DIGITAL ENTREPRENEURSHIP

G. Siva Vineela

Research Scholar,
Department of Entrepreneurship, GITAM Institute of Management,
GITAM (Deemed to be University), Visakhapatnam, Andhra Pradesh, India

ABSTRACT: Many studies proved entrepreneurship as a key factor for economic growth and also for reduction of unemployment. For being a successful entrepreneur, it is very essential to understand all the concepts that are related to entrepreneurship. In order to meet the market competition and achieve the business goal, every entrepreneur should be updated with the changes that occur in customer’s tastes and preferences and also in the market. Sometimes it is necessary to use some modern digital technologies and software to communicate with the customers and also to increase product value. As today’s world is mostly dependent on national and multinational technologies, it is essential to include these technologies in the business. In this sense, digital entrepreneurship plays a vital role in empowering an entrepreneur to perform all the activities accurately and effectively. As this is the process of using digital applications, it helps every entrepreneur to increase the market value for his/her product and develop the business both traditionally and technologically. As Information and communication technology (ICT) abilities are important elements of success of a digital enterprise, it is important to know how it helps people to improve their business. This is a basic study which describes digital entrepreneurship in detail. This can enable every individual who involve in business to gain knowledge about digital entrepreneurship.

Keywords: Economic growth, unemployment, entrepreneurship, digital entrepreneurship, information and communication technology, digital enterprise, digital artifacts, digital platform, digital infrastructure

INTRODUCTION

The present world is changing drastically in all fields especially in information and communication technologies (ICT). In this scenario, the rapid increase of digital technologies with new innovative functionalities is transforming competitive environments, modifying general business strategies, structures and procedures (Bharadwaj et al. 2013). For example, in the networked economy motorized by digital technologies, many firms or companies are becoming smaller with only one individual where partnerships are changing. Innovative digital technologies like social media, big data, and mobile and cloud solutions are giving rise to new methods of collaborating, leveraging resources, product/service design, development and deployment over open standards and shared technologies (Markus and Loebbecke, 2013). They are in turn influencing the business activities by generating employment opportunities. For example, Alibaba.com is a digital technology which enabled millions of Chinese people to become entrepreneurs and also responsible to create employment.

Even though digital technologies generating vast employment opportunities, they are also creating many challenges. The labor market is being modernized through digital technologies. Many countries like Australia are facing many challenges in order to meet the economic competition. In order to face these challenges and remove the hurdles, the countries are suggested to take over digital entrepreneurship and gain an appropriate position.

Digital entrepreneurship increases the rate of employment through ICTs like internet, mobile technology, social computing and digital platforms (Davidson & Vaast, 2010; Oestreicher-Singer & Zalmason, 2013; O’Reilly, 2007; Onetti, Zucchella, Jones, McDougall-Covin, 2012). Digital entrepreneurship can be simply defined as an entrepreneurial business which is carried out through a digital channel. Many companies started digital business by selling their goods online in order to meet the competition in the market. As this became a need, the concentration on how to start a business venture is growing with utmost importance. People who want to start a digital business should clearly know the difference of digital and traditional entrepreneurship, opportunities, downfalls and obstacles in digital entrepreneurship. For this, people require a format or a framework of digital entrepreneurship which consists of all the details regarding new digital venture like its features, objectives. This study simply provides a brief description and the process of digital entrepreneurship for understanding the concept.

REVIEW OF LITERATURE

Davidson & Vaast (2010) defined digital entrepreneurship as an act of identifying and utilizing new business opportunities which are offered by new media and internet technologies. It is same as traditional entrepreneurship in the sense that financial profits can be created through digital ventures and are directly associated with economic activities like new business establishment or commercialization of a business or innovation. Hair, Wetsch, Hull, Perotti & Hung (2012) stated that in case of digital entrepreneurship, all the activities of business are digitally operated instead of traditional layout. Hair (2012) said that the major difference between digital and traditional entrepreneurship is the business models and strategies that are followed by the companies for marketing and distribution of products.
According to Reuber & Fische (2011), a digital enterprise is termed as a person or a business that utilizes ICTs in order to communicate between customers and partners. This involves activities with a main aim of selling products or services which are digitalized. Simmons, Armstrong & Rosenbloom (1993) opined that digital entrepreneurship involves large firms like hardware, software and network technologies to small firms which utilize information and communication technologies to organize their business activities.

Vasilchenko & Morrish (2011) opined that small scale business firms which perform their actions with the support of ICT applications like online accounting, Wi-Fi – hotspot, phone backup, artificial intelligence soft wares, social computing websites like music consumption, and small mobile and internet based businesses like classification/cataloguing of specialized information, travel/recruitment agencies and buy-sell marketplace can also come under digital entrepreneurship.

It is important for everyone to understand the difference between digital entrepreneurship and traditional entrepreneurship. From the above review, we can say that digital entrepreneurship is related to the firms or entrepreneurial business that depends on digital technology whereas traditional entrepreneurship deals with business that is related to normal business strategies and procedures. This is explained further in detail.

ENTREPRENEURSHIP AND DIGITAL ENTREPRENEURSHIP – ITS DIFFERENCE

The concept of entrepreneurship is already explained through several studies’ literature (Kumtko and Hodgens, 2004; Cunningham and Lischeron, 1991: Timmons and Spinellli, 2005). Entrepreneurship is an activity which consists of identifying and utilizing opportunities, converting these ideas and opportunities into useful goods and services, adding value to them in long run, taking risk and obtaining rewards. Entrepreneurial actions can include activities in new and old ventures, non-profit organizations and also public sector. An important feature of entrepreneurship is creating a new value for a product through innovation.

Digital entrepreneurship is a sub group of entrepreneurship which involves digitalization methods in the functioning of its activities. Hence, digital entrepreneurship is related to digital business activities along with some digital goods and services (Clyde Hull, 2006). Traditional entrepreneurship can also be converted into digital business in order to increase the intensity of business. Some of the advantages of digital business include developing business activities, extend businesses by starting new ventures, improving business intelligence and communicating with large number of customers in less time. The growth of digital entrepreneurship can also lead to invention of new methods and technologies.

One of the major differences between digital and traditional entrepreneurship is the type of a product i.e. good or a service. If a new business offers digital products, then it is said to be mildly digital, and also experience some variations in customers’ response to those goods. Understanding how a digital entrepreneurship works can make many practitioners and business people to establish digital ventures.

Second major difference between digital and traditional entrepreneurship is the workplace. As soon as the products are digitalized, the physical space will be automatically reduced. DeSanctis and Monge (1999) assumed that virtual forms of digital ventures can offer products and services with a better cost as this process involves the usage of computer mediated –communication (CMC) within and between an organization and also some important external stakeholders (suppliers & customers). The importance for CMC in modern businesses is growing making it essential in virtual ventures.

Ease of Entry

Establishing a digital business venture is easy when compared to a traditional entrepreneurial business. For example, the time taken to build a website which sells the existing goods and services is less. Existing huge companies like eBay, amazon enables individuals to utilize the opportunities to form small business ventures in a short time. This is because many suppliers fail in offering quality products and services which makes digital entrepreneurship to succeed. The partial digital ventures are the one which face troubles due to this process as some of the activities require more effort. When high effort is required, the companies which have less capability of entry may fail. Apart from this, it also can be a motivation for entrepreneurs whose business is related with digital economy.

Ease of Manufacturing and Storing

A business venture that deals with digital products have tow benefits i.e. low manufacturing costs and less storing place whereas they are high in traditional entrepreneurship. In the process of producing or manufacturing digital products, no any physical equipment is necessary to produce them or no space is required to store it. This is a “just in time” production which saves many types of costs which are related to traditional entrepreneurship. There are more benefits for moderate and extreme digital entrepreneurship when compared to traditional and partial digital entrepreneurship.
Ease of Distribution in Digital Marketplace

The main feature and advantage of digital business is that the products and services are delivered overall the world very quickly and cheaply. Evans and Wurster (2000) mention this feature as “reach” of the internet. In olden days, the customers used to depend totally on local suppliers to get required goods and services to their locality. But in present world, internet enables every customer to obtain goods and services necessary to their place which is possible with an internet connection. This is again a huge advantage for moderate and extreme digital entrepreneurs, but in addition, partial digital entrepreneurs also share these benefits.

Digital entrepreneurs can start their business internationally without any trouble that is seen in the process of doing business in domestic areas. This enables a digital entrepreneur to address the demand throughout the world which is not possible in the later concept. Secondly, in this process, digital entrepreneur needs to face competition worldwide which will be a big challenge which in turn makes them to prepare effective business strategies. The digital market place works “24 -7” which have a capability of handling high demands of customers.

Digital Workplace

As the internet connects people overall the world, entrepreneurs can take a benefit of capable employees and make them business partners all over the globe. Duarte and Synder (1999), Lipnak and Stamps (1997) stated that an entrepreneur can identify and hire talented employees, maintain cultural diversity, enhance utilization of available resources, increase flexibility and responsiveness through global virtual teams. Accomplishing virtual teams face many different challenges which are not experienced by normal managers (Cramton, 2002; Kayworth and Leidner, 2000). Digital entrepreneurs should understand about these challenges before entering into digital business.

Digital Product

Apart from manufacturing, storing and shipping advantages, digital product provides more benefits to entrepreneurs. A digital product can be adapted easily with innovative changes without interrupting the process of manufacturing and marketing of goods. Hence, digital entrepreneurs, before presenting a new product, should check the arguments of the Utterback – Abernathy model that says that when any innovative ideas happens after preparing a design, then product quality can drop. They stated that process innovation should be followed by product innovation to maintain the relationship between processes. This can be an advantage for moderate and extreme digital entrepreneurs because partial and traditional entrepreneurship don’t have digital products.

Digital Service

Importance for services in the digital world is growing higher and higher. It is highly essential for every customer and profits are also can be earned when the service cost is less than customer value. The important point an entrepreneur should remember is that the service provided should be worthy to the price they charge for the service. This gains a positive image for the company which also generates profits in terms of good will. An effective digital service helps an entrepreneur to obtain more number of customers and can also be an opportunity to know and understand the worldwide demand.

Slater & Narver (1995), Kohli & Jaworski (1990) and Deshpande & Webster (1989) stated that organization which is market oriented should focus on identifying and reacting to customer needs and observing competitor behavior which are more important for digital entrepreneurship. Companies with appropriately acceptable goods and services are unsuccessful in business as the attention on market situations is inadequate. In the case of digital entrepreneurship, when the required business activities are linked up with technology needed, they may think that they have done what they need to do to achieve success which can lead to failure.

BASIC ELEMENTS OF DIGITAL TECHNOLOGIES

In entrepreneurship, digital technology is incorporated in the form of three basic elements. They are: Digital Articrafts, Digital Platforms and Digital Infrastructure.

A Digital Articraft is a digital component, application or media content that is considered as a part of new product or service which in turn adds value to the end consumer (Ekbia, 2009; Kallinikos, Aaltonen, & Marton, 2013). The addition of some physical qualities from its related objects can add more value for these articrafts and convert them into useful products and services (Lusch & Nambisan, 2015) and also provide entrepreneurs many opportunities in several industries. These digital articrafts can be seen not only on smartphones and other personal devices (like apps that run on smart watch, fitness watch, etc.) but also as a part of home appliances, toys, apparel, shoes etc. These articrafts can be independent components of software/hardware or can be an item that operates with the help of digital platform.

A Digital Platform is said to be a mutual set of services and architecture that helps to offer complementary products or services which includes digital articrafts also (Parker, Van Alstyne,& Choudary, 2016; Tiwana, Konsynski, & Bush, 2010). For example, the platform of Apple’s iOS and platform of Google’s Android helps the applications to run on their corresponding smartphones. Likely, Ford’s SYNC 3 is a digital platform that manages integrated communication, navigation and many entertainment applications in cars. Digital platforms enable entrepreneurs to grab the opportunities in order to develop complementary goods and
services and meet the market competition (Zahra & Nambisan, 2011). The effectiveness of digital platform depends on the performance of the firm, the platform leader which in turn leads to creation of value and appropriation. The ability of new business ventures to improve their specialization to neutralize their capabilities of production, marketing and distribution describe the desirability of digital platforms for entrepreneurial business (Huang, Ceccagnoli, Forman, & Wu, 2013; Zahra & Nambisan, 2011).

A Digital Infrastructure is defined as tools and systems of digital technology (e.g., cloud computing, data analytics, online communities, social media, 3D printing, digital market spaces, etc.) that provides communication, collaboration, and/or computing abilities to upkeep innovation and entrepreneurship. The democratization of entrepreneurship is possible through these types of digital infrastructures as a large number of people involve in all activities during entrepreneurial process. For example, the systems like crowdsourcing and crowd funding enable entrepreneurs to communicate with potential customers and also investors to obtain various difference resources like innovative ideas and capital on a global scale. In addition to these, new digital infrastructures possess the capability of supporting end-to-end business activities.

Hence, the role of digital technologies in entrepreneurial right from opportunity recognition to the formation of business ventures in both processes and outcomes. Especially, according to the framework of entrepreneurial opportunity proposed by Davidson (2015), digital artifacts and digital platforms serve as one of the parts for starting a new venture where as digital infrastructure is an external unit to support an entrepreneurial process.

**PILLARS OF DIGITAL ENTREPRENEURSHIP**

Many studies, as said above, digital entrepreneurship differs from traditional or general entrepreneurship in many aspects which have been examined for years. The European Commission (2013) recognized 5 elements as pillars of digital entrepreneurship in which each element is related to analyze the concept of entrepreneurship.

- Digital knowledge base and ICT market.
- Digital business environment.
- Access to finance.
- Digital skills and e – leadership and
- Entrepreneurial culture.

**Digital Knowledge Base & ICT Market**

Digital knowledge base is a type of technology which is used to store complex unstructured and structured data or information which is used by computer systems. A digital knowledge based system comprises of knowledge – base that characterize the facts and an interface engine that justify these facts and also use many rules and logical forms in order to produce other facts from existing information. Information and communication technology is also one of the technologies that are responsible for transmitting all kinds of information of industries or companies electronically. ICT is the major tool or technology that is used for process of digital entrepreneurship.

**Digital Business Environment**

Digital business environment can be explained as a virtual place in which one or more computer systems are used to record or save business information and details of individuals’ interaction. This can be done through digital social environments, also called as social networking sites which consist of single central server to share information or data to each and every client.

**Access to Finance**

Finance is the primary concept and requirement for every business to carry on both short term and long term activities effectively. Access to finance is defined as the capability of an individual or an enterprise to attain financial services along with credit, deposit, payment, insurance and other risk managing services. The extent of finance depends on the type of business, its products and services. The management of available finance is very important for every entrepreneur for reducing financial risks. There are many formal and informal financial services which provide financial support.

**Digital Skills & E – Leadership**

There are many kinds of skills which are essential for every individual who wants to become an entrepreneur. Among them, the digital skills are related to digital entrepreneurship. Digital skills can be defined as the skills of an individual which are associated with the usage of digital technologies. Attention on the process of using digital technologies should be more to eliminate the disturbances in digital business environment. E – Leadership, in other words, electronic leadership, is a process to influence the people in order to change their attitudes, intentions, behavior and also performance in the way they can achieve their goals perfectly. E – Learning can be used not only for digital entrepreneurship, but also for other aspects in order to attract people towards the specific fields.
Entrepreneurial Culture

An entrepreneurial culture is defined as an environment where people are influenced and motivated to obtain innovative thinking power to bear risks. In the case of business, an entrepreneurial culture is a program or a place where employees are encouraged to express their innovative thoughts or products. Whenever the time during work is involved in this, it is called as intrapreneurship. Entrepreneurial culture has several issues of market orientation are different from traditional products.

THE ROLE OF MARKET ORIENTATION IN DIGITAL ENTREPRENEURSHIP

Market orientation is stated as a philosophy of a company which focuses on how to identify and satisfy the needs and aspirations of the customers with its product mix. It mainly concentrates on the customer or a consumer than on the product or a good. Market orientation is very essential to digital entrepreneurs and several issues of market orientation are different in traditional and digital entrepreneurship. These issues consist of the necessity of being market oriented in general, the necessity of maintaining relationships in a digital aspect, maintaining visibility, and recognizing the nature and importance of digital value. It is found from the results that the attitude of students on music downloading is not at all impacted by the permission of an artist. Not only traditional challenges but also many cultural aspects which are creating serious problems are also became hurdles for digital entrepreneurs.

THE PROBLEM OF VIRTUALITY

Piracy is a biggest challenge for entrepreneurs who deal especially with digital products. According to 2016 Business Software Alliance/IDC Global Software Piracy Study, the world piracy rate is 35% and losses occurred due to piracy is more than 34 Billion US dollars. Eastern Europe is the one who recorded 69% of piracy rate which was high since 1994. This is similar in music business which was recorded as USS 4.6 billion globally. When the process of manufacturing and supplying products makes easy to get pirated, then it results in the change of customers’ attitude towards nature of a product which causes heavy loss.

Electronic communities are one significant tool for a digital entrepreneur that enables quick alteration of innovative ideas between the organization and its customers (Kozinets 2002). This fast moving market research tool enables even partial digital entrepreneurs to know the needs and desires of their customers regularly and immediately which is comparatively expensive interactive process (Kozinets, 1998).

Apart from knowing the customers’ needs and desires, a digital entrepreneur should observe and examine the suppliers’ and competitors’ direct and indirect activities. Gummesson (1994) stated that in order to formulate effective and successful relationship marketing strategies, the coordination between customers and stakeholders is very essential. A customer–accessible electronic community is the best way to strengthen the process of communication for any digital enterprise (Kozinets, 1998). The innovation is made easily when a community–based interactive systems exists in the business. Their assistance in association of partners in large and small scale organizations is appreciable and also makes an entrepreneur to know the situations of digital marketplace. Peppers and Rogers (1996) opined that the “market of one” in which every customer obtains...
a modified product is basically very important to digital entrepreneur which introduce many challenges when the number of customers increase. Payne and Frow (2005) said that the success for any process of relationship management happens when the customer is placed at the heart of an electronic strategy and there are several customer relationship management software packages available in order to do the above. 

Lastly, Rayport and Sviokla (1999) said that knowing the advantages of virtual value chain is essential to deliver excellent customer service. A series of value – added activities which is electronically enabled which connects the supply and demand is called as a virtual value chain. The importance of understanding this concept is to point out these processes and recognize value added capacities in every stage. In the process of using virtual value chains, digital entrepreneurs can be able to view every business activity and hence the final products and services more efficiently through which the customers can be satisfied. An effective virtual value chain also acts as a mirror to project the capabilities of activities of research and development. Finally, the virtual value chain makes an entrepreneur to offer improved customer relationships that not only advance the performance of existing activities, but also recognize new opportunities.

Hence, market orientation is an essential factor of success in basically digital entrepreneurship. This helps the digital entrepreneurs to enhance the performance of business activities. Among several applications, market orientation is one of the successful communications whereas in digital marketplace, it is CMC i.e. computer – mediated communication. This offers many opportunities and showcases many challenges to a digital entrepreneur that may not be present in traditional entrepreneurship.

HOW IS DIGITAL ENTREPRENEURSHIP IMPORTANT?

More customers:

As digital entrepreneurship is related with the utilization of digital systems for execution of all business activities, the communication between a buyer and a seller becomes easy the communication through internet is easy when compared to other means of communication. Buying goods and products through online is the convenient way for consumers to buy. Now days, people are more interested to purchase anything online than spending their time in going to stores. Hence the number of customers can be increased due to convenience of buying.

Keep up with the competition:

The usage of digital marketing enables a company to attain more customers and strong enough to meet the competition. In order to face various market challenges, digital technology is very essential for every business in order to face the challenges and grow their business.

Maximize the value of website:

Every website of a business is supposed to offer services as much as possible to make visitors as efficient customers and in turn consumers. Different entrepreneurs follow different ways to achieve this but one common aim for everyone is to have high sales for their company. Hence, well designed website for every business can be a platform to achieve this goal.

Reduced costs:

Digital technology is very feasible in financial aspect. This means digital marketing is very affordable. The costs are varied depending on the kind of strategy they use for marketing products. So automatically the costs can be decreased with the use of digital technologies.

Instant feedback:

One of the important advantages is that people can highly involve in interacting process with the customers. As this conversation is two way, the entrepreneurs can get feedback instantly. An entrepreneur can know immediately when the customer is not satisfied with the product offered. He/she can modify the products if necessary according to the needs of customers. This makes an entrepreneur to follow the trends that occurred in requirements, tastes and preferences of the customers.

7 WAYS TO ENHANCE DIGITAL INNOVATION AND ENTREPRENEURSHIP

Analysis of digital innovation and entrepreneurship suggested 7 ways through which digital entrepreneurship can be encouraged. They are:
1. Target digital innovation and entrepreneurship

Many skills and capabilities like technical, managerial and financial are necessary for digital innovation and entrepreneurship. Along with these, entrepreneurial culture, acceptance of risks and failures, large funding and environment which is innovative – friendly is also required which involves capacity building and some business strategies. Digital innovation doesn’t involve only ICT applications but also development in other fields through digital technologies are also to be noticed.

2. Control difficulties and reduce their negative effects

Controlling digital disruption and securing the status quo is one of the short – term strategies. It is also important to look beyond the impact of economic aspects of digital innovation. Hence, policy makers should take into account its impact on other aspects along with social impacts. For example, changes occur in structure of employment and distribution of income.

3. Notice the diversification of digital innovation and entrepreneurship

Several feedbacks from policies that allow innovation and entrepreneurship among various fields of digital innovation and entrepreneurship ecosystem are important and necessary. In the physical field, business policy should encourage public and private research and development and make the digital infrastructures important. In remaining fields of ecosystem, more flexible tools and innovative strategies are said to be effective. In the field where more interruptions occur due to digital platforms, regulation plays a vital role.

4. Strengthen collaboration

To provide collaboration, the transfer of knowledge and spillovers should have more focus on public policies. Establishing ecosystems and building links among them can allow the flow of knowledge and absorption.

5. Provide scaling – up

More attention should be given to the complementarities between public and private funding for innovation along with increase of fund for innovation. Public funding should concentrate on failure of research and bear failure costs. In addition to this, it should also assure the steadiness and determination of funding to technological ventures in order to neutralize the investment cycles of private funding.

6. Establish technology – related networks and stable exchange of IPR

In order to assure technological transfer and usage of information and establish technology – related networks, synchronization between several technological standards is required. SMEs and start – ups are also being included in this process of standardization. Technology markets can also be used to exchange information which plays a key role in contracting with the division of technology. Their efficiency depends on quality of IPR.

7. Balancing between openness and incentives to innovate

Technological complication associated with increase of digital innovation needs a stability between two inconsistent goals: the facility of incentives in order to make new products and inspiration of distribution of knowledge.

CONCLUSION

There is an evidence to note digital entrepreneurship as a different field in academic scholarship and having its own social and economic importance. The European Commission, through its study on Digital Entrepreneurship in 2013 recognized this concept as important for particular analysis. In the present body of scholarship, there is a little information relating to digital entrepreneurship which can be a foundation for many concepts in the existing fields of digital economy and entrepreneurship. As the knowledge of digital technologies is very essential for becoming a digital entrepreneur, this study helps people to gain a basic knowledge of digital entrepreneurship. In this context, the present study paves a pathway to analyze digital entrepreneurship into a wide extent.

The variations between traditional and digital entrepreneurship is highly focused as this is very important for every entrepreneur to justify their type of business. In examining this, many key issues which differs digital from traditional entrepreneurship are highlighted. In addition to this, the problems of virtuality and the need for market orientation is also discussed. The elements which are elementary of digital entrepreneurship along with its pillars are also explained. This helps a digital entrepreneur to modify the business strategies in order to make the business effective and strong. Finally why digital entrepreneurship is important is given to know the purpose of digital entrepreneurship along with the measures for development of innovative and digital entrepreneurship. Apart from this, the major limitation of the current study is that this is totally theoretical which depends on existing work done by many authors in order to understand the phenomenon of new digital entrepreneurship. This paper presents a new way of thinking regarding internet and digital businesses.
REFERENCES


