

8 MAJID MAHMOOD

UTILIZING PROJECT MANAGEMENT TO STARTUP A COMPANY IN THE IT INDUSTRY

ABSTRACT The problem of literature exists in the inter-relation of the 2 fields of Project management and Entrepreneurship. A lot of research is being done in the field of entrepreneurship and project management but not in a co-linear or relational methodology. The problem that is being analyzed by this research is how to implement the principles of project management to the concept of starting a new business. The finding for this research was the implementation of WinWin Sprial model to starting a new company and sustaining it using the WinWin Spiral model.

Keyword: Entrepreneurship, Project management, project management for entrepreneurship, business creation

Introduction

The new age of business, entrepreneurship is an important aspect that has a lot of advantages. According to Acs, Arenius, Hay and Minniti (2004), entrepreneurship has a lot of advantages including job creation, national economic growth because of the export that is being done. The paper structure is defined in the way that the theoretical concepts in entrepreneurship, project management are explained first and later on the procedure of starting a company is defined. This leads to the explanation of the proposed framework to highlight the connection between Project Management and Entrepreneurship.

What is Entrepreneurship?

A number of studies has been done on the field of entrepreneurship; however, there remain a lack of a proper definitive definition for it. Gedeon

(2010) has compiled a list of definitions he considers as prominent or widely used in the literature. Entrepreneurship according to Draheim (1972), is the act of founding a new company where none existed before. Vesper (1982) defines loosely entrepreneurship as “the creation of new business enterprises by individuals or small groups.” Lumpkin and Dess (1996) defines it as a “new entity” or an orientation refers to the processes, practices, and decision-making activities that lead to new entry. Gartner (1990) defines entrepreneurship as the process by which new organizations come into existence.

Given these diverse definitions of entrepreneurship, a common thing can be noticed in them which is the *creation of a new venture/company/organization* for different reasons including profits, etc. However another interesting aspect of notice is not every company succeeds or makes profits. Ventures close down as well because of the losses they are making and eventually are left with no liquid capital. As Richtermeyer (2003) said that the field of entrepreneurship is continuously evolving and expanding. This is because the dimensions of entrepreneurship are constantly changing. One example lies in the deployment of internet and companies moving online for a more globalized business approach which leads them to make more money without having to invest money heavily in the development of ventures on land foreign to their corporation nationality.

Entrepreneurship in information technology is much different from traditional entrepreneurship. The reason being it can be innovative or imitative entrepreneurship. Innovation in this context could be characterised as being when a new solution is devised for which no other solution exists. In innovation there is a less chance that competitors would exist but another aspect might be that the clients might have to be trained that the solution is one of their needs. Imitation is when there is an already existent solution, its replica is made but in a different manner to portray differently. Imitation might necessary not be an exact replica. But with imitation there are competitors already existent in the business field.

What is Project Management?

Atkinson (1999) quotes Olsen (1971) defines project management as “the application of a collection of tools and techniques—such as the CPM and matrix organization—to direct the use of diverse resources toward the

accomplishment of a unique, complex, one-time task within time, cost and quality constraints. Each task requires a particular mix of these tools and techniques structured to fit the task environment and life cycle (from conception to completion) of the task". Kuura (2012) refers to the development of contemporary project management came into the being in 1950s which means people started using basic project management in that era. There is a lot of literature on the project management and how project management was developed. Project management varies differently for different industries and different types of projects even though with a basic framework being almost the same.

Shrnhur (1997) defines project success dimensions by defining 3 levels, meeting design goals, impact on the customer and benefits to the organization which further can be divided into meeting the operational specification, time goal, budget goals, and meeting technical specifications. If these are not met, the project is most likely to fail and leading to a case where there is no benefit to the organization.

Project Life cycle

According to Field and Keller (1998), Buchanan and Boddy (1992) defines a project as "A project is a unique venture with a beginning and an end, conducted by people to meet established goals with parameters of cost, schedule and quality". There are a lot of other valid definitions that hold true for the word project each with a different explanation of the word project. A project can be considered unique or a further extension of a previous project. In order to handle projects, a lot of project life cycles have been research upon and documented.

Other authors like, Schwalbe (2010) define a project as "a temporary endeavor undertaken to create a unique product, service or result." The noticeable thing between the two definitions is that each of them refers to the project having an ending with the passage of time, let alone the aspect of the project is completed successfully or the project is failed. The most important thing from the definition is the concept that projects are done by people. This implies there has to be a realization of the project requirement otherwise there is a chance that no project will be done.

Similar to this, a lot of research has been done on project life cycles and a variety of different cycles have been created, each with a different set of focus of industry, or type of project. Kendrick (2013) defines the project

life cycle as a linear project with the project starting and moving towards a requirement and planning which is further refined, designed then developed and at the end tested before the project is ended. In such a model processes are normally not interpreted and changes are hard to make during the project.

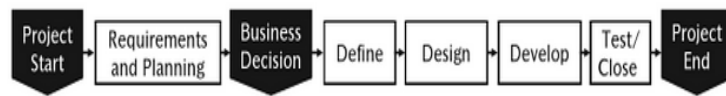


Figure 1: A typical Project life cycle for development projects, Adapted from- Kendrick, Tom- The Project Management tool kit- Page 143

Another model for project management is the Boehm (1998) defined Win-Win Spiral Model that uses a cyclic methodology for the successful execution of complex projects. In a WinWin Spiral model, there are 4 activities in each stage of the cycle in the project life cycle—as follow:

- Elaborate the process, objectives and constraints
- Evaluate the process with respect to the objectives and identifying the major source of product risk.
- Elaborate the definition of process
- Plan the next cycle

The purpose of dividing these stages into cycles helps the projects completed more efficiently and effectively. Another impression can be if there is a likelihood that the project is going to fail or is not going to perform as expected, the project can be closed before it utilizes the resources like money and labor in a negative manner.

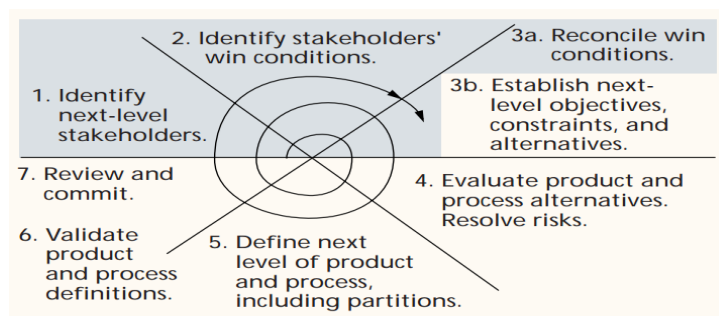


Figure 2: Adapted from Boehm, Barry, et al. "Using the WinWin spiral model: a case study." *IEEE Computer* 31.7 (1998): 33-44.

An interesting aspect is the concept of projects is, there are deliverables after a phase of a project is completed. The Project Management Institute Inc (2001) defines a few of the deliverables as Project Charter, Project Management Plan, Resource Requirement, Work Breakdown Structure, Budget Planning, Risk planning, Stakeholders list and Quality assurance. These documents are developed with passing time and progress in the project. These documents tend to help when the project is being upgraded or being run in a spiral model.

Starting a business

Even though the procedure for starting a business varies from country to country but in a very general overview, Gibb (1982), Allan describes the steps as mentioned in Figure 3. Rather than talking about the legal aspects which is just one of the activities in the business initiation. The most important thing in order to start a business is acquiring motivation and finding a business idea. But not every idea is a million dollar idea. Ideas can be validated and a lot of research has been done by prominent management gurus on how to validate a business idea whether it has a possible business potential or no. Kim and Renée (2000) proposes the 3 tools of validating a business idea are “the buyer utility map”, “the price corridor of mass” and “the business model guide”. These concepts let one know if there is a possible potential in an idea or whether at the end of the day it might be unrealistic and not possible.



Figure 3 Stages of starting a business- Adapted from Gibb, Allan, and John Ritchie. "Understanding the process of starting small businesses." *International Small Business Journal* 1.1 (1982): 26-45.

After an idea is validated, the business needs to be registered and all the legal paper works needs to be done which results into a registered entity which is ready to do business. Then comes the most important stage of the survival, because survival of a business plays an important role. If the business is not kept to survive, the company will make no money and most likely fail eventually leading to the company closure. Documentation is

needed for the business as well, and two of the most important documents include the business plan and business model canvas. A lot of extensive research has been done. Sahlman (1997) explains the ways how to write a successful business plan with things including the people, the opportunity, the context and risk/rewards. A business plan is a comprehensive document explaining almost everything about the business plan. Similarly, Osterwalder's (2008), Business model canvas can be used to create a pictorial analysis of the business idea including 9 basic building blocks which summarize almost everything about the business.

Implementation of project life cycle on starting of a new company

The part of research that is meant to indicate how the interrelation can be drawn between project management and the starting of a new business (Entrepreneurship), an application of the project management methodology was needed to be applied to the process of starting a new business. The model was derived from the basic spiral model of Project management and is illustrated in Figure 4 Project Management in Entrepreneurship (page 16). The spiral was divided into 8 stages in one cycle and the cycle is repeated with the progress of time but each time with a difference. The cycle starts with a specification, motivation that means an individual realizing the fact that there is an opportunity for a business. After realizing about the business opportunity is the next stage of planning where there is a business plan, or documented specifications in the form of a requirement document, a business plan and a business model canvas. The project charter will be the business plan. After that, the business idea needs to be validated, and validation can be done from the methods mentioned by (Chan and Mauborgne, 2000) which can be used to validate a business idea. In an Information Technology company, resources include human resource, technology resource, land resource, etc. Most important being the human resources which include developers, designers, marketing and management people. The roles need to be defined here that what resource will do what and how will the human resources be compensated. Other aspect of resource is the technological resource planning like the number of machines that would have to be planned. The budget planning needs to be done as well and the source budgeting needs to be done. The budget definition also needs to

identify where will the business funded from, whether an investment exists, or no. After the resource identification, in the first cycle comes the negotiation (or execution) of the business. By execution, the meaning of legally registering the business, starting to build a prototype if the company is going to offer a product otherwise building a portfolio and coming up with services that the business will offer. After going through the legal matters of registration, the legal permissions are granted from the governmental authorities that the business is legally registered. This makes the company move towards the birth and survival which means the making money, getting clients/people to use products or offering those people services. After this stage comes the profit analysis which means to analyze how was the company launch and the profit that is being made. If the idea is sustainable and a profitable one it will definitely be showing a possibility of profit if not had a break even yet. While analyzing the profits, there would be lessons learnt that can be used later. Things that can be done and others which cannot be done. They need to be documented as well such that it will help in the future. The last step is the future planning, which includes what are the possibilities for the next phase of the business which needs to be documented as well.

Businesses would not stop on the first cycle, businesses are meant to be sustainable and grow with time eventually making higher profits. After completion of the first cycle, the second cycle would include the expansion of the business or the other case being converting the business model to make it profitable given it is not making any money. From the end of the first cycle, the business knows what can be done in the future or possibility a spark was generated because of a possible chance, which than is the motivation for the extension of the business. That motivation is documented in the business plan as an update which is then validated and the cycle continues towards the development of that possibility of extension of the business. Each time a new motivation comes, this cycle can be revived and follow applying the spiral cycle of project management and giving rise to a new business.

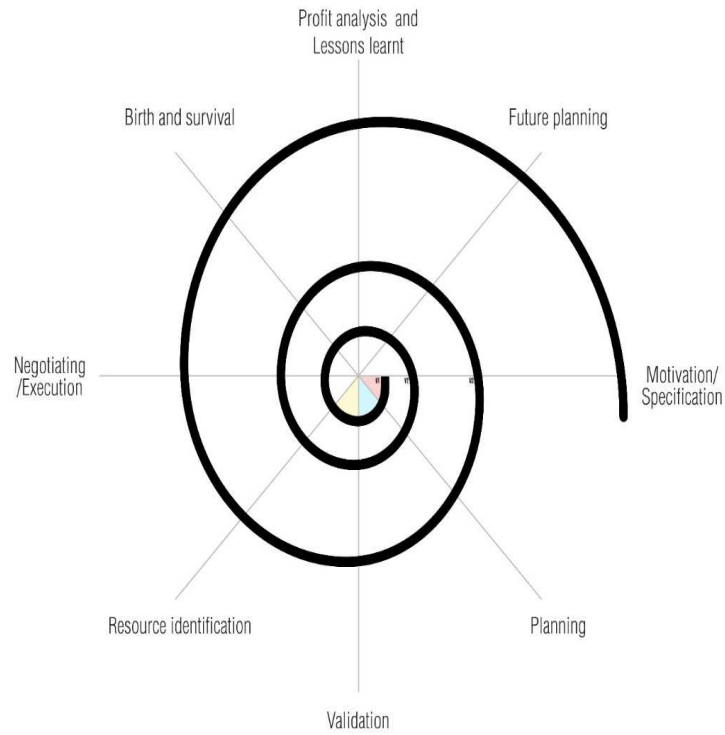


Figure 4: Project Management in Entrepreneurship

Conclusion

The two domains of project management and entrepreneurship have a great domain of knowledge available and a lot of research has already been done and is being done. However the need of an interconnection with respect to each other is also essentially becoming important as more entrepreneurs are coming and the domain of starting new businesses is dramatically changing. In this era, IT companies are being formed more easily and more profits are being made from them. The research suggested a possible methodology that can be followed for launching an IT company using a Project Management model. Further research is highly recommended to enhance the overall concept. By undertaking further research, I would be develop-

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ing more frameworks and mathematical models for the interrelation of Project Management and Entrepreneurship.

Author's Brief Bio

Majid Mahmood is an MBA Student in Global Management at Hochschule Bremen, Bremen, Germany. He holds a Bachelor degree in Engineering Science from the Ghulam Ishaq Khan Institute, Topi, Pakistan, with specialisation in Semi and Super conductors.

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