DIFFICULTY OF IMPLEMENTING PROJECT MANAGEMENT TECHNIQUES IN DIGITAL START-UPS

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Abstract

Project management is becoming more and more popular as a useful tool for businesses to embrace change and adapt to the market in order to stay competitive in a quick-moving sector. In today's corporate world, when resources are limited, timescales are shorter, budgets are more constrained, and technology is always evolving, project management is crucial. As a result, it is thought that using it in start-ups is advantageous since it boosts productivity.

The task of keeping a project's budget in check requires the use of comparative tools, cost-management techniques, and contingency plans. Any digital start-up that spends hours creating a healthy profit that shows a solid economic position in the market is regarded to have a tough time stabilising the economy. Finding repeatable and useful business models is a start-up's primary goal since these models deal with tried-and-true methods of conducting business that promote growth, revenue, and healthy rivalry with rivals. Additionally, it has been noted that new companies have encountered certain difficulties while using these project management models or methodologies.

It is therefore evident that the majority of participants believe that in the current business climate, beginning businesses should concentrate on agile methods where they only pay attention to the quality of their products and the satisfaction of their customers, as well as on project management, which is the most crucial factor in the evolution of project management over the course of a start-up's lifetime. Therefore, based on the results of this survey question, it is evident that the agile technique is one of the best business practices. This way lowers risk and promotes corporate flexibility, which is one of the crucial elements for start-up companies to offer customers with better service.

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Chapter 1: Introduction

1.1 Introduction

Project management is gaining popularity as a beneficial tool for organizations to adapt to the market and accept change in order to remain competitive in a fast-paced industry (Kiznyte etal., 2016). Project management is essential in today's business environment, when budgets are tighter, timeframes are shorter, resources are fewer, and technology is always advancing. As a result, its usage in startups is seen to be beneficial, as it is considered to increase efficiency. Two basic techniques to project management for digital startups may be distinguished: conventional/ traditional and agile. Traditional project management is linear, with a major emphasis on the start of the project. A project is formed and divided into portions, which are finished before the project sections are put together (Hebert & Deckro, 2011; Weaver, 2007). Traditional project management knowledge, techniques, and procedures for time management, cost control, risk mitigation, resource scheduling, roles, and quality assurance can be utilized to meet project objectives and complete sets of planned and anticipated activities. Work Breakdown Structures, Gantt Charts, Review Approach (PERT), Critical Path Method and Program Evaluation are commonly used in the traditional project management technique due to their relevance in a project (Gelbard et al., 2002; Shi & Blomquist, 2012). Agile Project Management (APM) techniques seek to adapt to the modern fast-changing business climate by coping with evolving needs and unanticipated circumstances during project execution, increasing the flexibility of this project management approach over the traditional project management. Short iteration intervals allow tasks to be subdivided into smaller, more manageable tasks; minimal initial planning prevents rework and saves time and money resources on adjustments (Kautz et al., 2014). Furthermore, a project's flexible scope encourages open contact with consumers, increasing

client satisfaction (Lee & Yong, 2009; Serrador & Pinto, 2015). This literature review examines the concept of project success in the context of entrepreneurship and new venture formation, focusing on digital startups.

1.2 Problem statement and justification

What project management techniques and approaches do entrepreneurs use in starting a digital business versus running it, and what challenges exist?

This literature review aims to understand the use and importance of project management tools and methodologies in digital startups. To understand the usage and value of project management at various stages of the start-up, a differentiation between techniques and tools used during the launching stage and those utilized during the business's operation must be established. The following objectives serve as a foundation for this research and answering the research questions:

- Identify the project management methods and tools digital startups use to get their businesses off the ground.
- Identify digital start-ups' project management methodologies and tools to run their businesses.
- Increase overall understanding of project management approaches and techniques essential in a digital start-up.

Chapter 2: Literature review

2.1 Introduction

The literature survey gives a theoretical basis for the two basic project management methodologies, which are classified as traditional and agile project management strategies. The main concepts, features, and evolution of both are discussed to provide a strong theoretical foundation to build the analyses. In addition, the development of entrepreneurialism and entrepreneur attributes are discussed. Finally, a link will be drawn between the two research fields of project management and entrepreneurship.

2.2 Project Management techniques

According to Kuura et al. (2014), we live in a project-oriented society, where a project is a short-term venture aimed at producing a one-of-a-kind product, service, or accomplishment. Projects are tools for growing a firm by implementing or meeting regulatory requirements, meeting stakeholder expectations, and developing, enhancing, or restoring services and processes (Kenley & Harfield, 2014; Weaver, 2007). A project may be described as a collection of activities having a well-defined aim, purpose, timeline, budget limits, and resource utilization in monetary terms, personnel, and technology (Hornstein, 2015). Executing projects allow a company's efficiency throughout the development phase; as a result, they may be seen as crucial in generating value and advantages (Jugdev et al., 2013). Additionally, projects are inventive and might be termed "entrepreneurial activities" because they attempt to introduce something new to their original context (Kuura et al., 2014). They also have a life span during which skills, technologies, and people are required to successfully use resources to complete (Jugdev et al.,

2013). Although project management techniques are so beneficial for start-ups but are difficult to inject into their systems so it is essential to find a solution to them. The analysis will probe into the stage of '***What can be done to apply project management techniques into start-ups that are digital and naturally on a scarcity of resources?***'

2.3 The current state of project management for digital startups

Project management is now widely recognized as an efficient approach of organizing work into projects in order to communicate and collaborate throughout the business (Kiznyte, Welker, & Dechange 2016). Regarding collaboration, planning, and competitively operating a firm, project management is effective (Kuura et al., 2014). Executing organized procedures and programs in the form of project management may assist a firm in prioritizing and managing its operations, targets, and achievements, as well as withstand market competition (Milosevic& Iewwongcharoen, 2004). In this context, preparation, monitoring, directing, delivering, realizing advantages, and handling change are at the heart of project management. Cost, risks, and managing deadlines, as well as the growth of a teamwork culture in the business, all contribute to improved efficiency in the application of Project management (Kiznyte, Welker, & Dechange 2016). The essence of project management helps complete tasks on time, within a predetermined range, and with improved outcomes because it is a method of predicting and optimizing brief collective inventiveness (Garel, 2013). Project Management is a strategic capability inside businesses since it aids in attaining objectives via projects and is a successful means of competing, maintaining a business, and enabling the reaction to change in the industry. Since it is more than simply figures, patterns, tables, or graphs, it is becoming increasingly complicated because of the rising intricacy of firms implementing business plans as projects (Kuura et al.,

2014; Milosevic& Iewwongcharoen, 2004). The complexity has been attributed to reliance on traditional/ conventional project management techniques in changing environments.

Startups have different structure and mode of functioning in business sector therefore, problems arising as a result are also unique and significant. As a result many large businesses working today are by products of these startups. Apple, Amazon, and Microsoft, the three very important companies in the world by market value in 2019, all began as new digital startups" (Pollman, 2019). "Very well-known companies, such as facebook, Google, Amazon, Uber, Saleforce, Airbnb, Spotify, and others, began as new digital businesses." (Zaheer et al., 2019). Consequently the approach to understand and analyze startups also varies. Apart, from these, one of the prior thing is evaluating these concepts of strartup's. As said by Niculescu (2016) "The inherent desire to produce a new product in an uncertain environment is one of the definitions of a startup." (Niculescu, 2016). As a result there are a lot of difficulties that have been faced by companies in various project implementations. "Most projects have some level of uncertainty, even very professional Managers have problems dealing with it." (De Meyer et al., 2002). Therefore, Pollman (2019) has also evaluated that, "Public and typical public firms are not the same as start-ups that focus on technology and innovation, as well as risk and growth. In result, they have different governance" (Pollman, 2019).

Startups are also analyzed as institution created by entrepreneurs that are worked under foreign investments "The objective is to create unique goods or services, achieve rapid growth, and exit via a trade sale or an Initial Public offering (Pollman, 2019). Entrepreneurship entails identifying, evaluating, and capitalizing on opportunities (Sońta-Drączkowska and Mrożewski, 2020). Similarly, It also primarily relies on cutting-edge technologies. Entrepreneurs' creative spirit is fueled by innovation, which is required for development and sustainability.". (Terry and

Frederick, 2016). In addition to this, Management also works simultaneously in every startups as managements are considered on of the basic element in every organization. Teixeira et al. (2018) has analyzed how implementation of project management has become crucial strategy in evaluation of every business plan. Therefore, there are a number of problems in this area, the most significant of which is a shortage of money and skilled people resources (Pollman, 2019). Along with it, advancement of digital technologies as also increased hurdles in way of project implementation in startups. As project management is an essential factor of growth and establishment so, various companies has used competitive ideologies to tackle the issues of project management implementation. The more highlighted concept in this regard are digital marketing. Project Management in Digital Marketing are complicated due to risk of heavy investments and its downfall so there is need to evaluate strategically and analytically these issues under startups and small and medium enterprises (SME) (Cova and Salle, 2015). The main reason for such problems are variant mode of functioning of digital as well as traditional mode of project implementation strategies of startups. The startups with traditional strategies "Working in harsh circumstances with only a 10% likelihood of success" (Johnson, 2017). In this way, better methodology is to shift towards digital marketing and become part of global world community.

2.4 Techniques and tools of traditional project management

Until the 1960s, there were no standardized processes for software development (Elliot, 2004). The Software Development Life Cycle, sometimes abbreviated as SDLC, is said to be the earliest codified technique for system development. The key concept and the goal of SDLC was to "formalize the development of information systems in an organized and systematic manner."

The sequential execution of each stage of the software development life cycle, beginning with the from the beginning to the end of the product system" (Elliot, 2004, p.87). Hirschheim, Klein, and Lyytinen (1995) offered an insightful discussion regarding the evolution of software techniques, defining the seven generations of software development processes and expressing the ideas underlying each of them. W.W. Royce created the conventional development approach, particularly the waterfall methodologies, in 1970 in order to tackle software project challenges (Guntamukkala et al., 2006). Because the core characteristics of the Waterfall model are straightforward, organized, predictable, and proven to be reliable, the sequential development technique has been extensively used in highly structured industry, particularly in large-scale projects in the public sector and military (Boehm and Turner, 2003). Traditional project management's core aims are to keep costs, quality, and time under control, which is why this review will focus on the most often utilized techniques to achieve those goals (Shi & Blomquist, 2012, Weaver, 2007, Laursen & Svejvig, 2016. Kostalova & Tetrevova (2014) recommends that project management knowledge, skills, methodologies, tools, and approaches are implemented extensively in projects to meet project objectives and achieve defined goals. A method is a set of activities, procedures, routines, and regulations in a field as a tool is physically used to execute a task to generate a product or outcome. This distinction is necessary to distinguish the two and prevent misconceptions in subsequent readings. Project management techniques are similar to guidelines and checklists in that they guarantee that the best rules are implemented and that the desired results are achieved (Jugdev et al., 2013). Agile project management is more spiral than traditional project management, which is linear (Sage Business Researcher, 2017). Agile project management creates functional projects that include the entire team and customers throughout the process (Kiznyte et al., 2016). In general, numerous procedures must be regularly linked with

the organization in order to develop a functional management system throughout the business; hence, customized internal ways are very common (Jugdev et al., 2013; **Kiznyte et al., 2016).**

2.5 Scheduling and time planning tools

Managing uncertainty and ambiguity via time scheduling is a major goal of project management (Shi & Blomquist, 2012; Weaver, 2007). There are several different methods for project scheduling, the most common of which being Work Breakdown Structures and Milestones (Bitner, 1985; Jugdev et al., 2013). A work breakdown structure is a basic project-planning instrument that breaks a project down into smaller components on an organizational chart to produce a roadmap of what must be accomplished and fulfilled (Garel, 2013; Kenley & Harfield, 2014; Kostalova & Tetrevova, 2014). Project Schedule Network Diagrams and Project Schedule Network Diagrams are two essential tools in project management. They are project networks that are also used for planning and monitoring (Garel, 2013; Hebert & Deckro, 2011; Kostalova & Tetrevova, 2014). CPM was developed after PERT to address shortcomings and serves as a scheduling technique for calculating the minimal project length, scheduling versatility, and controlling problems (Garel, 2013). On the axes of a Gantt chart are actions and durations, which are used to design task duration in the format of bars based on start and completion dates. A Gantt chart aims to calculate the length of operations and the project by defining time needs, depicting succession, relationships, accessibility, and effectiveness of resources (Kostalova & Tetrevova, 2014). Overall, Gantt Charts, WBS, PERT, CPM, and MSP software assist in planning and breaking up work into smaller tasks and offer vigorous control on the natural progression in traditional project management.

2.6 Tools to control costs

Cost management tools are much more crucial in project management because they direct how expenses will be adequately controlled during the venture (Garel, 2013). Maintaining a project's budget is a critical duty; tools include Comparative Tools, Cost Managing Strategies, and Contingency Plans (Bitner, 1985). Risks can be exemplified and analysed using Probability Analysis, or Reliability Analysis, for example (Jugdev et al., 2013; Kostalova & Tetrevova, 2014). Activity-Based Costing, or decision management means for example decision trees may all be used to control costs in a project (Jugdev et al., 2013, (Milosevic& Iewwongcharoen, 2004)). Furthermore, Earned Value Management (EVM) is widely used to regulate a project by comparing work completed and projected worth (Kostalova & Tetrevova, 2014; Milosevic& Iewwongcharoen, 2004).

2.7 Proposed solutions to limitations of Traditional project management for digital startups

2.7.1 Agile Project Management (APM)

Traditional project management techniques, and procedures, as previously stated, rely on extensive preliminary planning (Brechner & Waletzky, 2015). Project requirements are created before they are implemented, and making changes during the project execution takes time. This makes traditional techniques stiff and inflexible, while adjustment requests, upgrades, and plan revisions are expensive and time-consuming (Brechner & Waletzky, 2015). The contemporary Agile project management technique uses a "adhocratic" approach to estimate the project's triple constraints: Time, Cost, and Scope, and to manage the Scope in a value-driven manner by retaining Cost and Time variables as fixed entities to project objectives (Rose, 2010). The difference in approach between the two methodologies argues for the potential advantage of

Agile Project Management Approach (APM) over traditional Project Management Approach (TPM) in terms of risk management and project value addition through its iterative and progressive approach to planning and development (Robins, 2017). Traditional approaches appear to be antiquated as the tendency toward a rapidly-evolving, dynamic environment with shorter business cycles grows (Raval & Rathod, 2014; Serrador & Pinto, 2015). Agile project management arose as a technique to bring more flexibly and suitably (Boehm & Turner, 2005). It was first presented in 2001 and has risen in appeal over the past two decades (Kautz et al., 2014). It is frequently applied in software design, which contends with fast changing requirements (Association for Project Management, 2017). The Agile Methods, which comprise a collection of best practices under the umbrella of an iterative approach to software development, were established in the 1990s, with the emergence of the Internet. Thinking outside the boundaries of Traditional Waterfall Model Development Approach, a team of software engineers with knowledge in several frameworks to each other, collaborated to create a contemporary approach to project management based on the Iterative functionality (Schwaber and Beedle, 2002). It mitigates the failures of digital ventures and offers a substitute to the notion that normal project management methods are no longer suitable for this industry (Gandomani & Nafchi, 2016; Jayawardena & Ekanayake, 2010). One of the widely used Agile framework for software development is the Scrum (Weber, 2015). The scrum is very famous because it's adoption is very easy in the organization with small 8-12 member team. Furthermore, it seeks to cope more effectively with rising competition by concentrating on time and financial constraints, which define competition for a considerable percentage of the population (Raval & Rathod, 2014). This validates the literature review's focus on agile project management.

2.7.2 Attributes of Agile Project Management (APM)

In many respects, the features of an agile approach differ from those of a traditional method. Rather than comprehensive preplanning, a creation's vision determines the growth path (Conforto et al., 2014). As a result, agile methodologies focus more on the implementation point than the planning stage (Jayawardena & Ekanayake, 2010). The principle of lean development is included by employing an agile strategy that focuses on simplicity, efficient workflows, and resource efficiency (Conforto & Amaral, 2016). The agile technique emphasizes excellent team communication and external stakeholders to guarantee conformity with the concept's ideals (Boehm & Turner, 2005). Another feature of agile project management is that it necessitates extremely tight engagement with the user to integrate their input in all iteration cycles for continual development (Conforto & Amaral, 2016). The principle of direct feedback will enable effective communication to boost customer and end-consumer satisfaction and, as a result, minimize manufacturing costs (Brechner & Waletzky, 2015). As a result, agile project management is compatible with lean management, which emphasizes on eliminating wastage and minimizing rework by addressing problems timely when they arise. Additionally, early advantages are delivered as a result of gradual progress. Requested changes and suggestions are gathered and approved based on their importance and ability to provide immediate advantages (Association for Project Management, 2015). The consumer may benefit from additional functionality and upgrades by releasing them regularly (Association for Project Management, 2017; Brechner & Waletzky, 2015).

In agile projects, the team structure is self-managed and self-directed, linked to a higher level of responsibility for every team member. In contrast, the authority of a single project manager diminishes (Association for Project Management, 2017). To manage the agile context,

improved cooperation and effective communication in the team are required. The project manager is more concerned with training and handling broader stakeholder interactions to relieve the team's burden and allow them to focus on their primary responsibilities (Association for Project Management, 2015). Additionally, regular and brief stand-up discussions keep everyone informed about the project's progress. In those settings, problems that have arisen and obstacles that have been encountered are explored (Conforto & Amaral, 2016). While this may appear time-consuming, it helps avoid repeating the same mistakes and learn from teammates' experiences. As a result, productivity rises (Kautz et al., 2014). Furthermore, team members must justify and defend themselves if they fail to complete a job. On the one hand, this increases the amount of pressure and, on the other, creates an incentive for progress, assists in quickly addressing issues such as an excessive workload and allows the team to alter their activities to avoid overruns.

2.7.4 Agile Project Management usage in practice for digital startups

The agile technique became popular in projects as a solution to enormous cost and schedule overruns caused by traditional project management methods (Association for Project Management, 2015). This alternate strategy is now widely accepted as the standard for managing projects (Hoda et al., 2017). In addition, agile project management is commonly used in various industries that operate in a highly dynamic, fast-paced environment and require creative processes, such as design or service (Association for Project Management, 2015). A variety of conditions and features can trigger agile project management. For ventures of uncertainty and lost needs, a more dynamic approach with less early preparation is highly effective (Association for Project Management, 2015). Regular feedback mechanisms, rigorous communication and teamwork, can help guide this procedure in this scenario (Conforto & Amaral, 2016). As a result,

agile project management suits innovative development procedures (Conforto et al., 2014). In addition, the necessity for quick marketplace entry and time and cost restrictions are features of agile project management (Association for Project Management, 2015).

2.8 Conclusions

Due to the current business climate and rapidly changing needs, there is a need to be more adaptable and actively integrate clients, particularly in the software development sector. Many digital startups use an adapted version of agile management to do so. In contrast, others characterize their development process using typical agile project management features, indicating the unintentional use of an agile framework to some extent. Agile project management qualities appear to be more suited for many projects since they are well-matched with the qualities of today's environment. The widespread and practical implementation of agile project management leads to whether traditional project management is unsuitable for digital startups or perhaps obsolete. Traditional project management looks unsuited, particularly in the information sector and in light of start-ups' limited resources, especially in the early phases. This analysis is quite helpful in terms of integrating entrepreneurship with project management. The similarities and differences concerning the traits and responsibilities of businesspersons and project managers were discussed.

Furthermore, the view that establishing and expanding a business might be regarded as a project and managing a company's continuous activity linked the two research fields is increasingly apparent. Similarly, the review has noted that planning is critical in startups. As a result, using project management approaches seems natural. In principle, striking a balance between preparing enough and not spending too much time planning is critical; hence, agile project management's more dynamic approach looks more appropriate. The focus on project

management differs significantly based on the industry, teammates' location, and the project's size. For this reason, it is critical to link the study fields of entrepreneurship and digital startups with project management to raise attention that enables project managers to be appropriately considered and assessed. However, there are a few limitations to this review. New research alternatives might be suggested to attempt to integrate the two research domains of project management and entrepreneurship. The evaluation of the consistency of start-up existence and applied project management techniques and procedures are disregarded in this review due to the focus on identifying project management methods and tools for startups. However, the results suggest that project management tools and techniques should be used to manage the start-up's growth process effectively. Future research should emphasize on the cohesiveness of project management and the possibility of a start-up's continued existence to assess the value of project management in digital startups. Furthermore, this review represents unique attempts at studies in this area, and additional quantitative studies would offer extra reinforcement of the outcomes on a larger scale.

Chapter 3: Methodology

3.1 Introduction

In order to stabilize the economy for any digital start-up is considered as a difficult job as they spend hours making a good amount of profit that indicates a stable economic place in the market. In globalization digital startups are one of the essential sectors as they help to reduce poverty and unemployment from any underdeveloped country. Start-ups' main aim is to find repeatable and applicable business models because these models deal with traditional models of business techniques that lead to higher revenue, healthy competition with others and also an increase in

growth (Mantilla, 2020) . It also has been observed that while implementing these project management models or techniques new startups have faced some challenges. With the introduction of project management techniques to the startups those faced challenges are the aim of this research.

The methodology which will be use in the research will be qualitative research study and questionnaires will be use with open ended questions. This technique will help to collect in depth information about how startups dealt with the project management difficulties.

3.2 Research Philosophy

Gathering as much data based on conducted surveys is the main purpose of a researcher. A system of their thought that helps to follow the new opportunities and by which the research aims are satisfied is termed as the scientific research philosophy. There are many surveys which are conducted based on challenges faced by startups while implementing project management tools and techniques for building any project. It has been observed from that research that collection of data, processing with them and analysing based on those helps researchers to obtain a predicted and optimistic outcome for the research (Saunders, 2009). There are multiple research philosophies which can be applied for respective research but for this research a Positivism research has been conducted and applied to extract a predictable outcome as this type of research philosophy deals with data collection, sampling and interpretation through observation along with measurement (Kiznyte, Welker and Dechange, 2016). The main principles of positivism philosophy such as across sciences there are no difference about the logic of inquiry, the aim of the research indicates explanation and prediction and not permitting common sense in terms of research findings, the analysis and interpretation about the collected survey data is performed

through logic. According to these main principles, the aim of this research is to justify the chosen philosophy.

3.3 Research Approach

According to the definition of research approach, from broad assumptions to utilized methods of data collection, analysis and interpretation, plans and procedures for research which helps to span the steps. Various data is collected from different studies which are conducted on the research aims that is the impact of the challenges faced by start-up while utilizing project management techniques are first observed and then based on some hypothesis outcomes are predicted. For this research we also uses qualitative research study and questionnaires uses with open ended questions. This technique will help to collect in depth information about how startups dealt with the project management difficulties. Research approach is the main component of research methodology where three different types of approach are there such as inductive, deductive and abductive. These three approaches are based on some individual criteria (Zielske and Held, 2020). According to our research, the inductive approach is the best approach in which the outcomes are gathered with the help of predictions obtained from observations and theories and some interviews (Midler and Silberzahn, 2008). Three major applications of inductive research are observations, pattern of the data and research and the theories about the research. Grounded theory is considered as descriptive research conducted with quality. Some of the parameters of the inductive approach are - bottom up direction, multiple spatial scales, cognitive scale is multiple and high data intensity.

3.4 Research Strategy

The research strategy defines the whole process through which the research is being organized. Various questionnaires based on the problems faced by startups regarding implementation of project management techniques are collected and according to that some observations are noted. A positivist research philosophy has been chosen among all research philosophies as it is most justified with gathering data for research and an inductive research approach has been selected for this particular research (Mingers, 2001). Amongst various data collection methods qualitative research is considered as most suitable for this research with some survey methods that related to the research schedule and the formation of a Gantt chart. For the purpose of interpretation of data, we uses the atlas.ie software to analyse our qualitative data. The chosen research strategy as qualitative indicate some extra advantage over quantitative such as big organization established larger business whereas start-up need to apply an appropriate project strategy that leads growth of their business, questions coming from the employees of any organization who faced problems while implement project management strategies, a qualitative research also gives near o accurate prediction that helps to mitigate those challenges, solution came from the managerial interview also helpful to collect necessary information about the source of issue.

3.5 Data collection Method

Data collection method is a part of a research method and it consists of five different types of data collection strategies which can be dispensed based on the research aim and approach in corresponding to satisfy various motives. The five methods are survey methods that are segmented into two types: questionnaires and interviews; qualitative data collection and quantitative data collection methods, experiments and action research. For this research

qualitative has been selected for research within which observation type of qualitative data collection method has been chosen as the many information about questionnaires of this research has been gathered and those data are analysed through observation and by using the software atlas.ie. Observation can be structured or unstructured and in structured observation, the collection of data is accomplished on specific variables according to their per determined values and in unstructured observation there are no predefined values for variables so researcher can free to collect as much as data he/she needed from any media (Igwenagu, 2016). It has been noticed that a specific semi structured data observation method is applied here as via telephone and emails limited few business involvement has been conducted or accomplished while starting a new business for any start-up companies such as the number of correspondents will be certain as 10. Some important aspects of data collections are from feedback of customers with and without the utilization of project management techniques, textual data has been observed, visual analysis are performed through books and conducting interviews on people (Wilcox et al., 2012).

Interview Questionnaire will be consist of following questions:

1) In which Industry is your startup working?

2) What is the size of your company i.e how many employees are working?

3) Which Project Management technique is your company using? Like waterfall or agile etc.

4) What organizational difficulty has your company faced?

5) How has the Project management evolved over the course of startup's life time?

6) Your company future plans for Project management success.

7) Describe a time when your company experienced Project management success?

The intended sample for this project is to collect non random sampling with the purpose to collect all information needed and the best information from that samples. Over all 10 startups will be studied to get more relevant information. People from these 10 startups will be chosen purposefully according to their role within the organization and their knowledge in the subject and interview will be conducted Live via Phone Call,Teams or skype.

Important aspects of Data collections

- Textual data observation from customer feedbacks of digital start-ups with and without project management techniques

- Visual analysis from sources like books and interviews of people involved in the field of digital start-ups(owners, workers and customers)

- Literature data and review collections of start-ups that introduced project management techniques and their experiences along with data history and records from people who did not work digital start-ups with project management techniques

3.6 Sampling Method

Sampling method comes from the term "sampling" in research and there are mainly two types of sampling methods and they are probability sampling and non-probability sampling. The Process involve first to create a series of questions to better understand the difficulties which start up face in project management techniques. Questionnaires will be developed and sent out to different people in startup which are personally known by the researcher and assuring that all answers will be obtained. Then, representatives of startups will be contacted and find the out the interested ones and questionnaire will be then sent over to them. The questionnaire will be made in semi

structured way that will take less time of the representative but enough time to provide required important information for the research. After the questionnaire process the data will be transcribed and recorded and separated in terms of company theme and industry.

The sampling method which is selected for this project is the simple random sampling which is a type of probability sampling. A group of people, objects or items that are considered or extracted form a larger population or measurement are known as sampling in the context of research (Zhang, Lu and Cheng, 2021). There are many benefits of simple random sampling which helps to observe and get the predicted and most accurate outcome from the research as it is the purest form of sampling and the most straightforward probability sampling technique. For a wide range of motives it is the most genuine method that chooses a simple among its respective population or costumes (Xie, Heddy and Vongkulluksn, 2019).

3.7 Data Analysis

Straightforward newly settled firms or those in the arranging stage with almost no commitment to business tasks using ICTs and the web will be moved toward actually on the ground, via telephone, and by means of email. the significant members in this review. The survey will be semi-organized, and in light of the fact that it will require an investment to accumulate the material, there might be space for 10 answers (Lee, Hyeon and Hwang, 2020). The data was accumulated through the effective assessment of six issues, as shown by the information above, it is clear. In any case, it additionally runs the risk of passing up a great opportunity with significant educational subtleties. Effective request, a strategy for social event emotional information, involves filtering an assortment of information to recognize, inspect, and report repeating themes. It is a strategy for consolidating information, yet as well as picking codes and

making subjects, it likewise includes deciphering. Use the codes in Atlas,ie to analyse the interviews results. Effective examination is utilized in abstract investigation to concentrate on significant subjects or occasions tracked down in the information. This technique could feature the course, extensive depiction, and hypothetically taught understanding of significance of the enlightening social event (Amarasinghe et al., 2020).

3.8 Ethical Consideration

Definitive principles and regulations lay strong emphasis on making the exam paper moral from every angle, in line with how the evaluation was conducted. Many individuals come to the conclusion that moral evaluation should focus on moment audit plans and approaches. Mathematical outcomes are frequently replaced with text-based ones when thinking in terms of emotional appraisal. An emotional researcher can't depend on regular techniques for resolving specific issues like tendency and legitimacy since the master is considered as the exploration device and the plan of solicitations should be figured out and changed as the survey advances. In this manner, it is much of the time considered a fundamental part of emotional exploration to gain from an assortment of mistakes (Kiani et al., 2018). While social occasion data from individuals, experts are obliged to reliably stick to various moral standards. The severe rules in the audit manual that should be observed while making the investigation report likewise feature the need of saving moral issues.

3.9 Time Horizon

As indicated by the assessment's points, objectives, and questions, it got a cross-sectional time Horizon. The examination depends on a solitary investigation for a specific measure of time, subsequently the time horizon is cross-sectional. A cross-sectional fleeting horizon gives a fast

look at different portion gatherings (Robertson, 2020). Cross-sectional examination makes it simpler to take a gander at numerous things found simultaneously all through the assessment. This has helped the master in recommending answers for facilitating those difficulties through the examination. The data accumulated and coordinated through effective review has made the test really fascinating.

3.10 Gantt Chart

Chapters	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Chapter 1: Introduction												
Chapter 2: Literature review												
Chapter 3: Methodology												
Chapter4: Data Analysis												

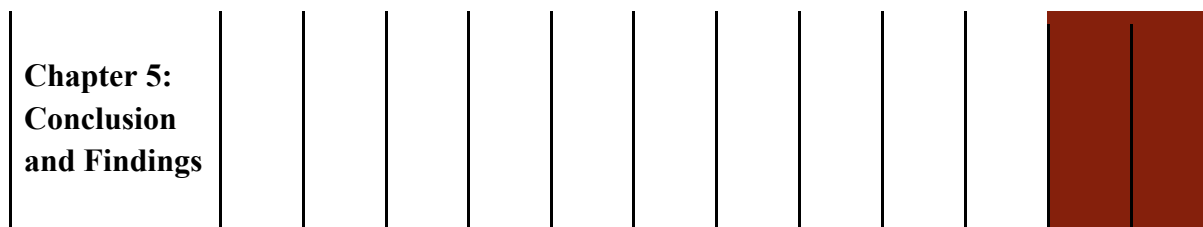| Chapter 5: Conclusion and Findings											

Figure 1: Gantt Chart

3.11 Summary

Any computerized organization that goes through hours making a sound benefit that shows a solid financial situation in the market is respected to make some extreme memories settling the economy. Computerized new companies are an urgent region in the worldwide economy since they lower property and joblessness in emerging countries. It has been found through this examination that social event information, handling it, and afterward assessing it permit specialists to show up to a predicted and confident end for the review. There are numerous other examination methods of reasoning that might be utilized, but for this review, positivism was utilized to direct the exploration and concentrate an anticipated outcome since this sort of exploration theory centres around social occasion information, testing it, and deciphering it through estimation and perception.

Chapter 4: Data Analysis

4.1 Introduction

Computerized new businesses are popular in the present globalized world since they are viewed as being pivotal to the development of a steady economy. Furthermore, it is fundamental for work development and helps in resolving the squeezing issues of joblessness and neediness. To make essential experiences for the exploration exertion, the concentrate in this space has

included information from the genuine diaries and papers. The review has inspected quantitative information from essential information sources to assemble the fundamental information with respect to the Startups work uniquely in contrast to laid out organizations, subsequently the issues that emerge accordingly are particular and significant. Subsequently, numerous effective significant ventures today are the posterity of these new businesses. New companies are likewise analysed as organizations established by money managers and upheld by unfamiliar financial backers. "The objective is to foster particular items or administrations, experience quick turn of events, then exit through an exchange deal or an IPO.

4.2 Primary data analysis

4.2.1 Organization difficulties organization faced

Figure 2: Organizational Difficulty

Beast on the first question of the survey on the difficulties on the organization phase in the current time most of the company are facing the lack of resources. As per the opinions on the survey question 1, 70% of the participants voted for black on resources issues of the start-up

companies. At the time of creating any start-up business it needs to be supported financially and other things to create sustainable business operations for making profit at the end. As per the opinion of the participant most of the start-up business is facing issues on financial resources such as adding funds on the business to create more sustainable operations of the business along with that the starters also face the human resources issues or the agent issues. However 20% of the participants on the surface stated that the company is facing scaling issues in the business market at the time of start-up. As per the opinion of the participant the scaling of issues is one of the second largest issues in the start of his business where the business can't address the scaling of objectives for the business growth. Moreover, to scale up the business the company needs to focus on the future goals and need to prepare for the financial growth of the market and also the company needs to evaluate the competition of the business and understand its issues and opportunities to create a sustainable business for future. As per the opinion of the participants the scaling up or the growth issue is one of the biggest issues for a start-up business. As per the participants' opinion 10% of them mention that funding or the unforeseen difficulties are one of the reasons for the startups that create difficulties in starting business.

4.2.2 Describe the time when the company experience the project management success

Figure 3: Experienced Project Management Success

Based on the result of the survey on the 2nd question, which is the description of time when the company experienced project management success, 60% of the participants voted for the agile method usage of the company project management. Therefore it has been clear that most of the participants believe in the agile method to create a successful project management experience for the start-up company. 60% of the participants believe that the company needs to provide the superior quality product to the consumers and also work on the consumer satisfaction to create better business in the end. The company always needs to create the control on the products so that they could use the feedback of the consumers on their product to improve the quality and provide a better satisfaction to the consumers. However, 30% of the participants still believe that the use of traditional methods in project management can create more successful results rather than other methods and companies could experience the success of project management by using the traditional methods rather than other agile methods. These participants have the belief that

the traditional business plan is much affected by the business plan for the new start of business. This type of business plan allows the owner of the company to create the goals and objectives and provide a proper business plan to achieve them. As per the traditional methods or in the start-up business it provides a primary function to manage the future and current financial projection of the organization that help the company to create a better future plan for the business operations and project management. As per the result of the survey 10% of the participants all believe that the planning for the future based on the project management good provides the experience of project management success to the company at the time of start-up. As per their opinion the company needs to plan for the future before conducting the project management and need to focus on the future plans which will provide the company more accuracy on the success of the project management and the experience of the success of the business operations.

4.2.3 Evolve of the project management over the course of start-up Lifetime
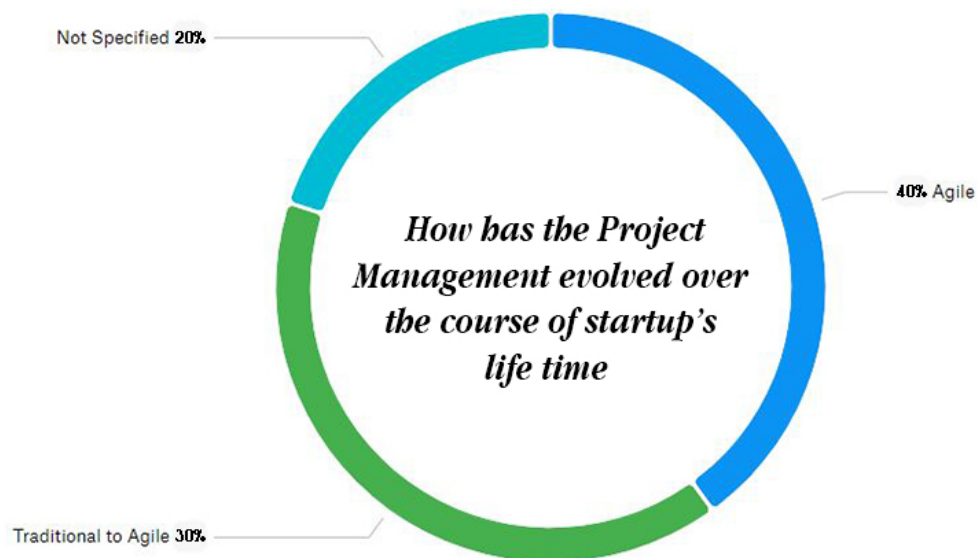
Figure 4: Project Management Evolving

Based on the third question on the evaluation of project management of the start-up company in their overall lifetime the 40% of the participants believe that agile is the one of the reasons that evolve the course of the start-up lifetime. So it has been clear that most of the participants are believe that in the current business time for the starters they need to focus on the agile methods where they only focus on the products quality and consumer satisfaction and the time of project management which is the most important thing to evolve the project management over the course of start-up lifetime. Therefore based on the result of this survey question it has been clear that the agile method is one of the better methods in the business where this method reduces the risk and increases the flexibility of the company which is one of the important factors of the start-up business to provide better service to the consumers. All those agile of the business also provide continuous improvement on the quality of the product and provide infrastructure that create a flexible system for the company to understand the feedback of the consumers and continuously imply on the product and increase the consumer satisfaction. Also this methodology provides better team infrastructure to the data companies which improves the project predictability and creates a better control on the quality of the product which creates a good impact on the consumers. On the other hand the traditions of agile could be the reason for the evolution over the course on the start of lifetime as been voted by the 30% of the participants. On the basis of the participants' opinion on this particular question 30% of the participants are not specified about the evolution of the project management of the course of the start-up lifetime.

4.2.4 Company future plan for the project management

Your Company future
Plans for the
Project Management Success

Stay in Traditional Metho... 20%

Move Further into Agile 20%

60% Traditional to Agile Method

Figure 5: Plan for Project Management Success

As per the opinion of the surface question on other future plans of the company for the project management, 60% of the participants want the company to transfer their operating method from traditional to agile methods. Therefore it has been clear that most of the participants believe that the agile methods in a business is one of the best methods to create a better future project management plan for the company. As per the method the company needs to focus on the quantity and the quality of the product to maintain the consumers satisfaction which is to provide the organization a better quality control on the product and also to improvise their business as per they wanted. The agile methods of the business provide a flexibility for applying new changes in the business and improve the project ability which will help the organization to reduce the risk for their future project management. Although, as per the survey result 20% of the participants are moving to the agile method which showcases that the other participants are also wanting the company to maintain the agile methods in the business to create a better and sustainable business

project management in the future. Along with that the 20% of the participants also voted for traditional methods which is a showcase that they wanted to stay in the traditional methods of project management. Traditional methods provide the company owners full control on the business operations and provide the full control on the goals and objectives of the business.
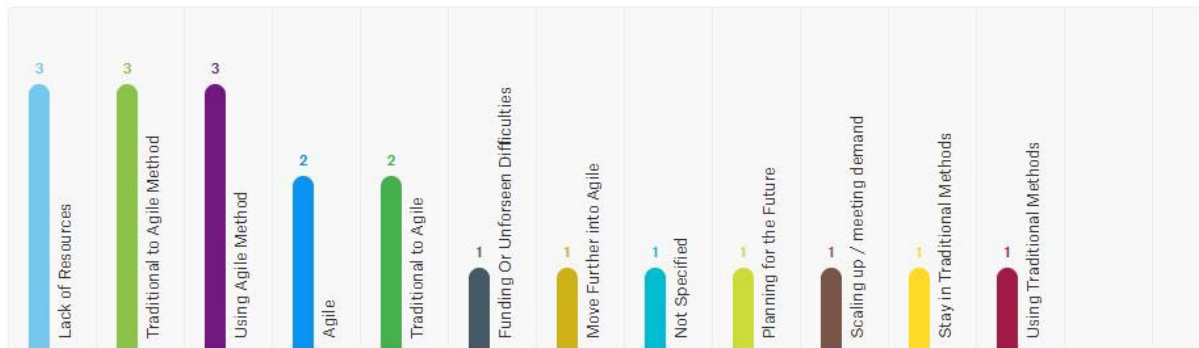

Figure 6: Atlasti Interviews results Chart

This above chart shows the interviews results in the form of graph as from the above graph it is very clear that most company are using Agile methodology in their companies.
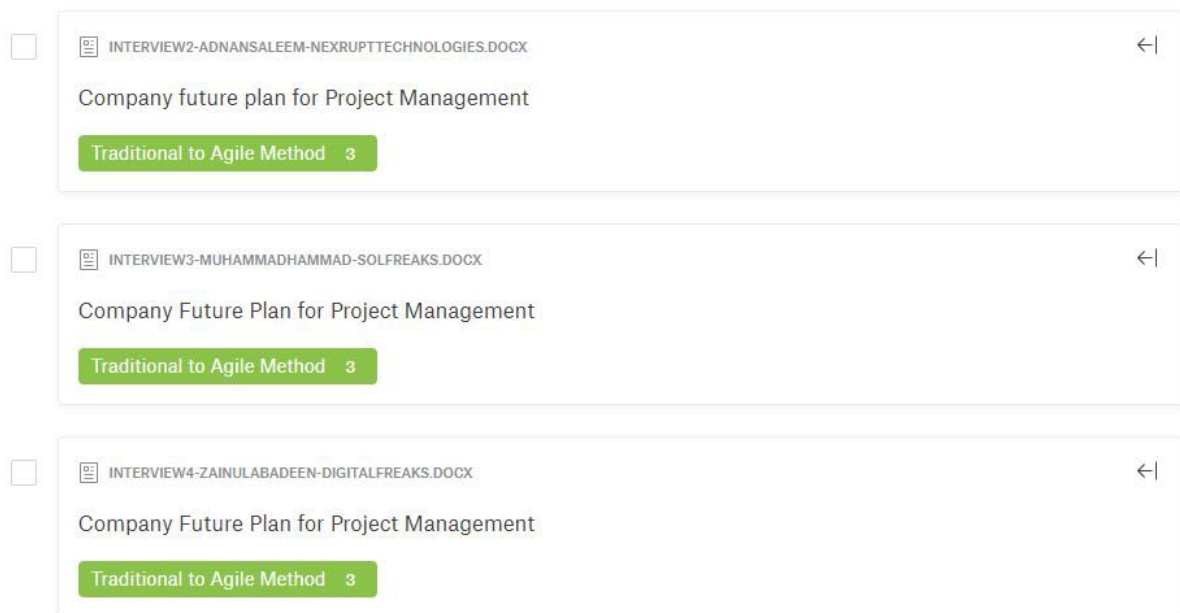

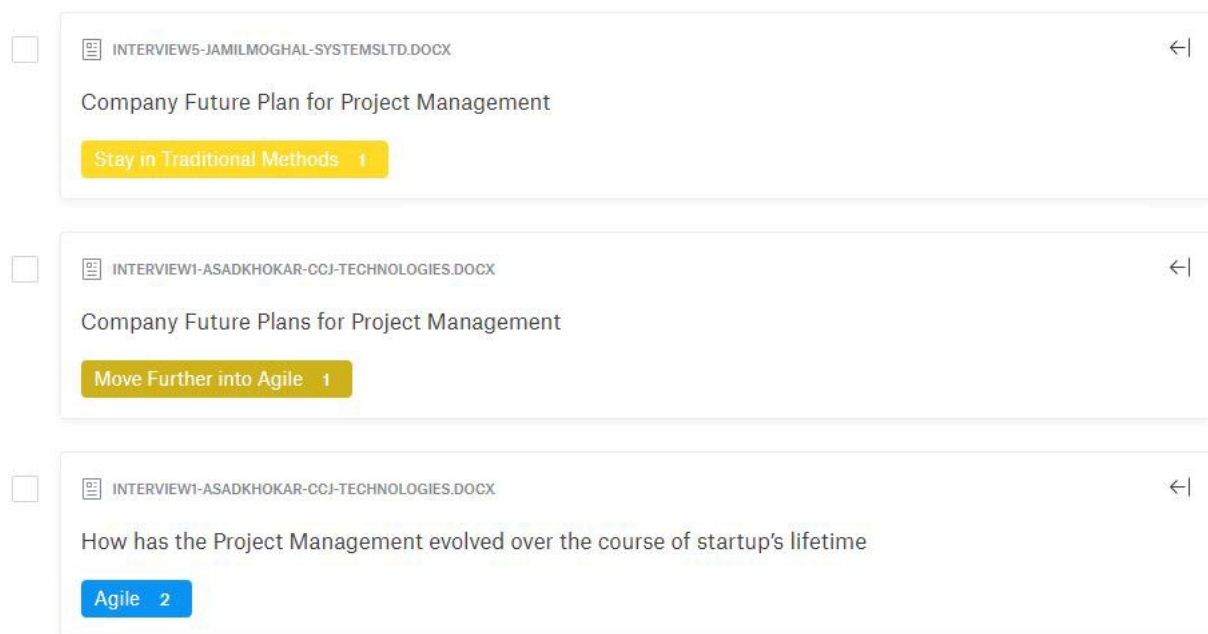**Figure 7: Interview codes Screenshot 1 from Atlasti**

INTERVIEW5-JAMILMOGHAL-SYSTEMSLTD.DOCX

Company Future Plan for Project Management

Stay in Traditional Methods   1

INTERVIEW1-ASADKHOKAR-CCJ-TECHNOLOGIES.DOCX

Company Future Plans for Project Management

Move Further into Agile   1

INTERVIEW1-ASADKHOKAR-CCJ-TECHNOLOGIES.DOCX

How has the Project Management evolved over the course of startup's lifetime

Agile   2

Figure 8: Interview codes Screenshot 2 from Atlasti

INTERVIEW3-MUHAMMADHAMMAD-SOLFREAKS.DOCX   ↗ Open

How has the Project Management evolved over the course of startup's lifetime

Traditional to Agile   2   + Add code

INTERVIEW4-ZAINULABADEEN-DIGITALFREAKS.DOCX

How has the Project Management evolved over the course of startup's lifetime

Traditional to Agile   2

INTERVIEW5-JAMILMOGHAL-SYSTEMSLTD.DOCX

How has the Project Management evolved over the course of startup's lifetime
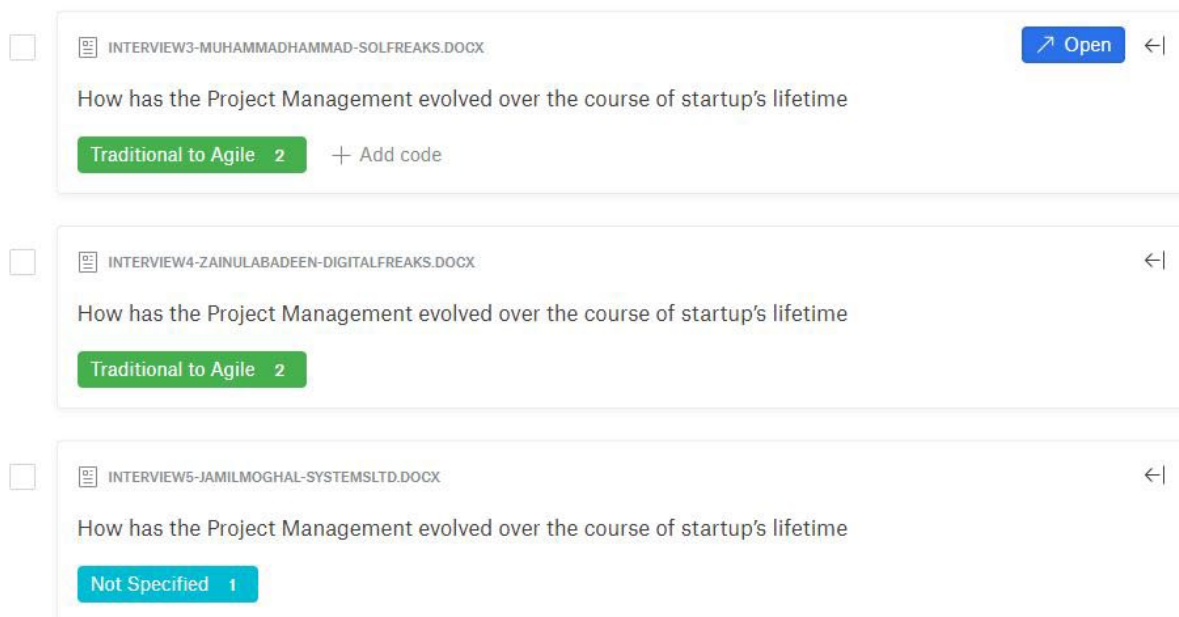
Not Specified   1

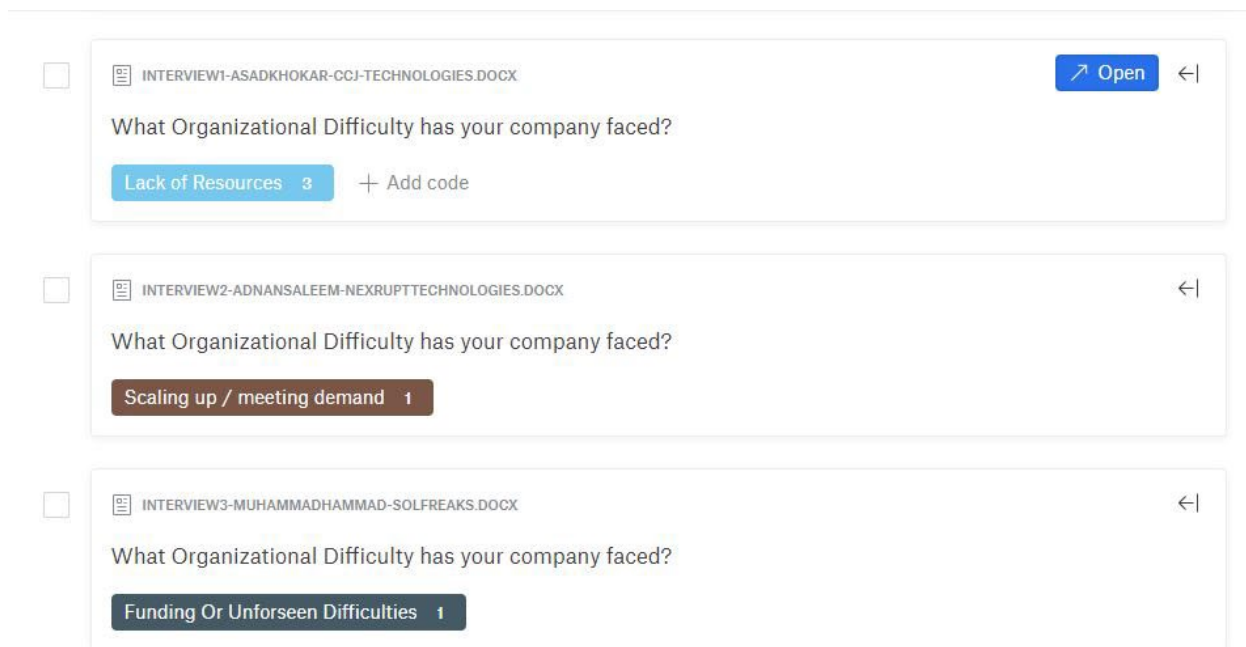**Figure 9: Interview codes Screenshot 3 from Atlasti**

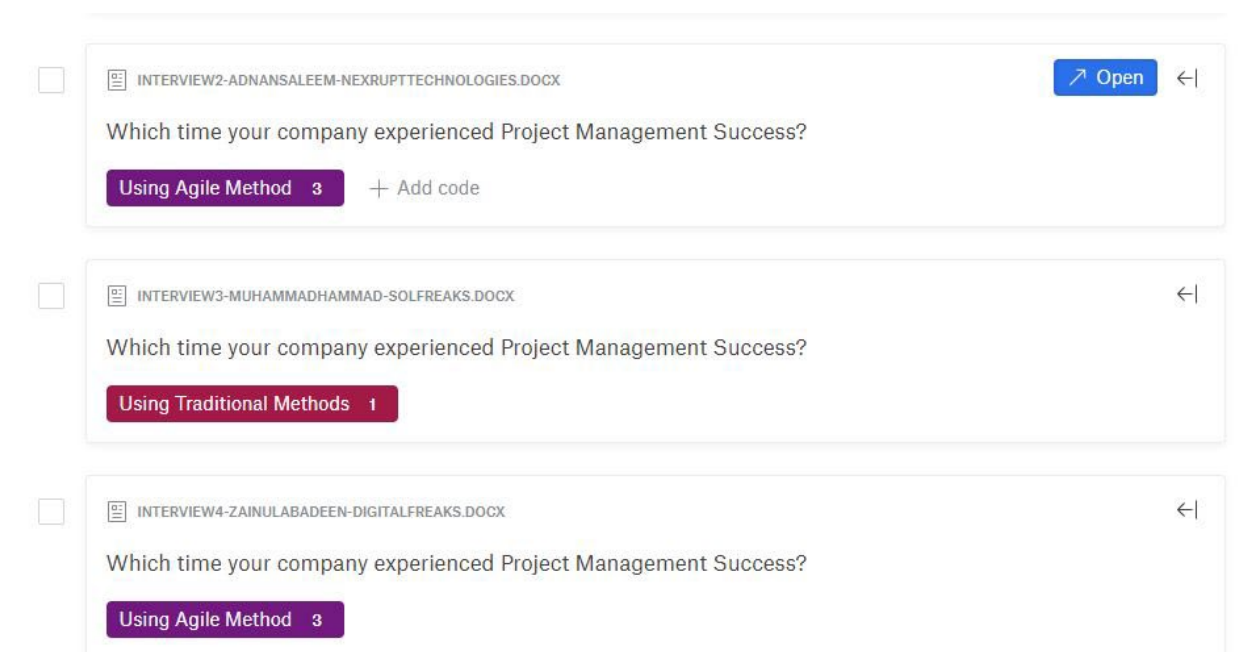**Figure 10: Interview codes Screenshot 4 from Atlasti**

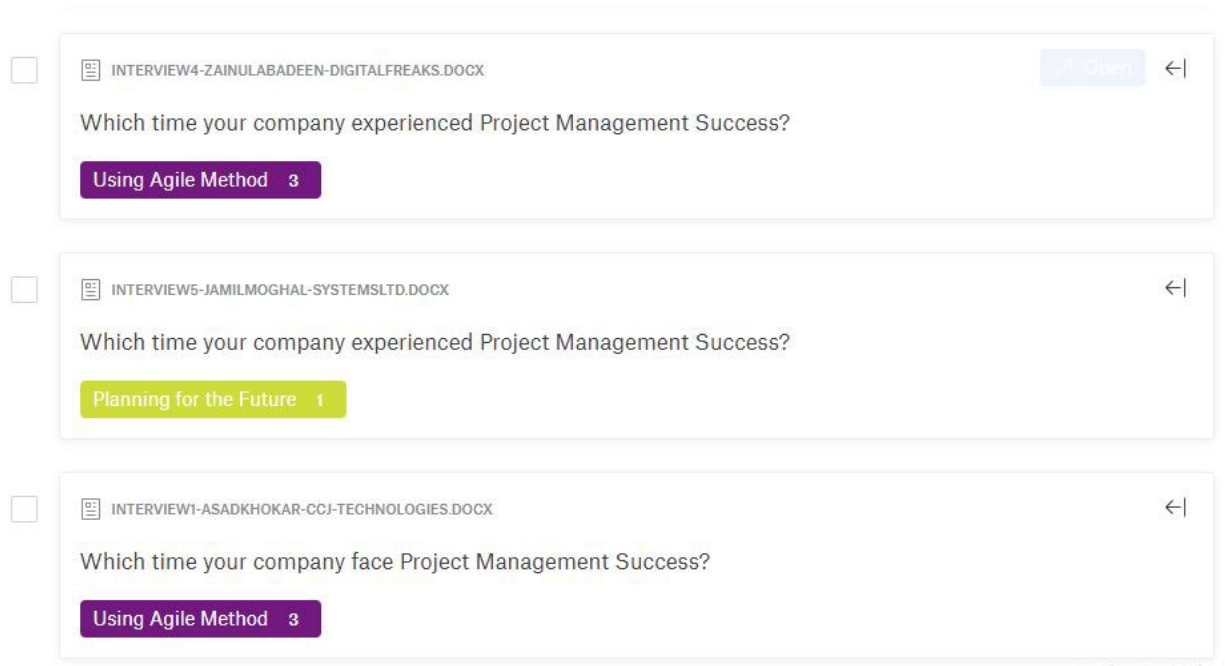**Figure 11: Interview codes Screenshot 5 from Atlasti**

Figure 12: Interview codes Screenshot 6 from Atlasti

This above screenshots are taken from the Atlasti software which we uses for the analysis of our data which we gathered in term of interviews, and this above screenshot shows the codes which is the term provided by atlasti to analyse the data gathered.

4.3 Summary

It is therefore evident that the majority of participants think that in the current business climate, beginning businesses should concentrate on agile methods where they only pay attention to the quality of their products and the satisfaction of their customers, as well as on project management, which is the most crucial factor in the evolution of project management over the course of a start-up's lifetime. Therefore, based on the results of this survey question, it is evident that the agile technique is one of the better business practices. This way lowers risk and enhances corporate flexibility, which is crucial for startups to provide customers with better service.

Chapter 5: Discussion

As per the opinion of the participant most of the start-up business is facing issues on financial resources such as adding funds on the business to create more sustainable operations of the business along with that the starters also face the human resources issues or the agent issues. However 20% of the participants on the surface stated that the company is facing scaling issues in the business market at the time of start-up. As per the opinion of the participant the scaling of issues is one of the second largest issues in the start of his business where the business can't address the scaling of objectives for the business growth (Mantilla, 2020).

Moreover, to scale up the business the company needs to focus on the future goals and need to prepare for the financial growth of the market and also the company needs to evaluate the competition of the business and understand its issues and opportunities to create a sustainable business for future (Hoda*et al.,* 2017). As per the opinion of the participants the scaling up or the growth issue is one of the biggest issues for a start-up business. As per the participants' opinion 10% of them mention that funding or the unforeseen difficulties are one of the reasons for the start-ups that create difficulties in starting business.

The company always needs to create the control on the products so that they could use the feedback of the consumers on their product to improve the quality and provide a better satisfaction to the consumers. However, 30% of the participants still believe that the use of traditional methods in project management can create more successful results rather than other methods and companies could experience the success of project management by using the traditional methods rather than other agile methods. These participants have the belief that the traditional business plan is much affected by the business plan for the new start of business (Kiani*et al.,* 2018).

This type of business plan allows the owner of the company to create the goals and objectives and provide a proper business plan to achieve them. As per the traditional methods or in the start-up business it provides a primary function to manage the future and current financial projection of the organization that help the company to create a better future plan for the business operations and project management (Kenley& Harfield,2014).

As per the result of the survey 10% of the participants all believe that the planning for the future based on the project management good provides the experience of project management success to the company at the time of start-up. As per their opinion the company needs to plan for the future before conducting the project management and need to focus on the future plans which will provide the company more accuracy on the success of the project management and the experience of the success of the business operations (Lee, Hyeonand Hwang, 2020).

Therefore based on the result of this survey question it has been clear that the agile method is one of the better methods in the business where this method reduces the risk and increases the flexibility of the company which is one of the important factors of the start-up business to provide better service to the consumers (Hornstein, 2015). All those agile of the business also provide continuous improvement on the quality of the product and provide infrastructure that create a flexible system for the company to understand the feedback of the consumers and continuously imply on the product and increase the consumer satisfaction.

Also this methodology provides better team infrastructure to the data companies which improves the project predictability and creates a better control on the quality of the product which creates a good impact on the consumers (Kiznyte,Welkerand Dechange, 2016). On the other hand the traditions of agile could be the reason for the evolution over the course on the start of lifetime as been voted by the 30% of the participants. On the basis of the participants' opinion

on this particular question 30% of the participants are not specified about the evolution of the project management of the course of the start-up lifetime (Kiani*et al.,* 2018).

The agile methods of the business provide a flexibility for applying new changes in the business and improve the project ability which will help the organization to reduce the risk for their future project management (Robertson, 2020). Although, as per the survey result 20% of the participants are moving to the agile method which showcases that the other participants are also wanting the company to maintain the agile methods in the business to create a better and sustainable business project management in the future.

Along with that the 20% of the participants also voted for traditional methods which is a showcase that they wanted to stay in the traditional methods of project management. Traditional methods provide the company owners full control on the business operations and provide the full control on the goals and objectives of the business.

Chapter 6: Conclusion

6.1 Key Insights

The goal of startups is to develop distinctive goods or services, experience quick development, and exit through a trade sale or an initial public offering. Startups are also evaluated as organizations founded by entrepreneurs and supported by foreign investors. Identification, assessment, and exploitation of opportunities are all components of entrepreneurship. Similar to that, it likewise heavily depends on modern technology. Innovation is what drives entrepreneurs' inventiveness and is necessary for growth and sustainability. Additionally, as management is regarded as one of the fundamental components of every firm, it also functions concurrently in every start-up. Any computerized organization that goes through hours making a sound benefit

that shows a protected monetary situation in the market is respected to make some extreme memories settling the economy. Computerized new companies are one of the vital businesses in globalization since they help unfortunate countries with destitution and joblessness decrease. These elements amount to the start-up by decreasing designing and waste hours, placing the item in the possession of the objective client at the earliest opportunity, and thirdly, moving the start-up's focal point of gravity with the goal that it is extending toward the objective it set off on a mission to accomplish while as yet leaving space for learning and improvement. Additionally, a survey will be created that addresses all significant project management and execution issues in computerized new businesses, such as hiring the incorrect leader, putting on a poor show when taking risks, and having a limited understanding of the venture's scale. From there, the possibilities are endless. It will then be sent to other start-up workers with the intention of helping them find better solutions to their problems while concentrating on their degree of business expertise. It will also be used as a reference for the review paper's informational annex.

Any computerized business that spends countless hours producing a sound advantage that demonstrates a stable financial state in the market is regarded to create some extreme recollections stabilizing the economy. Computerized new businesses are a crucial sector of the global economy since they reduce property and unemployment in developing nations. Through this investigation, it was discovered that managing social event data and then analysing it allowed experts to arrive at a foreseen and confident conclusion for the review. Any new company venture needs both financial and non-financial backing in order to establish long-term operations that will generate profits. According to the participant's perspective, the majority of new businesses experience problems with their financial resources, such as adding cash to the company to make its operations more sustainable, coupled with problems with its agents or

human resources. However, 20% of the participants initially said that the company was having scalability problems when it first launched in the commercial sector.

Due to the current business climate and rapidly changing needs, there is a need to be more adaptable and actively integrate clients, particularly in the software development sector. Many digital startups use an adapted version of agile management to do so. In contrast, others characterize their development process using typical agile project management features, indicating the unintentional use of an agile framework to some extent. Agile project management qualities appear to be more suited for many projects since they are well-matched with the qualities of today's environment. The widespread and practical implementation of agile project management leads to whether traditional project management is unsuitable for digital startups or perhaps obsolete. Traditional project management looks unsuited, particularly in the information sector and in light of startups; limited resources, especially in the early phases. This analysis is quite helpful in terms of integrating entrepreneurship with project management. The similarities and differences concerning the traits and responsibilities of businesspersons and project managers were discussed.

The participant believes that the second-largest problem at the beginning of his firm, after the inability to handle the scaling of goals for business growth, is the scaling of challenges. Additionally, in order to expand the business, the organization must concentrate on its long-term objectives, plan for the market's financial expansion, assess its competitors, and comprehend its challenges and possibilities in order to build a long-term, sustainable enterprise. Therefore, it is evident that the majority of the participants trust the agile technique to give the new business a good project management experience. The participants are of the opinion that in order to generate greater revenue in the long run, a firm must provide consumers high-quality items and

focus on customer pleasure. The business must always maintain control over its products so that it may use customer input to enhance product quality and boost customer happiness.

6.2 Conclusion

Project management is becoming more and more popular as a useful tool for businesses to embrace change and adapt to the market in order to stay competitive in a quick-moving sector. In today's corporate world, when resources are limited, timescales are shorter, budgets are more constrained, and technology is always evolving, project management is crucial. As a result, it is thought that using it in startups is advantageous since it boosts productivity. Agile and conventional/traditional project management methodologies are the two main types that may be identified for digital startups. Traditional project management is linear and places a lot of focus on the project's beginning. Before the project pieces are assembled, a project is established and separated into portions that are completed. By dealing with changing demands and unforeseen events during project execution, agile project management (APM) approaches aim to adapt to the current, quickly changing business environment. This increases the flexibility of this project management approach above traditional project management. A task can be broken down into smaller, more manageable tasks with short iteration intervals; less initial preparation reduces rework and saves time and money on revisions. Additionally, a project's adaptable scope promotes open communication with customers, raising client satisfaction. Project management is now universally acknowledged as an effective method of segmenting work into projects to facilitate communication and collaboration throughout the organization. Project management is beneficial in terms of teamwork, planning, and running a business aggressively. Project management is a method for carrying out well-organized processes and programmes that may help a business prioritize and manage its operations, goals, and accomplishments as well as

endure market competition. Since it helps achieve goals through projects and is an effective way to compete, sustain a firm, and enable the reaction to industry changes, project management is a key competence inside enterprises. It is getting more complex since it involves more than just numbers, patterns, tables, or graphs due to how intricately businesses are implementing business strategies as projects. Reliance on traditional/conventional project management methods in dynamic situations has been blamed for the complexity.

As a tool is physically utilized to accomplish a job in order to produce a product or end, a technique is a set of actions, processes, routines, and rules in a field. To distinguish between the two and avoid misunderstandings in later readings, a differentiation must be made. Similar to rules and checklists, project management strategies ensure that the best procedures are followed and that the intended outcomes are obtained. Compared to traditional project management, which is linear, agile project management is more spiral. As a tool is physically utilized to accomplish a job in order to produce a product or end, a technique is a set of actions, processes, routines, and rules in a field. To distinguish between the two and avoid misunderstandings in later readings, a differentiation must be made. Similar to rules and checklists, project management strategies ensure that the best procedures are followed and that the intended outcomes are obtained. Compared to traditional project management, which is linear, agile project management is more spiral.

The characteristics of an agile approach are different from those of a traditional technique in many ways. The growth route of a work is decided by its vision rather than by extensive preparation. Agile techniques therefore place more emphasis on the execution stage than the planning phase. By implementing an agile approach that emphasizes simplification, effective processes, and resource efficiency, the lean development concept is included. In order to ensure

adherence to the concept's concepts, the agile approach places a strong emphasis on effective team communication and external stakeholders. Startups want to create unique products or services, grow quickly, and exit through a trade sale or an initial public offering. Startups are also assessed as businesses started by entrepreneurs with funding from abroad. Entrepreneurship includes all three of these activities: opportunity identification, evaluation, and exploitation. In a manner similar to that, it also largely relies on contemporary technology. Entrepreneurs' ingenuity is driven by innovation, which is essential for growth and sustainability. Management also performs simultaneously in every start-up because it is one of the basic elements of any company.

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