Hypothesis 4:** Social media marketing has no significant relationship with the success of technological entrepreneurial ventures or vice versa.

$$H_04: \rho_{(SMM; TEV)} = 0$$

$$H_A4: \rho_{(SMM; TEV)} \neq 0$$

The correlation between social media marketing and success of technological entrepreneurial ventures is .679 which shows strong correlation between the two variables. The strong relationship between the variables is further signified by ANOVA table 23 given below:

Table 23
Regression Marketing

Model	Sum of Squares	₫£	Mean Square	F	Sig.
Regression	8.862	1	8.862	105.414	.000b
Residual	10.340	123	.084		
Tota1	19.202	124			

The table shows that the relationship of social media marketing and success of technological entrepreneurial ventures is significant (F= 105.414; P (.00) < 0.05 significant level). On this basis, the above-mentioned null hypothesis is rejected. Hence its recognized that Social media marketing has significant relationship with the success of technological entrepreneurial ventures and alternative hypothesis is accepted.

**Hypothesis 5:** Social media branding has no significant relationship with the success of technological entrepreneurial ventures or vice versa.

 $H_{O}5: \rho_{(SMB; TEV)} = 0$ 

 $H_A5: \rho_{(SMB; TEV)} \neq 0$ 

The correlation between social media branding and success of technological entrepreneurial ventures is .645 which shows strong correlation between the two variables. The strong relationship between the variables is further signified by ANOVA table 24 given below:

Table 24
Regression Branding

Model	Sum of Squares	<u>df</u>	df Mean Square		Sig.
Regression	7.986	1	7.986	87.580	.000b
Residual	11.216	123	.091		
Total	19.202	124			

The table shows that the relationship of social media branding and success of technological entrepreneurial ventures is significant (F=87.580; P(.00) < 0.05 significant level). On this basis, the above-mentioned null hypothesis is rejected. Hence its recognized that Social media branding has significant relationship with the success of technological entrepreneurial ventures and alternative hypothesis is accepted.

## **4.8. Summary**

The chapter covers all the statistical operations performed over the data collected. The descriptive analysis, analysis of correlation, regression analysis and independent T-test is

performed. The analysis shows the significance and association of social media on the success of entrepreneurial ventures with the results of statistical analysis.

#### CHAPTER 5

### RESULTS DISCUSSION

The chapter presents all the results obtained from the statistical analysis performed. The results are discussed in detail to find the answers of the research questions.

#### 5.1. Results

"The research studies the impact of social media on technological entrepreneurial ventures. For carrying out the study a survey based research was carried out that contained 20 items to gauge the impact of social media on success of entrepreneurial ventures. The entrepreneurial ventures from software development industry are taken as sample of the research.

Initially the pilot study is carried out and face validity of questionnaire is conducted to ensure the reliability and validity of measuring instrument.

Multiple success factors associated with entrepreneurial ventures constitute the dependent variable of social media success and major variables of social media networking, communication, marketing and branding are studied as independent and influencing variables. The reliability of the sample is tested through Cronbach alpha calculation. The value of Cronbach alpha greater than 0.5 validated the scale of study. Further statistical operations were performed over the collected data to study the impact of social media on success of technological entrepreneurial ventures.

The demographics of the sample are analyzed which gives the frequencies and percentage distribution of the sample. The demographics include the gender, age, qualification, designation and organization. The frequency distribution reveals that male members are in greater number working in the entrepreneurial ventures. The educational level in greater percentage is of bachelors and people working at the post of executive and associates are greater in number.

The objective of research is to study the impact of social media on success of entrepreneurial ventures. The social media methods and techniques are analyzed for success impact. Social media networking is analyzed and the results show that Social media networking helps in the exploitation of new business opportunities, new social relationships are formulated for business purpose, the technological demand trends have changed (Hansen, 1995). The value creation in the product/service is facilitated with the help of social media networking (Granovetter, 1973). The correlational analysis of the networking and success gives significant values and proves the presence of significant impact of social media on the success of technological entrepreneurial ventures.

The business paradigm has changed completely over the years. Social media is used for marketing and promotions and advertisements. The usage of social media is less costly and effective. Social media has changed the business strategies, social media marketing influences the sales pf product/service, the productivity level of the entrepreneurial venture is influenced with social media marketing techniques (Mangold & Faulds, 2009). The Pearson correlations values are significant and show that social media marketing and success of entrepreneurial ventures have significant association.

The branding of the business venture in this modern era of technology and social media is vital for existence. The branding creates the customer loyalty towards the product, uniqueness in the product (Grunig & Grunig, 2001). The value of correlation is significant presenting a significant association between the social media branding and success of entrepreneurial ventures.

The regression analysis between the predictors and dependent variables reveal that social media marketing, branding, networking and communication all variables influence the success of

technological entrepreneurial ventures. The significant values of p show that social media impacts the success of entrepreneurial ventures" (Bukhari & Jamal, 2017)..

The t-test is also carries out to study if the social media affects the startups only or affects the organizations that have been running since past 1 year or more. The no significant difference in the means of both categorizes of entrepreneurial ventures reveal that social media impacts both categories of entrepreneurial ventures significantly.

"The statistical operations performed reflect the significance of social media in success of entrepreneurial ventures. Modern methods and techniques of business have changed the way businesses operate. The social media has become significant for entrepreneurial ventures success and survival" (Bukhari & Jamal, 2017).

#### 5.2. Discussion

The results of study signify the importance of social media communication, interactivity and networking. The correlation and regression values support the hypothesis that social media has significant relation with success of entrepreneurial ventures. "Social media interactivity and communication influences the success of entrepreneurial ventures. The modern techniques and methods have changed and new methods are used for stability and survival of business (Stuart, Toby & Sorenson, Olav, 2005). Social media communication helps in improvement in performance levels as the effective communications between the teams and departments lead to organizational success. The effective management of resources is ensured through effective communication between teams and departments and goals are achieved which leads to success (Greve & Salaff, 2003). The awareness and information is effectively communicated with social

media interactivity and communication. The correlational significant values reflect that significant association is found between social media communication and success.

The survival of entrepreneurship is dependent upon the strength of social network. The social networking helps in the communication and interaction of organizations. The collaborations between the organizations occur as the outcome of networking. The interactivity of organizations in terms of development, innovation process proves effective for entrepreneurship (Staber, 2001). The networking helps in the discovery of new information regarding opportunities and exploitation of information. Networking is significant for entrepreneurs as the information related to business can be collected and implemented for business purposes (Barnir & Smith, 2002)" (Bukhari & Jamal, 2017).

The entrepreneurial venture success and process of entrepreneurship are significantly associated with social networks. The importance of social network in the entrepreneurial process cannot be denied (Granovetter, 1973). The factors that influence the entrepreneurship in a positive are the size of the social network, the diversity among the people and backgrounds in the social network, the combination of good and very good ties and the amount of redundancy in the network (Licht & Amir & Jordan, 2006).

Entrepreneurs utilize the social networks for decision making and problem solving. The strategies for business and success are formulated with the help of people in the professional and personal circle. The entrepreneurial outcomes can be dependent upon the type and quality of social networks as well. the quality and type can differ on the basis of gender as well (Robinson, Sherry & Stubberud, 2009).

Social networks act as facilitator for the economic activity as shown by the results. The opportunities of the business increase and chances of entrepreneurial success also increase. The entrepreneur or the emerging entrepreneur interacts with people of different organizations and people dealing with the similar entrepreneurial ventures (Fornoni, Arribas, & Vila, 2012).

The results of correlation signify importance of social media networking. Networking allows the entrepreneur to utilize the resources which are necessarily not under the ownership of the entrepreneur. The accessibility of the resources helps in the achievement of the entrepreneurial goals and objectives defined by the entrepreneur. The achievement of goals is itself success for the entrepreneur (Hansen, 1995).

The networking between the entrepreneurs' social network helps the emerging entrepreneur with the human and financial resources. The availability and access to resources is made by the people in the circle. The entrepreneurs can be provided with the help through experience and expertise. The relationships and networking can help in managing the angel investment for the entrepreneurial venture (Diaz, Cristina & Sara, 2009).

The research reflects that relationship between social networking and entrepreneurial success is significant and entrepreneurial networking is one of the vital factors of entrepreneurial success (Chattopadhay, 2008).

The use of social media is not limited to the marketing and promotions of the business rather it is the vital tool for the business success. Social media doesn't deal with one department of the business rather social media comes in direct contact with the customers, opportunities, resources planning and strategy and human resource. The social media defines the success of any

business venture partially as social media in itself is the success factor for the business. the business venture small or big both categories of business employ new tactics for business success.

Social Media provides a medium to the firms to gauge the customer needs and maintain relationship with the customers in an effective way. Social media helps the entrepreneurial ventures to extend and maintain the social network. The purpose of any business is to increase the customer base and to make the masses aware regarding the product/service. Social media is a platform where multiple customers are present on various social networking sites which makes the connectivity with prospective customers easy (Halligan, Shah & Scott, 2009). The results signify that social media is useful for customer satisfaction and in growth of business.

Social media has redefined how the customers and sales department interact. The social media is used to gauge the impact of product and customer trends. The social-media is employed by the sales people to study the customer behavior which may lead to effective responsiveness and performance level of sales people in satisfying the customers (Agnihotri, Dingus, Hu & Krush, 2016). the results of statistical analysis show the significance of social media for entrepreneurial success.

The results of marketing and branding show that social media helps in the management of the customer relationship management. The capability of the interactivity leads to the customer engagement through social media. The customer relationship performance level of the firms and organizations is positively influenced with social media (Trainor, Andzulis, Rapp & Agnihotri, 2014).

# 5.3. Summary

The chapter discusses results of different statistical operations performed. The impact factors of the study are analyzed and results are presented. The reliability and descriptive analysis of the study is discussed. The correlation matrix of the study and significant results are discussed. The regression analysis of the variables is discussed and significant associations between social media and entrepreneurial success are presented through statistical significant values.

#### **CHAPTER 6**

### **CONCLUSION & RECOMMENDATIONS**

The chapter discusses the conclusion of the research that has been carried out. The recommendations will be made on the basis of study findings and problems faced during the process of study. Future research scope will be discussed as the research creates space for further research in the field.

#### 6.1. Conclusion

"Technology has transformed the business methods and techniques. The survival and success techniques of business have changed over the time. Social media has become tool for the business promotion and growth. Different tools and sites of social media are used for the marketing and promotion of the business, the social media significantly impacts the marketing policies of entrepreneurial ventures.

The study reflects strong association between the social media and success of entrepreneurial ventures. The social media defines the new strategies of business. Social media helps in better and effective communication which leads to better management of resources and exploitation of opportunities.

Social media has redefined the networking norms and social networking influences the business. the networking helps in finding new opportunities for entrepreneurial ventures and increases the awareness regarding entrepreneurship.

Social media branding and advertising helps in creating the name of brand. The value of the product is enhanced through innovation and uniqueness, moreover marketed and promoted in effective way to gain attention from customers/ clients. sales and profits of the entrepreneurial ventures are affected with social media.

Social media tools and techniques are defining new ways of businesses and survival of entrepreneurial ventures specifically associated with technology domain is possible only if social media is incorporated into business strategy. The study shows significant impact of social media on entrepreneurial success" (Bukhari & Jamal, 2017).

#### **6.2. Recommendations**

Social Media impacts the success and trend of the business. the complete strategy of the entrepreneurial ventures is redefined how the social media is used. It is recommended to incorporate social media in defining the goals and strategy of the business, the achievement of goals will be made possible by the use of social media for communication, marketing rather in each function and department.

Social media can be used to create awareness about entrepreneurship among youth of Pakistan. The trend of entrepreneurship is increasing and entrepreneurial ventures in Pakistan are incorporating social media as the business success tool. More youth can be motivated towards entrepreneurship.

Social media marketing and branding is less costly than other digital advertising and promoting methods. Its advisable to promote the entrepreneurial ventures through social media which can help in gaining more customers and clients, the good name of the product/service can be created through social media campaigns which proves beneficial for entrepreneurial venture in the longer run.

Pakistan is developing country; the concept of software startups software houses is relatively new. The difficult task is to find the authentic data regarding the registered or un registered entrepreneurial ventures working in the state. There is a need to manage a database to

record the information regarding software companies and entrepreneurial ventures existing and running in Pakistan.

## **6.3. Future Scope of Research**

The study has been carried out with social media as a business component. The impact is studied and significance of impact entrepreneurial success is proven. The study was limited to the entrepreneurial ventures of software industry of Pakistan. The research can be extended globally

The research can be carried out to study which tools of the social media impact the entrepreneurship as a whole not specifically targeting the entrepreneurial ventures from software industry.

The social media influence on entrepreneurship and economy can be studied and aspects related to youth improvement and involvement in entrepreneurship can be explored.

The impact of social media on the social entrepreneurship in developing countries like Pakistan can be studied as the extension to the research that has been carried out.

The research study can be expanded into two directions, social media and entrepreneurship.

## **6.4. Summary**

The chapter discussed the conclusion of research that has been carried out. The recommendations depending on the findings and experience of the research are made. The future aspects of research are also discussed.

#### REFERENCES

- Agnihotri, R., Dingus, R., Hu, M. Y., & Krush, M. T. (2016). Social media: Influencing customer satisfaction in B2B sales. *Industrial Marketing Management*, 53, 172-180.
- Aldrich, H.E., & Zimmer, C. (1986). Entrepreneurship through Social Networks. *The art and science of entrepreneurship. Ballinger, Cambridge, MA*, 3-23.
- Baines, S., & Wheelock, J. (1998). Working for each other: Gender, the household and micro-business survival and growth. *International Small Business Journal*, 17(1), 16-35.
- BarNir, A., & Smith, K.A. (2002). Inter-firm Alliances in the small firm: The role of social networks. Journal of Small Business Management, 40(3), 219-232.
- Blank, R. M. (2010). Women Owned Businesses in the 21st Century. A report prepared by the US Department of Commerce, Economics and Statistics Administration for the White House council on Women and Girls.
- Bradley, E., Curry, L., & Devers, K. (2007). Qualitative Data Analysis for Health Services Research: Developing Taxonomy, Themes, and Theory. *Health Services Research*, 42(4), 1758-1772.
- Bresciani, S., & Eppler, M. (2010). Brand new ventures? Insights on start-ups' branding practices. *Journal of Product & Brand Management*, 19(5), 356-366.
- Bukhari, Z., & Jamal, F. (2017). Impact of Social Media on the Success of Technological Entrepreneurial Ventures. *New Media and Mass Communication*, 61, 20 -28.
- Burt, R. S., Kilduff, M., & Tasselli, S. (2013). Social network analysis: Foundations and frontiers on advantage. *Annual review of psychology*, *64*, 527-547.
- Butler, J. E., & Hansen, G. S. (1991). Network evolution, entrepreneurial success, and regional development. *Entrepreneurship & Regional Development*, 3(1), 1-16.
- Butler, J., & Hansen, G. (1991). Network Evolution, Entrepreneurial Success, and Regional Development. *Entrepreneurship and Regional Development*, 3 (1), 1-16
- Carton, R., Hofer, C., & Meeks, M. (1998). The Entrepreneur and Entrepreneurship: Operational Definitions of Their Role In Society. *International Council for Small Business*, 1-12.
- Chattopadhyay, R. (2008). Social Networking and Entrepreneurial Success: A Study Based on Indian Culture. *Journal of Asia Entrepreneurship and Sustainability*, 4 (3), 39.

- Chell, E., & Baines, S. (1998). Does gender affect business performance? A study of microbusinesses in business services in the UK. *Entrepreneurship and Regional Development*, 10, 117-135.
- Coviello, N., Brodie, R., & Munro, H. (2000). An investigation of marketing practice by firm size. *Journal of Business Venturing*, 15(5), 523-545
- Cramer, D., Bryman, A., & Michael Strang., M. (2005). *Quantitative Data Analysis With SPSS 12 and 13: A Guide for Social Scientists* (1st ed.). Taylor & Francis Group / Books.
- Cruz-Cunha, M. (2011). *Handbook of research on business social networking* (1st ed.). Hershey, Pa.: IGI Global (701 E. Chocolate Avenue, Hershey, Pennsylvania, 17033, USA).
- Davidsson, P., & Wiklund, J. (2006). Conceptual and empirical challenges in the study of firm growth. *Entrepreneurship and the Growth of Firms*, *I*(1), 39-61.
- Del Greco, L., Walop, W., & McCarthy, R. H. (1987). Questionnaire development: 2. Validity and reliability. *CMAJ: Canadian Medical Association Journal*, 136(7), 699–700.
- Díaz García, M. C., & Carter, S. (2009). Resource mobilization through business owners' networks: is gender an issue?. *International Journal of Gender and Entrepreneurship*, 1(3), 226-252.
- Dodd, S.D, Jack S., & Anderson A. (2002). Scottish Entrepreneurial Networks in the International Context, Entrepreneurship Theory and Practice, 19 (4), 7-19.
- Dodd, S.D., & Patra, E. (2002). National Differences in Entrepreneurial Networking. Entrepreneurship and Regional Development, 14(2), 117-134
- Drucker, P. (2014). Innovation and entrepreneurship. Routledge.
- Eckhardt, J.T., & Shane, S.A. (2003). Opportunities and Entrepreneurship. *Journal of Business Management*, 29(3), 333-349.
- Fornoni, M., Arribas, I., & Vila, J. E. (2012). An entrepreneur's social capital and performance: The role of access to information in the Argentinean case. *Journal of Organizational Change Management*, 25(5), 682-698.
- Fournier, S., & Avery, J. (2011). The uninvited brand. *Business Horizons*, 54(3), 193-207.
- Fruhling, A., & Digman, L. (2000). The Impact of Eelectronic Commerce on Business Level Strategies. *Journal of Electronic Commerce Research*, 1(1), 13-22.
- Fuchs, C. (2017). Social media: A critical introduction. Sage.

- Gartner, W. (1990). What are we talking about when we talk about entrepreneurship? *Journal of Business Venturing*, *5*(1), 15-28.
- Gilmore, A., Carson, D., Donnell, A. O., & Cummins, D. (1999). Added value: A qualitative assessment of SME marketing. *Irish Marketing Review*, 12(1), 27-35.
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360-1380.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American journal of sociology*, *91*(3), 481-510.
- Granovetter, M. (1992). Problems of explanation in economic sociology. *Networks and organizations: Structure, form, and action*, 25, 56.
- Granovetter, M. S. (1973). The strength of weak ties. *American journal of sociology*, 78(6), 1360-1380.
- Gravetter, F.J., & Wallnau, L.B. (2004). *Essential of Statistics for the Behavioral Sciences* (6th ed). Wadsworth Publishing company.
- Greve, A., & Salaff, J. W. (2003). Social networks and entrepreneurship. *Entrepreneurship theory and practice*, 28(1), 1-22.
- Greve, A., & Salaff, J.W. (2003). Social networks and Entrepreneurship. Entrepreneurship Theory Practice, 28 (1), 1-22.
- Grunig, J., & Grunig, L. (2001). The relationship between public relations and marketing in excellent organizations: Evidence from the IABC study. *Journal of Marketing Communications*, 4(3), 141-162.
- Halligan, B., Shah, D., & Scott, D. (2009). Inbound marketing: get found using Google, social media, and blogs (Vol. 1). John Wiley & Sons Inc.
- Hansen, E.L (1995). Entrepreneurial networks and new organization growth. Entrepreneurship Theory Practice, 19 (4), 7-19.
- Hedges, L., Gurevitch, J., & Curtis, P. (1999). The Meta-Analysis of Response Ratios in Experimental Ecology. *Ecology*, 80(4), 1150.
- Hoang, H., & B. Antoncic. (2003). Network-based research in entrepreneurship: A critical review. Journal of International Small Business, 20 (2), 213-219.
- Johannisson, B. (2000). Networking and Entrepreneurial growth, In the Blackwell Handbook of Entrepreneurship, ed. D. L. Sexton and H. Landstroem, p.368-386. Oxford:Blackwell.
- Jones, B. (2010). Entrepreneurial marketing and the web 2.0 interface. *Journal of Research in Marketing and Entrepreneurship*, 12(2), 143-152.

- Kaplan, A., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59-68.
- Kothari, C.R. (1990). Research Methodology (2nd ed.). Newage International Publishers.
- Kotler, P & Armstrong, G. (2011). *Principles of Marketing* (14<sup>th</sup> ed.). Pearson Prentice Hall
- Krebs, V. (2008). Social Network Analysis: A Brief Introduction, 2008.
- Kuratko, D. F. (2016). *Entrepreneurship: Theory, process, and practice*. Cengage Learning.
- Larson, A. (1991). Partner networks: Leveraging external ties to improve Entrepreneurial Performance. *Journal of Business Venturing*, 6, 173-188.
- Lechler, T. (2001). Social Interaction: A Determinant of Entrepreneurial Team Venture Success. *Small Business Economics*, 16(4), 263-278.
- Licht, A. N., & Siegel, J. I. (2006). The social dimensions of entrepreneurship.
- Littunen, H., & Niittykangas, H. (2010). The rapid growth of young firms during various stages of entrepreneurship. *Small Business and Enterprise Development*, 17 (1), 8-31.
- Lotto, L. (1986). *Qualitative Data Analysis: A Sourcebook of New Methods: Matthew B. Miles and A. Michael Huberman.* Educational Evaluation and Policy Analysis, 8(3), 329-331.
- lvarez S. A., & Busenitz L. W. (2001). The entrepreneurship of resource-based theory. *Journal of Management*, 27, 755-776.
- Lydread, S. (1991). The Questionnaire as a Research Tool. *Family Practice*, 8(1), 84-91.
- Mangold, W., & Faulds, D. (2009). Social media: The new hybrid element of the promotion mix. *Business Horizons*, 52(4), 357-365. http://dx.doi.org/10.1016/j.bushor.2009.03.002
- Mangold, W., & Faulds, D. (2009). Social media: The new hybrid element of the promotion mix. *Business Horizons*, 52(4), 357-365.
- Martinez, M., & Aldrich, H. (2011). Networking strategies for entrepreneurs: balancing cohesion and diversity. *International Journal of Entrepreneurial Behavior & Research*, 17(1), 7-38. http://dx.doi.org/10.1108/13552551111107499
- McQuaid, R. W. (2000). The theory of partnership: why have partnerships?. *Routledge Advances in Management and Business Studies*, 19, 9-35.

- Miles MB, Huberman M. (1994). *Qualitative Data Analysis: A Sourcebook of New Methods*. 2. Beverly Hills, CA: Sage Publications.
- Nevo, B. (1985). Face Validity Revisited. *Journal of Educational Measurement*, 22(4), 287-293.
- OECD, (2000). OECD small and medium enterprise outlook. Paris: OECD 2000
- P@SHA | Facts & Figures. (2012). Pakistan Software Houses Association.
- Pakistan. (2015). *The World Bank*. Retrieved 20 July 2016, from http://data.worldbank.org/country/pakistan
- Peppers, D., Rogers, M., & Dorf, B. (1999). Is your company ready for one-to-one marketing. *Harvard Business Review*, 77(1), 151–160.
- Porter, M. (2001). Strategy and the Internet. *Harvard Bunsiess Review*, 79(3), 62-78.
- Qualman, E. (2013). Socialnomics (2nd ed.). Hoboken, NJ: John Wiley & Sons.
- Reijonen, H. (2010). Do all SMEs practice same kind of marketing? *Journal of Small Business and Enterprise Development*, 17(2), 279–293.
- Reyneke, M., Pitt, L., & Berthon, P. (2011). Luxury wine brand visibility in social media: an exploratory study. *International Journal of Wine Business Research*, 23(1), 21-35.
- Robinson, S., & Stubberud, H. A. (2009). Sources of Advice In Entrepreneurship: Gender Differences In Business Owners' Social Networks. *International journal of entrepreneurship*, 13, 83.
- Safko, L. (2012). The Social-media Bible (1st ed., pp. 3-21). Hoboken, N.J.: Wiley.
- Schaper, M. T., Volery, T., Weber, P. C., & Gibson, B. (2014). *Entrepreneurship and small business*.
- Sekaran, U. (2003). *Research methods for business: A skill building approach* (4th ed.). New York: John Wiley & Sons, Inc.
- Sharir, M., & Lerner, M. (2006). Gauging the success of social ventures initiated by individual social entrepreneurs. *Journal of World Business*, 41(1), 6-20.
- Siegel, D., & Wessner, C. (2010). Universities and the success of entrepreneurial ventures: evidence from the small business innovation research program. *The Journal of Technology Transfer*, *37*(4), 404-415.

- Small Business Survey by Deluxe Reveals Snapshot of Social Media Savvy Entrepreneurs. (2011). Small Business Trends. Retrieved 9 June 2017, from <a href="https://smallbiztrends.com/2011/06/social-media-savvy-entrepreneurs.html">https://smallbiztrends.com/2011/06/social-media-savvy-entrepreneurs.html</a>
- Smith, P. and Taylor, J. (2004). *Marketing Communications: An Integrated Approach*. London: Kogan Page Limited.
- Staber, U. (2001). The Structure of Networks in Industrial Districts. *International Journal of Urban Region and Resources*, 25(3), 537-552
- Stokes, D., & Lomax, W. (2002). Taking control of word of mouth marketing: the case of an entrepreneurial hotelier. *Journal of Small Business and Enterprise Development*, 9(4), 349-357.
- Stuart, T. E., & Sorenson, O. (2005). Social networks and entrepreneurship. In *Handbook of entrepreneurship research* (pp. 233-252). Springer US.
- Tapscott, D., & Williams, A. (2007). *Wikinomics: How Mass Collaboration Changes Everything* (1st ed., p. 320). New York: Penguin.
- Taylor, C. (2011). *Twitter Has 100 Million Active Users. Mashable*. Retrieved 9 June 2017, from http://mashable.com/2011/09/08/twitter-has-100-million-active-users/
- Teece, D. (2007). The role of managers, entrepreneurs and the literati in enterprise performance and economic growth. *International Journal of Learning, Innovation and Development*, 1(1), 4364.
- Trainor, K. J., Andzulis, J. M., Rapp, A., & Agnihotri, R. (2014). Social media technology usage and customer relationship performance: A capabilities-based examination of social CRM. *Journal of Business Research*, 67(6), 1201-1208.
- Vesper, Karl H., New Venture Strategies (1990). University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship.
- Walsh, M., & Lipinski, J. (2009). The role of the marketing function in small and medium sized enterprises. *Journal of Small Business and Enterprise Development*, 16(4), 569-585.
- Zontanos, G., & Anderson, A. (2004). Relationships, marketing and small business: an exploration of links in theory and practice. *Qualitative Market Research: An International Journal*, 7(3), 228-236. http://dx.doi.org/10.1108/13522750410540236

# Appendix A

Table 25 Demographics Organization

**Organization** 

		Organiza	ши		
		Frequenc	Percent	Valid	Cumulative
	_	у		Percent	Percent
	Emumba	5	3.6	3.6	3.6
	Konstant Variables	2	1.5	1.5	5.1
	Adlab Solutions	1	.7	.7	5.8
	IVY Interactive	1	.7	.7	6.6
	Vizteck Solutions	7	5.1	5.1	11.7
	<b>Longhorn Innovations</b>	8	5.8	5.8	17.5
	Hiqu Systems	8	5.8	5.8	23.4
	Stella	9	6.6	6.6	29.9
	X-flow Inc	9	6.6	6.6	36.5
	Biome Analytics	1	.7	.7	37.2
	Wondeful				
	Engineering/Tech	2	1.5	1.5	38.7
	Valley				
Valid	Nov Systems	3	2.2	2.2	40.9
vand	Decube Technologies	9	6.6	6.6	47.4
	Fides Technologies	3	2.2	2.2	49.6
	Cygnus Solutions	5	3.6	3.6	53.3
	Deal Smash	8	5.8	5.8	59.1
	We R Play	15	10.9	10.9	70.1
	Learn O Bots	8	5.8	5.8	75.9
	Ausomatic	5	3.6	3.6	79.6
	Simplicity Labs	8	5.8	5.8	85.4
	Touchd	3	2.2	2.2	87.6
	<b>Noval Solutions</b>	4	2.9	2.9	90.5
	Talk Health	4	2.9	2.9	93.4
	Hire Ninja	6	4.4	4.4	97.8
	Step Robotics	3	2.2	2.2	100.0
	Total	137	100.0	100.0	

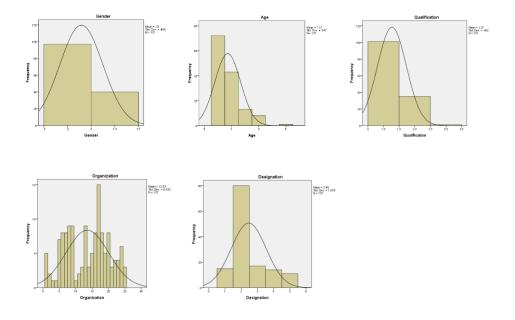


Figure 16. Histograms of Demographics

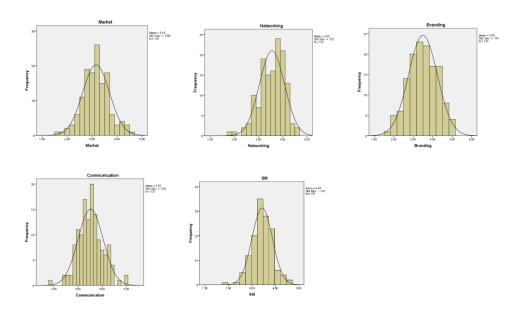


Figure 17. Histograms of Independent and Dependent Variables

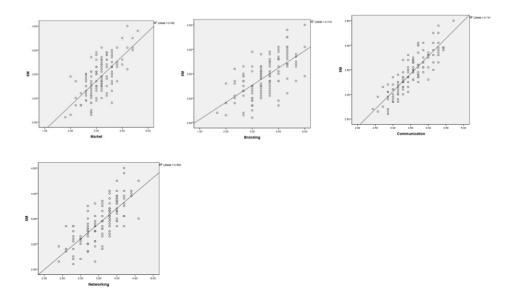


Figure 18. Scatter-plots of Independent Variables