

University of Bahrain

College of Business Administration

Department of Management & Marketing



Evaluating the Role of Business Accelerators on the Performance of the Startups Ecosystem: Case Study in Bahrain

**تقييم دور مسرعات الأعمال في أداء النظام البيئي للشركات الناشئة:
دراسة حالة في البحرين**

Thesis Submitted in Partial Fulfilment of the Requirements for the Degree of
Master of Business Administration – MBA

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January 2022



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The student is awarded a grade B+ in the thesis subject.

☐ Without making any changes to the thesis.

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Abstract

This is a one-of-a-kind research paper that investigates the current impact Business Accelerators and Incubators in the Kingdom of Bahrain have on Startups. Understanding the impact of accelerators and incubators on Startups is important as it will give insight for both parties. Accelerators and incubators can use that insight to improve and build on, while Startups can use it to evaluate the benefits they can get from being accelerated and incubated which in turn can have a significant impact on the Bahraini Startups Ecosystem. The research follows a descriptive design as it aims to evaluate the current relationship using three main variables for testing. A sample of 30 accelerated and incubated Startups were randomly chosen to fill out a questionnaire that was structured based on the literature reviewed and the research questions. The questionnaire was distributed with the help of the Ministry of Industry and Commerce's SMEs development directorate and other Business Accelerators and Incubators in Bahrain. The data was then quantified and analyzed using quantitative descriptive statistics. It is found that the impact of Business Accelerators and Incubators on Startups in Bahrain is quite positive in terms of innovation, easy access, and overall benefit which support the existing literature about accelerators and incubators. Such findings strengthen the previous studies conducted and will help many Business Accelerators and Incubators and Startups to further investigate the existing relationship between the two and study new ways to improve and advance the relationship ahead. The variables of this research can be reused in other testing forms such as T-testing and ANOVA.

Keywords: Startups, SMEs, Accelerators and Incubators, ecosystem.

ملخص الرسالة

تهدف هذه الدراسة إلى البحث في التأثير الحالي لمسرعات وحاضنات الأعمال في مملكة البحرين على الشركات الناشئة. من المهم فهم تأثير المسرّعات والحاضنات على الشركات الناشئة لأن ذلك يعطي نظرة ثاقبة لكلا الطرفين. يمكن للمسرعات والحاضنات استخدام هذه الرؤية لتحسينها والبناء عليها، بينما يمكن للشركات الناشئة استخدامها لتقييم الفوائد التي يمكن أن تحصل عليها من التسريع والاحتضان، والتي بدورها يمكن أن يكون لها تأثير كبير على النظام البيئي للشركات الناشئة البحرينية. يتبع البحث تصميمًا وصفيًا حيث يهدف إلى تقييم العلاقة الحالية باستخدام ثلاث متغيرات رئيسية للاختبار. تم اختيار عينة من 30 شركة ناشئة معجلة ومحتضنة بشكل عشوائي لملء استبيان تم إعداده بناءً على الأدبيات التي تمت مراجعتها وأسئلة البحث، حيث تم توزيع الاستبيان بمساعدة إدارة تطوير الشركات الصغيرة والمتوسطة بوزارة الصناعة والتجارة وغيرها من مسرعات وحاضنات الأعمال في البحرين. بعد ذلك، تم تحديد البيانات وتحليلها باستخدام الإحصاء الوصفي الكمي. وجد أن تأثير مسرعات وحاضنات الأعمال على الشركات الناشئة في البحرين إيجابي للغاية من حيث الابتكار وسهولة الوصول والفائدة العامة التي تدعم الأدبيات الحالية حول المسرّعات والحاضنات. تعزز هذه النتائج الدراسات السابقة التي تم إجراؤها وستساعد العديد من مسرعات الأعمال وحاضنات الأعمال والشركات الناشئة على مواصلة التحقيق في العلاقة الحالية بين الاثنين ودراسة طرق جديدة لتحسين العلاقة وتعزيزها في المستقبل. يمكن إعادة استخدام متغيرات هذا البحث في أشكال اختبار أخرى مثل T-testing و ANOVA.

الكلمات الدالة: الشركات الناشئة ، الشركات الصغيرة والمتوسطة ، مسرّعات وحاضنات الأعمال، البحرين.

Declaration of Originality

This thesis is a presentation of my original research work as my best of knowledge. All the assistance received in preparing this thesis and sources have been duly acknowledged, and this work has not been submitted for any other degree, professional qualification, or any other purposes. The work was done under the guidance of Dr. Waleed AbdulAziz at the University of Bahrain to the award of a master's degree in business administration.

Ali Hussain Mubarak (Candidate's) Signature:

Date: 17-Jan-2022

In my capacity as supervisor of the candidate's thesis, I certify that the above statements are true to the best of my knowledge.

Dr. Waleed Abdul-Aziz (Supervisor's) Signature:

Date:

Acknowledgment

This research is dedicated to:

My dear late grandmother - The person that raised me and taught me to always aspire to be a better person and always wanted me to advance educationally.

My parents - Their motivation and support was beyond priceless ever since pre-school to my MBA and beyond.

Zainab Alsayed Kadhém - For always believing in me and directing me towards my goals for more than 13 years. Will forever be grateful.

My supervisor, Dr. Waleed - For the excellent communication and invaluable mentorship throughout the MBA program. His constructive feedback is beyond helpful and his impact will forever be in my memory.

Ministry of Industry and Commerce, SMEs Development - For their tremendous help in this distribution of my questionnaire and providing data diligently.

Yasin Aboudaoud - My manager and mentor, he was one of the people that always believed in me and introduced me to the world of the Startups Ecosystem.

Hamad Al-Fahad - A great mentor that dedicated a lot of time to help our in the distribution of the questionnaire to Accelerated and Incubated Startups.

And to all my friends that supported me.

I dedicate this research.

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Chapter 1: Introduction

1.1 Introduction

Since the 1960s, the origins of the first incubators go back to the Batavia Industrial Center, which was established in New York in the United States to combat New York's high unemployment rates at the time. However, it has since then proven its usefulness as a significant economic development tool that assisted a lot of companies to stand on their feet and give them the push they need to operate and grow. Because of the tremendous economic success associated with the Accelerators and Incubators experiment, the number of Accelerators and Incubators increased by 500% in the United States alone in fifteen years, from 12 Accelerators and Incubators to 400 (Wiggins and Gibson, 2003).

Ever since the establishment of the first Business Accelerator and Incubator, they became a unique phenomenon in the business field that kept evolving in different ways and shapes. The evolution of Accelerators and Incubators was in the form of a response to the general changes in the external business environment. The value-adding aspects of Accelerators and Incubators have changed because new sectors emerged, new forms of organizations were established, the overall way of doing business is not as it was before (Ghasemizad et al., 2011). Therefore, Accelerators and Incubators had to evolve in different shapes and forms to meet the ever-evolving requirements of Startup companies (Bruneel et al., 2012).

Because of the value Accelerators and Incubators add to a nation's economy, governments worldwide decided that capitalizing, investing, and building Business Accelerators and Incubators was essential. More than 70% of the Accelerators and Incubators worldwide are supported and financed by governmental entities (Al-mubartaki and Busler, 2010). However, the public sector is rarely invested in Accelerators and Incubators (Christiansen, 2009).

Business Accelerators and Incubators exist with the sole task of supporting Startup companies and accelerating their operations, success, and overall growth. According to Graham (2012), growth is the key indicator of a Startup company's success. Therefore, the growth of a Startup is what Business Accelerators and Incubators are continuously focusing on the factors that lead to the overall growth of a Startup company. Accelerators and Incubators support the main activities that lead a business to grow, which are.

- 1) **Business and technical mentorship sessions** - By doing this, the Accelerator and Incubator provide the Startup company with the knowledge they lack, whether it is in the technicality of their product and services or the business environment they operate in or in providing the necessary knowledge of running and managing a small business.
- 2) **Networking opportunities** - Connecting the Startups with the ecosystem is another essential aspect of acceleration and incubation programs. The Startup company must expand its network to attract beneficial entities within its supply chain and inner circle, from clients to suppliers and providers potential investors.
- 3) **Investments** - Some Accelerators and Incubators actually invest in the Startups they try to accelerate their growth by deploying seed funding for the Startup company as an initial capital for them to run their operations.

Business Accelerators and Incubators, and Startups are equally crucial to research and study in the business research field and to understand more about.

1.2 Research Problem

One of the first Business Incubators established in Bahrain was the Riyadat Mall. Its mission was to support women Startup founders by subsidizing rents, providing guidance, and introducing women as crucial players in Bahrain's economy. Despite the fact that the first

Business Incubator lacked the attention from the Startups ecosystem, Business Accelerators and Incubators kept emerging in the last decade within Bahrain, and with that, the awareness of the people raised and more attention was given to the Startups Ecosystem from both the public sector in the form of economic development and from the private sector in the form of Corporate Social Responsibility. Despite such significant advancements in the Bahraini Startups Ecosystem, many Startups still do not prefer to be incubated or accelerated due to their disbelief in the Acceleration and Incubation experience or because they lack the knowledge or the requirements of being Accelerated and Incubated. Many business accelerators also struggle to keep their Accelerated and Incubated Startups alive and push them towards growth and success due to many unknown reasons that can essentially be costly for the nation's economy, especially if the Accelerator and Incubator is financed by governmental entities. The main problem here is the lack of a complete feedback and evaluation systems of the Business Accelerators and Incubators in Bahrain by the incubated and accelerated Startups, which can help to identify the gaps that need to be filled and corrected by the Accelerators and Incubators directly and can also help raise the awareness to Startups about the benefits of joining an Accelerator and an Incubator. Therefore, an overall evaluation of the current role and performance of the Business Accelerators and Incubators in Bahrain is needed to understand better what Business Accelerators and Incubators are, what they are doing wrong, and what they are doing right.

1.3 Research Questions

Since the research aims to evaluate the current role and performance of Business Accelerators and Incubators in Bahrain, three main evaluation categories are picked. Five research questions were derived out of these evaluation categories to be turned into hypotheses that will be tested later on.

Category (A) - Accelerators and Incubators Impact. This category will aim to evaluate the performance in terms of impact, and the effects Accelerators and Incubators have on Startups.

Two questions were formulated under this category which are:

Question 1: To what extent do Startups benefit from Business Accelerators and Incubators services in Bahrain?

Category (B) - Access to Accelerators and Incubators. The two questions from the second evaluation category will help assess the difficulty of finding and joining a Business Accelerator and Incubator in Bahrain, assessing the flexibility and access variables.

Question 2: To what extent Business Accelerators and Incubators in Bahrain are accessible and responsive?

Question 3: To what extent are the screening and selection processes undertaken by Business Accelerators and Incubators in Bahrain uncomplicated?

This question will focus on evaluating how strict or lenient the selection process was, and what the joining requirements were in terms of speed and flexibility.

Category (C) - Innovation. The last evaluation category will assess and evaluate how well were the Business Accelerators and Incubators fostering innovation within their accelerated and incubated Startups, which is summed up in the last research question:

Question 4: To what extent do Business Accelerators and Incubators in Bahrain help Startups foster innovation?

1.4 Research Objectives

The research objectives are primarily derived from the research questions formulated based on the evaluation categories listed above and serve as a guiding tool for constructing the survey questionnaire.

The first objective is to evaluate the first variable in the category, question 1, which is the Business Accelerators and Incubators' performance.

The second objective is to evaluate the second variable in the Category, which is in question 2, Business Accelerator and Incubators support.

The third objective of the study is to evaluate the access to Business Accelerators and Incubators and Bahrain and how easy it is to access them, which correlates with question 3.

The fourth and last objective is to measure the degree of innovational impact the Business Accelerators and Incubators have on their Startup companies.

1.5 Research Significance

These types of research are essential to conducting, especially for those involved in the Business Accelerators and Incubators and the Startup Ecosystem in Bahrain. The importance of such descriptive research stems from the fact that it can solve many problems within Accelerators and Incubators and identify which areas need to be improved and which are working. As such, the research will generally help Accelerators and Incubators double-check their areas of services and support and compare it to the study results to get a better insight into what needs to be improved and what needs to be capitalized on. It will provide a precise evaluation of Bahrain's Business Accelerators and Incubators' performance status-quo.

The research will also serve as an unofficial guide to Startups who are uncertain about joining a Business Accelerator and Incubator and will show them the benefits of doing so. Therefore, it will also help Startups motivate them to be Accelerated and Incubated.

Another important aspect is that the research is novel as there are no similar researches conducted in Bahrain that focus on Business Accelerators and Incubators in the kingdom, which can potentially open the door for future researches to be conducted around the topic and study it

in depth while increasing the local research society's interest to tackle such researches about Business Accelerators and Incubators.

The existing scientific literature already lacks the research necessary around Startup companies. While Startup ecosystems and Accelerators are not studied enough, the studies provide controversial results and conclusions (Salamzadeh and Kesim, 2015). Therefore, it is necessary to bear the responsibility to contribute to the scientific research community with more papers and studies about Business Accelerators and Incubators, and startups. An overall increase in the scientific field of Accelerators and Incubators will further help the evolution of the value-adding support and services they provide to Startups and better cater to their current needs with respect to the market and global economies.

1.6 Study's Setting

This study is conducted within the Kingdom of Bahrain. Many Business Accelerators and Incubators were involved in distributing the survey questionnaire to their accelerated and incubated Startups. The Ministry of Industry, Commerce, and Tourism's SMEs Development Directorate also circulated the survey questionnaire to Accelerators and Incubators in Bahrain to get a higher reach of the sample. The study was done entirely online due to a significant limitation which was COVID-19; this particular limitation forced the study to be done online to apply social distancing and avoid direct face-to-face contact. Due to the descriptive, quantitative nature of the research approach, the physical setting of the study is not important as conducting it online through an instructed questionnaire distributed to incubated and accelerated Startup companies in Bahrain is sufficient and provides greater flexibility to reach the needed sample without having to come in direct contact due to the COVID-19 health restrictions.

1.7 Research Terminology

Term	Researcher Definition	Literature Definition	Literature Sources
Startups	Small, newly formed companies in their early stage of establishment, small, newly formed companies aim to grow into a larger company.	A Startup is a small new company that is mainly focused on growing itself and designed to do so before even forming the company.	Graham (2012).
		A Startup is a newly formed small company that changes the business community's perception of running a business and shifts the norms from the traditional to the innovative methods.	Livingston (2008)
Startups Ecosystem	All of the stakeholders are involved in and around the environment of a Startup company. From shareholders, clients, suppliers to competitors and support entities.	A growing economic network results from the activities triggered by operating Startups and is vastly affected by Business Accelerators and Incubators and often stimulated by governments to improve.	Munkongsujarit (2016).
Business Accelerators and Incubators	Support entities that are mainly funded by the government that provides value-adding services to Startups through accelerating and incubating them to foster their growth.	Support entities that provide financing, networking, and investment opportunities that facilitate the growth of a Startup company.	Blank (2005).

1.8 Thesis Organization

The thesis will begin with Chapter 1. In this chapter, a brief introduction about the topic's background will be explained, supported by various citations that will later be used in the literature review. It will also cover the research problem, significance, questions and objectives.

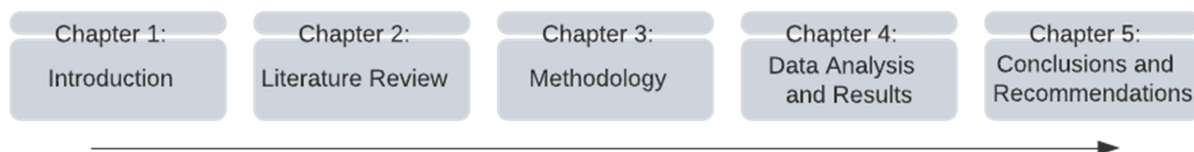
In Chapter 2, seven concepts related to Business Accelerators and Incubators will be reviewed in the respective literature in order to back up the topic and establish the ground work of the research. Four hypotheses will develop the conceptual model of the research with the identification of the dependent and independent variable.

Chapter 3 will discuss the methodology of the research in terms of its design, philosophy, population and sample, selection methods, data collection methods, and the limitations. It will also provide classification and justification of the instruments used to analyse the collected data.

The results of the methodology will be discussed and illustrated in Chapter 4 with the use of frequency tables and graphs.

The conclusion chapter will be Chapter 5 in which it will provide an overview discussion of the results, suggestions for future research, and limitations of the research.

1.9 Research Flowchart



(Figure 1-1)

1.10 Summary

This chapter covers a general overview of the research and its topics with a brief background with the use of cited research papers. The objectives, significance, problem and questions of the research were discussed and outlined. The structure of the research and the flow of the structure was illustrated in Figure 1-1.

Chapter 2: Literature Review

2.1 Introduction

This thesis chapter will collect multiple research papers that were conducted and are relevant to the researched topic and then analyzed and reviewed. The analysis will include highlighting points of controversy and agreement among previous research conducted which will help in identifying important patterns and crucial points. It also relates and contributes to the main topic of this research paper in terms of theoretical background, methodologies used, types of samples targeted, data collection, and different results that can be used to give a clearer idea of the current research for the reader. The central theme of the literature that will be reviewed in this section will be Startups, Accelerators and incubators, and the performance of both Accelerators and incubators and Startups.

By the end of each section of the literature review, the benefit to the literature piece will be dissected, compared and contrasted with other literature pieces, and an explanation of the benefit of the literature piece to the study will be presented.

The theoretical background collected will revolve around the main five research questions that belong to the three categories of variables: 1) Accelerators and Incubators Impact, 2) Access to Accelerators, and 3) Incubators and Innovation. Therefore, the formulation of the research hypotheses will be much easier, narrowed down, and deduced to simple statements that will answer the research question by being used later on to formulate the questionnaire that will be distributed to the targeted population of Accelerated and Incubated Startups.

The chapter will conclude with the research hypotheses explanations, categories, and null hypotheses.

2.2 Startups: What is a startup

A Startup is a small company with a unique business model that is designed to scale up and become repeatable (Blank and Dorf, 2012). Startups are not just new companies; startups are associated with growth. They are designed to grow rapidly and exponentially through productivity and innovation. A startup is also not only limited to the scope of having an exit strategy or acquiring VC funding, or just focused on tech. The core of a startup is its growth. Understanding and focusing on growth and expansion strategies is vital before operating a startup. But, on the flip side, if growth is achieved, all other organizational systems and tactics will work perfectly. Therefore, growth can be used as an essential guidance tool for the startup's decision-making process (Graham, 2012).

The remarkable concept of early-stage startups is that it changes the majority of people's perception of what running a business looks like. The traditional idea of a business is the imagery of businessmen sitting in a boardroom and going through multiple performance reports, deciding strategies while everyone is all suited up. Startups are precisely the opposite, and at the same time, they are considered to be the most economically productive player of entire national economies (Livingston, 2008).

According to the researchers Salmazadeh and Kesim (2015), Startups go through three main stages, which are considered to be the Startup life cycle.

A) Bootstrapping stage.

In this stage, founders start a chain of tasks and activities that will enable them to enable their business ideas into Startups with success stories. This also includes the founders sacrificing a huge amount of time and personal resources to build the Startup from scratch. It also involves the founders trying to get family and friends to invest in the Startup.

The definition of bootstrapping is the group of innovative methods of getting usable resources without the need to borrow them (Freear et al., 2002). The bootstrapping stage is also one of the main focuses in entrepreneurship studies that is vital to be researched (Ebben and Johnson, 2006).

The primary purpose of this phase is to place the Startup on track to grow by showcasing the Startup's products and services proof of concept, the ability to manage its cash flows, evaluate the leadership of the Startup, and the consumers' perception of the Startup (Brush et al., 2006).

The startup has higher chances of getting early small investors in the bootstrapping stage. Harrison et al. (2004) stated that this stage is the lifestyle of Startup companies. This is why a lot of the Startup ecosystems theories are derived from the Entrepreneurial ecosystems theories.

B) Seed stage.

The second stage is where the Startup entrepreneur starts a new phase of operations. In this phase, the main focus is the team structure of the Startup, research and development of prototypes, market entrance, the Startup valuation, and looking for Business Incubators or Accelerators to help the Startup grow.

According to Salamzadeh (2015), the seed stage of Startups is very much messy and has many uncertainties. The defining aspect of this stage is the seed funding or investment that serves as the working capital to start the production of products and services in the Startup (Manchanda and Muralidharan, 2014). Seeking Business Accelerators or Incubators is vital in this stage to get the help needed to accelerate the Startup. Many Startup companies die in the seed stage due to not finding the proper support entities. Therefore, the use of Business

Incubators and Accelerators is vital to eliminate or reduce the risk of a Startup failing. The valuation of the Startup is decided after the seed investment and this stage.

C) Creation stage.

This is the stage where the Startup finalizes the research and development and startups provide their products and services, compete in the market, and start hiring new team members (Salamzadeh, 2015). Ogorlec (1999) also indicates that some entrepreneurial researchers believe that the Startup turns into a company once this stage is reached. This also backs the previous theory that the field of Startups ecosystem borrows a lot of theories from the Entrepreneurial ecosystem theories and not from managerial and organizational ones.

By the end of the creation stage, the Startup is officially turned into an operating company, and VCs, Business Incubators, or Accelerators can also help support this stage by actually investing in the Startup itself.

The Startup companies life cycle formulated by Salamzadeh is critical and must be taught to every Startup and Accelerator or Incubator. It is very important to understand the different stages in order to dissect the necessary requirements of each stage, and more importantly, to identify the threats and opportunities, if any. It can serve as a handbook for new founders or individuals who wish to have a Startup one day in the future. The lack of such knowledge can lead to devastating consequences that could potentially waste a person's financial resources, time, and maybe even life, which can be avoided easily by understanding the progression of Startup companies and how to grow them into mature companies.

Livingston (2008) also stated that large corporations could not do everything a startup can do because of company politics. As such, startups will try to become less of a large

corporation. Large companies will follow the startups' trend and try to follow a similar way of operating their businesses.

Startups are also usually in the very early phases of their operations. Startups also try to penetrate existing markets or create new ones by introducing new innovative ideas that can be monetized and sold to the public (Nurcahyo et al., 2018).

In terms of operations and growth, Leppanen (2014) also defined Startups as small companies that have no history of operations and are solely focused on improving innovation of their products in order to keep growing their companies. They also operate under extreme circumstances where resources are limited and time is short while competing with competitors in the market.

As Graham (2012) mentioned earlier, Startups are very much associated and are connected with their company's growth rate. Therefore, a founder needs to start their business and start it business with an exponential growth rate. However, the company's growth speed needs to be determined beforehand to guide the company's path.

The growth rate goes through three main stages. First, there will be little to no growth as the company studies the market and determines the action plan of operations. Second, when the company secures its recipe for success, the growth rate will jump high rapidly, especially when the products or services of the startup are innovative with a unique value proposition. Third, the Startup will at some point grow into a scaled-up company; this is where growth rates will slow down because of reaching the limits of the industry market it competes in (Graham, 2012). Also, according to Dalmacro et al. (2017), a Startup must always gain market trust and be credible to be a key player in the market and acquire the largest market share available.

Startups also act as a very effective and efficient economic driver because they continuously stimulate the market and push the players in it to operate. At the same time, it also assist in reducing unemployment rates in developing countries through job creations (Sherman and Chappel, 1998).

The existing literature lacks the investigations conducted on early-stage companies and specifically startups. At the same time, it is true that this area is not studied enough in the literature; many pieces of research were conducted and identified controversial findings of Startups (Salamazadeh and Kesim, 2015).

According to the last pieces of literature in this section, it is safe to say that Startups are hugely tied to growth and improvements. Therefore, the first indicator of a successful Startup is its growth rate. Growth can be measured and interpreted in several ways, such as the growth of sales or products and services portfolio or even expanding into new markets or going global instead of competing locally. Another indicator of a successful Startup that is tied to its growth rate is the Startup's operations because operations are the reason behind a good or a bad startup's growth rate. It can also be learned that Large companies limits do not bind startups because of the freedom and flexibility in operating a startup. But, Startups can grow to be large companies one day and suffer from the same growth hindering limits of a large company.

And finally, more research and work needs to be done to understand the concept of Startups better and learn how to improve it and accelerate it.

Both Graham (2012) and Leppanen (2014) emphasized the importance of the Startups' growth in their studies respectively and associated it with the operations methods of the Startups and the expansion potential that determines the future of the Startup, its performance, and its growth.

It is also concluded that big companies cannot do everything a Startup can do. Livingston (2008) and Graham (2012) both stated that big companies suffer from internal politics and reach the maximum performance capacity in the markets they operate in. In contrast, Startups are new players in the market that can introduce innovative solutions and products, which can be a game-changing situation.

The study conducted by Livingston (2008) can be compared to that of Sherman and Chappel (1998) in terms of the positive economic impact Startups have on a nation's economy. Both studies agree that Startups can create jobs for the unemployed and help keep the market moving by increasing the competitiveness of the industry.

Understanding what a Startup is vital to this thesis in terms of educating the readers of the thesis of what is a Startup. It also outlines what makes a Startup a Startup by giving different variations of definitions to find patterns of the qualitative indicators of Startups. It also helps define the study population and choose the proper sample by highlighting the qualities that should be looked for while sampling. Since this thesis will be studying the current state of Business Incubators and Accelerators' role in the Startups in Bahrain, it is equally important to be defining the targeted population, which are Startups and not only Business Incubators and Accelerators.

The last benefit of this literature section in the study is that it will help to understand further and interpret the findings and results of the study, as it will help in filling any gaps of knowledge that is found in the results section which was not collected as it was not within the frame and scope of the study's objectives.

2.3 Startups: Innovation

Innovation is often mistaken with the invention. But that is not true; innovation is an idea with a novel presence that makes its way into the consumer or the business market. The process of innovation happens mainly in two models, the large businesses model and the Startups model (Freeman and Engel, 2007). Although the study conducted by Christensen (1997) found that large and well-established corporations struggle and face many obstacles in accumulating and building innovation. This conflict of arguments favors startups in the innovation fostering process and methods rather than large formal corporations. Startups and SMEs are hugely connected with innovation because the most prominent companies around like Uber, Facebook, Instagram, and SpaceX all began as small startups and transformed into multi-billion Dollar corporations with global presence. This is further supported and backed up by Schumpeter (1942), where he stated that economies would only thrive when their startups endorse very innovative and creative tactics and strategies. Innovation is a critical economic driver mainly because of the competition it drives within a nation's economy (Commision of the European Communities, 2000).

A very interesting finding by the study conducted by Aerts et al. (2007) is that the mission statement was a variable that affected the innovation level of a startup; startups with solid mission statements showcased higher innovation levels and skills than those who presented weak or average mission statements. We can indicate from this correlation that the mission statement of a startup is not a variable that affects the innovation of a startup but rather an indicator of an excellent innovative environment within the startup.

Founders involved in developing Startups with game-changing innovative solutions are key entrepreneurial players. They are considered game-changing due to the innovation they

foster that stems from facing significant challenges that force them to become innovative to compete effectively in the market against rival Startups or existing big companies. Otherwise, they are threatened by being taken over by the competitors. Therefore, a critical factor in building this type of innovation is to acquire as much capital as possible from VCs and investors.

This collaborative work between Startups and investors is one of the bases of innovation creation in Startups (Spender et al., 2017).

Startups face many obstacles during their innovation processes, mainly due to their limited access to resources. Therefore, Startups became required to adopt open innovation practices to bypass the challenges of being a novel and a small company in the market. Therefore, Startups must collaborate with all of the stakeholders in their environment to foster innovation (Bogers, 2011).

The relationship between Startups and innovation can also be associated with the effects of the skillset of the Startup's founders. Startups founders should always focus their attention on continuously improving their skillsets and share their entrepreneurial knowledge with the Startup's team in order to improve the overall innovation performance of the Startup (Papulova and Mokros, 2007).

The value of business innovation was rising in the last decade, especially when Startups became the main front of the business community (Colombo and Piva, 2008). After that, a direct link between Startups and business innovation was established and studied extensively to understand further the connection (Davila et al., 2003).

Business innovation is known as implementing new ideas through learning and utilizing opportunities in companies (Hung and Mondejar, 2005). However, innovation is defined as having new ideas that could combine previous ideas that add more value propositions with the

latest ones (Van de Ven, 1986). In the early stage of a business plan, the incorporation of unique and innovative ideas helps develop skillsets and processes that can help the Startup financially. With enough consistency and continuous growth of the innovation applications, the Startup will be able to build a VRIO competitive advantage (Spender et al., 2017).

Startups play an important role in driving competition in the market. As a result, new industries emerge, which will drive innovation between competitors (Wennekers and Thurik, 1999).

One of the main limitations that hinder the business innovation of a Startup is the unethical competition or by environmental factors that cannot be controlled, which directly affects the Startups' performance and can potentially kill the innovation of a Startup. An excellent example of such limitations can be summarized in the form of miscalculating the time needed to penetrate the market or misevaluating the performance of existing competitors (Levesque and Shepherd, 2004). Other limitations such as political and economic factors can play a role in hindering a Startup's business innovation performance (Sine et al., 2005).

Innovation is the key to successful companies around the world. It introduces new ideas, concepts, and out-of-the-box thinking to deliver unique products and services. Therefore, it is important to understand the connection between innovation and Startups and how they interact.

According to the studies, the relationship between Startups and innovation is positive, and that Startups do not foster innovation but also sometimes depend on it to survive and grow. Similarly, large corporations that rely on innovation to grow and become successful will stop growing or even liquidate their business if they stop developing their innovation strategies.

The methods of fostering innovation differed from one researcher to another. As it is shown, Spender et al. (2017) stated that one of the most critical methods of developing

innovation is by strengthening the collaboration between investors and Startups in order to acquire as much capital as possible to run the business of the Startup and help it develop its innovation processes while operating in the market safely. At the same time, Papulova and Mokros (2007) expressed that their essential method of developing innovation processes is by developing the Startup's overall entrepreneurial skillsets and enabling effective knowledge sharing that will help the company grow its innovation potential, which also correlates with the study conducted by Bogers (2011) that emphasize the importance of Startups to utilize the Open Innovation practices which will overcome the financial and resources obstacles by opening the field of innovation to everyone and capture it whenever possible.

Understanding the link between innovation and Startups is essential to this study. As this study will be evaluating the role of Business Incubators and Accelerators on startups performance, one aspect that is essential to understand is if the incubated and accelerated Startups did benefit from the innovation training and development of the Business Incubators and Accelerators currently provide or not. A three-questions section of the thesis questionnaire will be revolving around the incubated Startups' perception about if whether the Incubator and Accelerator helped them develop their innovation processes further or not.

This section of the theoretical innovation background will help in the assessment of the study's results and findings in terms of interpretation and recommendations for future research.

2.4 Startups: Challenges and Improvements

Startups are small companies that are freshly formed and strive to stay alive in the market. They are primarily created based on innovative ideas and solutions that assist their survival (Salamazadeh and Kesim, 2015). However, Startups that bypass the obstacles they face successfully become key players in their nation's economy (Martinsons, 2002).

Many Startups are prone to fail during their early-stage, and almost 70% of new startups die (Vesper, 1990). Another type of challenge that may face Startups and cause them to fail is the lack of financial resources, which causes operational inefficiencies and gaps. Internal managerial problems can also be classified as challenges that startups must overcome to succeed. It is mainly connected with the shortage of knowledge of the industry and the business. Finally, the volatility of technological changes can cause some Startup companies to fail if they do not keep up with such fluctuations (Nunez, 2007).

The challenges that commonly face Startup companies can be categorized into the following:

1) Financial

At some point, most Startup companies will be facing financial challenges for a variety of reasons (Tanha et al., 2011). The financing challenges stem from the newness of the Startup; convincing friends and family to invest in the Startup is a step many Startup founders take but fail to complete successfully. After that, finding investors and negotiating a reasonable equity with them can be tedious and challenging to achieve. Lastly, convincing a VC to invest in the Startup requires a good amount of evidence of the Startup's success, which many Startup companies lack (Salamazadeh, 2015).

2) Human Resources

A Startup company usually begins with a single founder or a couple of cofounders. Eventually, the founders will require more experienced people to help build the operational structure and basis of the Startup. Therefore, extensive expertise in the Human Resources field is essential. Many Startups founders do not come from business backgrounds, which puts them at a disadvantage in dealing with Human Resources challenges (Salamazadeh, 2014).

3) Business Support

Startups can utilize several support entities that will help enable them to operate successfully in the market. Entities such as Business Incubators, Business Accelerators, Tech Parks, and VC programs are primarily built and designed to revolve around Startups. Therefore, not utilizing these support systems will pose a great threat to the Startup's success (Salamazadeh, 2015).

4) Environmental Factors

Environmental changes introduce unexpected challenges to Startups everywhere. Failing to keep up with the environmental changes speed will result in an inevitable startup failure. While it is true that environments that foster Startups ecosystems, a corporate one can potentially ensure their failure (Boeker, 1988) because the ecosystem of Startups is much more fragile than big companies (Van Gelderen et al., 2005).

The business environment forces the Startup founder to have a strong personality for the Startup to succeed with the charismatic attributes of successful founders (Deakins, 1996). Therefore, the founder should be oriented towards building a successful Startup, calculating risks and taking them when necessary, being innovative, and having a clear vision of how they want their Startup to be (Anon, 2012).

Education delivers us the necessary knowledge associated with Startups' success. But, the volatility of knowledge development is making traditional education obsolete and behind. Therefore, founders should seek external education factors and ditch the old-school way to be truly successful (Loewen, 2011). A major contributor to the overall success rate of a Startup is the personality of the founder, the company, and the industry they operate in, and external factors such as the economic state of a nation and whether it is in recession or not (Kennickell et al., 2015).

The external environment plays an important role in the operations of a Startup company. The uncertainty of the business environment is a key factor that caused Startup companies to be bankrupt in the United States (Robb and Farhat, 2013). Therefore, it is important for governments worldwide to continuously stimulate their Startups ecosystems in order to increase the probability of the Startups success. Improving the conditions of the Startups ecosystem will help Startups foster and speed up their progression (Fotopoulos, 2012). As such, companies must also continuously strive to improve their operations as the governmental support to the Startups ecosystem is essential but not enough to ensure its success (Petkovic and Tesic, 2013), because Startups ecosystems are strengthening worldwide, especially for experienced founders, making it difficult for new Startups founders to enter the ecosystem and benefit from it (Carree and Thurik, 2010).

The challenges faced by startups are not like any other regular business challenges that face larger companies. Startups are fragile due to their limited financial resources and sometimes their lack of expertise and knowledge needed to establish and operate a company, let alone operating in an uncertain business environment with existing experienced competitors in the market with lots of new environmental changes that occur on a daily basis. Therefore, Startups need to learn how to bypass and overcome any challenges they face and learn from them for future improvements or if they face the same challenges again. The lack of a business background is a big game-changer for new Startup founders; therefore, founders must enrich their knowledge with the business literature to learn the foundations of business management, but not solely depend on it as new knowledge comes out every day.

The researches conducted by Boeker (1988) and Robb and Farhat (2013) both agree that a main challenge Startups face is the uncertainty of the changing business environment that can

pose significant risks and threats to Startups. The business environment can also be affected by the technological, economic, socio-political, and cultural changes around the world, which stimulates the overall business environment. It is challenging to respond to such significant changes as a Startup.

Deakins (1996) and Anon (2012) both emphasized improving the Startup founder's personal characteristics and attributes. They both believed that a significant element of a Startup's success is its founder's success. Therefore, all founders need to learn from successful founders the recipe for success of which they used to improve their attributes and characteristics. Then founders can implement such qualities and integrate them within their own personality, which will be reflected in their managerial skillset and quality, which will improve the Startup significantly.

Understanding the challenges and room for improvements a Startup face is essential to this thesis to distinguish which Business Incubator and Accelerator functions to focus on in the research and which not to include. It also educates in general about what Startup companies go through and how they face their challenges and overcome them. Finally, it will also help understand why certain respondents will choose specific answers, which could create a pattern that can only be understood by understanding this section of the literature review.

2.5 Accelerators: What is a business accelerator

The first business accelerator was founded in the United States, specifically in New York, and was referred to as a business incubator back in 1959 (Lewis, 2002).

Blank (2005) defined Business Accelerators and Incubators as support entities that provide financial resources, mentorship programs, networking opportunities, and investments to Startups. Because of the many types and specializations and forms a business accelerator can

take, researchers were not able to come up with a single definition of a business accelerator (Morant and Soriano, 2016). However, many studies were conducted to explore the concept of a business accelerator and do general comparisons between accelerators and tech centers (Ratinho and Henriques, 2010) or even compare them to actual university systems or business schools (Tierno et al., 2015). But, according to Norrman (2008), tech centers and university systems mainly advise and support late-stage firms which are almost all large corporations. This leads to the conclusion that there should not be a single narrow definition of a business accelerator which leads to greater confusion in conducting studies around business accelerators and further widen the gap in the research field being conducted around business accelerators.

Accelerators are continuously evolving around startups. A new acceleration model is currently the dominant one. This model focuses a lot more on the value-adding services that help the startups intangibly, such as connecting them with investors and giving them access to marketing and capital funding, and much more. The acceleration services are also continuously evolving to meet the ever-growing startups' requirements and serve them in accordance with their requirements to succeed (Grimaldi & Grandi, 2005). This research makes sense and correlates with the new dominant role of accelerators, as previously mentioned, accelerators revolve and evolve around startups. Therefore, an accelerator must adapt to the changing nature of startups around the world, otherwise, the accelerator will have zero impact on a startup's growth if not a negative one. The main focus here is to be able as an accelerator to adapt to the actual needs and requirements of growth for the early-stage startups they are targeting.

After observing the large number of small businesses requesting enrollment in acceleration programs to benefit from office spaces and entrepreneurial advice, the idea of business accelerators and incubators gathered governmental attention. This led to remarkable

funding and widespread acceleration programs across the United States up until this day, which then spread worldwide. Business accelerators are fast-growing entities that are being established worldwide due to their importance and impact on startups. A business accelerator is mainly focused on the process of accelerating groups of startups to achieve their goals and targets of growth and expansion. A lot of the accelerators provide valuable resources to their startups, such as an investment amount, shared office spaces to work, mentorship programs, and access to a wide variety of networking events and investor meetings.

The primary source of income for business accelerators was the acceleration fee they charge startups in exchange for the assistance they would get from the accelerator. Nowadays, most of the accelerators operating around the world are funded by governments (Grimaldi & Grandi, 2005). Which is absolutely true and accurate. Because, the main beneficiary from the existence of startups are governments in the form of economic prosperity. And business accelerators act as fountains of startups and new small businesses that will contribute greatly to a country's economy and solve many economical issues such as unemployment and inflation. Therefore, it only makes sense that governments take great interest into the establishment of business accelerators countrywide in order to build and maintain a solid startups ecosystem.

There are currently up to 7000 business accelerators operating around the world to help small businesses (Munkongsujarit, 2016). And it is very noteworthy to mention that Y Combinator and Techstars are two of the most remarkable business accelerators that assisted in raising funds of above USD 16 billion alongside launching more than 2000 startups (Cohen et al., 2019). These statistics show that business accelerators can have a huge impact on the startups ecosystem. Finding the right recipe for success that Techstars and Y Combinator found, will definitely increase the likelihood of an accelerator to succeed. The main ingredient of a business

accelerator's competence and success is the quality of the startups they attract and help to grow and expand, and how experienced the business accelerator is in the local startups ecosystem. Munkongsujarit (2016) divided the tasks of a business accelerator into three main stages when it comes to startups.

First, the incubation stage in which the accelerator assists with market scanning and technicality issues via connecting them with professional mentors that have hands-on experience with the related subject such as legal services or operational advice.

Second, the acceleration stage; in this stage, the accelerator attempts to integrate the startup within the global startups' ecosystems to help expand their growth to different markets and target more significant market segments.

Third, the networking stage, accelerators usually arrange an event called a "Demo Day", where startups can go on stage and showcase their business ideas, their target markets, and their business plans to diverse attendees of investors, journalists, and other startup founders. This event highlights acceleration programs' startups because it is the day where startups can potentially create new collaborations or attract investors.

Based on the definitions of tasks and responsibilities in the researches conducted by Grimaldi & Grandi (2005) and Munkongsujarit (2016), and the overlapping in the definitions and responsibilities of the two pieces of research respectively, it is absolutely logical to conclude that business accelerators exist exclusively to serve and foster the growth of startups, enable startups and increase their chances of survival and success. This finding is very important to this research paper in terms of narrowing the focus on startups and business accelerators only, without diverting concentration to other areas such as business accelerators and corporations. It also important in selecting the criteria in which startups find most useful or most useless in selecting

them. However, in this volatile globalization of the world, the nature of startups started changing and shifting into new normals that require new formulas for success. This can present a potential kick start of another research that focuses on the shifting trends of startups and business accelerators and how to accommodate such changes. Also, the research conducted by Grimaldi & Grandi (2005) mentions the funding of business accelerators, which was limited to two types of funding, this presents a research gap that could potentially be converted into full-scale research that focuses on devising new funding models and methods for business accelerators that are not limited to government funding or private funding. Such methodological research can also investigate the levels of innovation required to develop those new funding tactics.

2.6 Accelerators: Screening processes

An essential aspect of the acceleration programs is the screening or the “callout” phase. In this phase, a business accelerator advertises opening their program’s cohort to local or global startups. And then, a review of the applicants’ process initiates to select the most relevant and prominent startups to accelerate. Then, a ramp-up phase is initiated by shortlisting the best startups and asking them to provide more deliverables such as business plans, financial models, demos of their products and services, how they will contribute to the economy, and how it will actually succeed in the market. After the ramp-up phase, the startups get shortlisted even further to reach the final stage, which is the investment committee; in this phase, the startups are given a final evaluation of their deliverables, and then the committee which consists of the board members of the accelerator will decide which startups to invest in and accelerate.

The screening and selection process differs from one business accelerator to another. The focus on making the screening process as flawless as it can stem from the goal of having like-minded founders that have similar startup ideas in nature, which will help increase the

knowledge sharing between the accelerator's startups and improve the partnerships among the startups to come up with innovative ways of working (Commission, 2002). Emphasizing the importance of the screening process with a high concentration on the screening criteria is shown to have a significant impact on how successful the accelerator startups turn out to be (Bellingtoft, 2012).

Another study by Aerts et al. (2007) also supports Bellingtoft's (2012) study. Further, it emphasizes the importance of a very competitive screening process that will assist in filtering out the highest quality startups, which will make the process much more efficient, as efficiency and effectiveness levels of a business accelerator are hugely affected by the screening process as a competitive screening process of startups will lead to picking the best startup that can make the most use out of the services an accelerator provides; it also themes those services into one unified category which will help the startups all the same with the least amount of resources (Ratinho, 2011). The efficiency hypothesis is further confirmed by a study conducted by Bruneel et al. (2012), which proved that the more an accelerator can adjust and cater to their startups' needs, the more the accelerator's performance is impacted positively.

As such, Merrifield (1987) categorized the screening process into two steps. The first step, the business accelerator, assess the desired startup based on five main principles. The first one is the capability of profit generation, and the second is the limitations imposed by political or societal factors, the third is the capability of growth, fourth are competitors in the market, fifth and finally, a general assessment of the industry and the current main risks associated with it.

The second step is based on six principles to assess the fitting of the startup in the specified business accelerator, first, evaluating access to capital; second, assessing the capability of manufacturing; third, checking the distribution channels and the marketing power of the

startup, fourth, investigating the technical background of the startup team, fifth general overview, and evaluation of the startup's resources, sixth and final, assessing the competence of the startup's management team. But it is worth noting that there is no guaranteed recipe for success when it comes to startup screening. But, careful startups screening will most certainly improve the chance of the startups' success, which would make the business accelerator more successful (Merrifield, 1987).

Lumpkin and Ireland (1988) also evaluated the screening process of startups, but their results were different from those of Merrifield (1987). They grouped the screening principles into three. The first is by evaluating how experienced the startup's management is in terms of expansion, finance skills, technicality, and broad hands-on experience within the startup's field. Second, how strong is the startup financially? This mainly focuses on how profitable the startup is and how it is using its available assets alongside a general evaluation of its cash flow. Third and finally, a general assessment of the startup's business plan alongside comparisons with other startups' business plans, the innovation and creativity in it, and how unique their products and services are.

A third study by Commission (2002) is chosen, which assessed the criteria of screening and selection in a business accelerator, in which he explained that the main standards of screening are focused on the product growth, the management team, and team members of the startup, the potential of growth, being able to pay expenses effectively, and finally that the startup must be aligned with the accelerator's objectives.

The study conducted by Kakati (2003) around business accelerators' screening processes differs from Merrifield (1987) and Lumpkin and Ireland (1988) in terms of the fact it avoids categorization and going breaking it down into steps or phases and simply sums up the focus on

the resources capability, the competitive advantage a startup has, and their presence in the market.

Therefore, according to the studies conducted by Merrifield (1987) and Lumpkin and Ireland (1988), Kakati (2003), and Commission (2002), it can be assumed that the primary aspect of a business accelerator's screening process is the focus on the startup's overall performance from the management team to the product they are developing, to the capability of growing and expanding and generally how well are they doing and what are their achievements within their respective ecosystem. This finding correlates very well with this research paper because it focuses not only on the performance of the startups in Bahrain but also on the business accelerators' role in their performance. Both kinds of research conducted by Merrifield (1987) and Kakati (2003) present a gap in which both papers did not study the relationship between the business accelerator and the performance of the startups, this gap will be filled by this research paper, and it is the main topic and theme of the study. The reviewed literature and research papers regarding the screening processes of business accelerators will also assist in the formulation of this research questionnaire, especially when surveying the startups; some of the questions will focus on the screening process and how the business accelerator chose the startups and what were the criteria of selection and which criteria they think is the most important to focus on when it comes to applying for a business accelerator.. It will also generally help with the analysis of the results and understanding the correlation better. This section is also significant as the screening process is one of the main KPIs of a business accelerator to excel at.

2.7 Accelerators: Impact on startups

The research on the business accelerators model is still ongoing. A lot of the studies conducted that did not take variation into account found that accelerators had a mixed positive

and negative impact on startups. Therefore, it is important to understand the different roles accelerators play in the startups' ecosystem they mainly target or decide to operate in (Gonzalez & Leatherbee, 2016).

The previous literature studies focus mainly on collecting data and analysis from business accelerators only (Bellingtoft, 2012). This type of research is not sufficient when a researcher attempts to analyze the degree of impact on startups. Therefore, the focus of a research questionnaire and interviews should be the startups of the accelerator's portfolio to get their perspective. Older research papers automatically assume that an accelerator's services offering positively impacts the business accelerator's startup portfolio. But, the startups are rarely asked about their experience within the business accelerator and for feedback regarding the provided services to their acceleration (RaFtinho et al., 2010).

Business accelerators are critical to assist startups in maintaining their expansion and survival in the volatile competing business markets. Strong startup acceleration will lead to a more solid startup ecosystem that will boost economic growth via job creation and money circulation (Munkongsujarit, 2016).

Stokan et al. (2015) also found that a business accelerator's services affected startups growth positively and in particular, a significant positive impact on the startup's employees count and that the startups who participate in acceleration programs had as many as five times more business support services than the non-accelerated startups.

As stated by Graham (2012), startups are mainly focused on development, and growth is the leading indicator and guiding tool of a startup's decision-making process. Another study conducted by Aerts et al. (2007) supports this claim. Also, it contributes to the fact that business accelerators not only generally accelerate but also mainly target the acceleration of the growth

and expansion of the startups specifically, which then gives the momentum needed to enter and expand into newer markets, target broader and more diverse market segments, and attract VC funding from investors. Another study conducted by Mancuso Business Development Group (2005) also agrees with the growth hypotheses mentioned by Graham (2012) and Aerts et al. (2007) and confirms that business accelerators guide startups into their expansion and growth.

According to Grimaldi and Grandi (2005), Business accelerators were primarily created to reduce the cost of operating a company by providing various services such as co-working spaces, mentors, and business assistance.

Multiple pieces of research have been created to study and investigate innovation levels concerning business accelerators. Most of them have proven that business accelerators do accelerate and aspire to innovation within the startups they try to accelerate through the acceleration stages (Hackett & Dilts, 2004). This also supported and backs up the previously acceleration stages formulated by Munkongsujarit (2016) in his Thailand study. The European Union also promotes the use of business accelerators as a tool of driving creativity and innovation to startups and SMEs to foster economic growth within the union's countries (Allen and McCluskey, 1990).

Hansen et al. (2000) explored the networking stage of startups in-depth, where they observed that business accelerators are very much capable of building strong relationships between their program's startups. Such synergies contribute to the creation of multiple learning processes and knowledge exchanges between startups. These synergies are important reasons why a startup chooses a business accelerator and not the other one; startups are very excited to join accelerators where startups already exist to learn from their experiences in the local or even global startups ecosystem (Ruping & Zedtwitz, 2001).

According to the previous literature review sections, a limited number of studies are done on business accelerators. A very important study conducted by Christiansen (2009) surveyed more than 100 startups that participated in business acceleration programs. As a result, it was found out that five leading indicators were identified as the key elements that benefited startups who participated in acceleration programs. These aspects were seed funding and financial support, technical support on products and services, supporting the business, brand awareness, and access to venture capital funding opportunities. Further testing of the results in the form of interviewing the startups' team members about the five main elements discovered, most of the team members gave excellent explanations about the indicators, which showcases the importance of these aspects to exist in business accelerators.

Funding and Financial impact

The startup founders considered the funding element as an important one but not as the main aspect. The founders emphasized the importance of the funding amount to make them able to cover their stipend living expenses so that they can shift their focus entirely on maintaining their startup and improving it (Christiansen, 2009).

Technical support on products and services

Christiansen (2009) then expressed that one of the leading beneficial indicators of an accelerator program is technical support, as many startups are inexperienced in developing products. Therefore, the job of the accelerator is to connect those inexperienced startups with experienced experts from their network to mentor them on technical issues, which correlates to Hansen et al.'s (2000) study that explained and investigated the networking stage of an accelerator program.

Supporting the business

The third important aspect of a business accelerator is the support in operating a startup the accelerator provides. Mentorship advice and services on business modeling, strategic analysis, public relations and marketing, human resources, and legal and admin topics are essential for a startup founder (Christiansen, 2009). Many founders lack some or all of the previously mentioned skills, which makes it a very important aspect for an accelerator program to develop continuously.

Brand awareness

Christiansen's (2009) fourth aspect is the brand awareness that a business accelerator can build and develop for a startup. Therefore, an accelerator must focus on consistently producing a strong network of investors, mentors, experts, and even other startups to connect the program startups with them whenever necessary. However, the value-added from brand awareness is argued by Miller and Bound (2011) in which they stated that brand awareness is not enough on its own and that their customers and clients will always ensure startups' success.

Access to VC funding opportunities

According to the 100 startups surveyed by Christiansen (2009), the fifth and the most important indicator is the future funding opportunities and access to capital. This is due to the fact that large amounts of money are needed to fund the necessary cash flow for manufacturing the startup's products, operations, and expansion. Accelerators treat this phase as a win-win for both investors and startups (Miller & Bound, 2011). It provides new investment opportunities to investors looking for suitable investments and to startups looking for ways to fund their startup and turn it into more considerable success.

Lastly, it is found that the halt of the various types of support mentioned by Christiansen (2009), has a significant negative impact on the graduated startups from an accelerator.

A study by Schwartz (2013) focuses on the startups long-term survival; a sample of startups from a public business accelerator was taken and compared their performance to startups that did not enroll in any acceleration programs. But, the results do not infer that startups within an accelerator have a better probability of surviving in the long run than the compared non-accelerated startups. In some cases, the impact was favoring the non-accelerated startups.

A very controversial study that conflicts with the above is the one done by Pena (2004). It aimed to determine the degree to which the services provided to startups from business accelerators are essential and contribute to their survivability in the early-stage years. But, the findings were shocking to indicate that most of the services and aspects of assistance from accelerators were not essential and did not interest the startups in the first place.

The research papers analyzed in this section conclude that business accelerators can positively impact startups only when they know their needs and cater to their needs accordingly. Therefore, it is imperative to focus on the needs of a startup and capitalize on its growth and

expansion. These studies also contribute to this thesis by evaluating the five main elements indicated by Christiansen (2009) in startups in Bahrain; if the results of this paper matched the study's results, then it backs it up and builds on its knowledge; if not, then the variation creates a research gap and an opportunity for new comparative research to study the variation between the two startup ecosystems and understand it better.

2.8 Accelerators and startups: Performance

There has been a lot of interest in previous research in evaluating the performance of business accelerators. Many of the studies use diverse methodologies and focus on different aspects of an accelerator. Some of the research papers conducted to focus on the impact an accelerator has on startups, other focus on the economic impact of a nation's startups contributed by business accelerators. The best type of studies that focused on business accelerators' performance is the ones that focused on several dimensions to provide a complete overview of an accelerator's performance.

There are many difficulties and obstacles when it comes to evaluating the performance of accelerators. The first is getting consistent data that is reliable; this is mainly because startup founders do not have the time to participate in studies and therefore provide inconsistent data when they are asked to do so (Udell, 1990).

A definition of a business accelerator's performance is as to which the accelerator's productivity correlates to its goals. Still, assessing an accelerator's performance is far too complicated as every accelerator has different goals and objectives (Bergek & Norrman, 2008).

It is imperative to evaluate the impact of business accelerators on their startups and compare it to non-accelerated startups. But, accelerators tend to choose startups that have a higher likelihood of succeeding. This means, that the selected startups do not represent the general population and

therefore may represent an overrated accelerator's effectiveness in terms of performance (Stokan et al., 2015). Consequently, it is considered to regard the screening process of an accelerator as the critical factor of the acceleration program. It is one of the main success factors of a business accelerator which will be explained further in the upcoming section of the literature review.

There is a considerable amount of discussion surrounding the best factors in which an accelerator's performance is measured. One of the arguments is that the performance of an accelerator is best measured by the sensible impact it has. The majority of the studies evaluate business accelerators' performance by how many new startups are created and these new startups' expansion and maintenance rates (Colombo & Delmastro, 2002). Most of these studies are quantitative and rely on questionnaire surveys. As such, the number of startups created is not an adequate measure of the accelerator's capability to accelerate a startup (Peters et al., 2004).

Because it is comparatively easy to create a startup, but it is much more difficult for startups to maintain their long-term survival. Another widely used method in accelerators performance comparison is to compare a group of accelerated startups with a group of non-accelerated startups. This method was used by Colombo & Delmastro (2002) to measure the performance of the Italian Technology Accelerators. A sample of forty-five startups in technology accelerators in science centers was chosen. The results of the study indicated that innovation levels variance was low. But, another finding was that the accelerated startups always had optimal human resources in their teams, had higher expansion rates of growth, and it was easier for them to acquire public subsidiaries. The last finding of the study was that the startups also performed better when it came to technology adoptions.

An accelerator network also plays a role in the performance of business accelerators. In a study conducted by Rothaermel & Thursby (2005), they investigated the effect of a business

accelerator and universities networks on the success rate of startups. The study found that the more an accelerator is linked with universities in terms of professors as mentors and a university's network generally, the higher the chance of a business accelerator accelerating a startup. Another study regarding the network links with universities showed that startups graduating from an accelerator program that is linked with a university are more likely to maintain their growth and increase their sales over time (Lasrado et al., 2016). It shows that the network links with educational institutions significantly improve a business accelerator's performance, especially in accelerating startups' growth and long-term maintenance.

Despite the fact that there are many success stories associated with startups, nine out of ten startups tend to fail, mainly not from the competition with other startups or companies but from shutting down by the founders themselves. And a real problem facing the research world is that not enough attention is being directed towards the failure of startups as much as the attention focused on the guidance of building a successful startup, which can lead to a lack of understanding of how to avoid such failures (Kalyanasundaram, 2018).

According to the remarkable startups researcher Steve Blank (2005), in a world full of technological advancements, the dominant reason for startups failure is not that there is not enough technology, but there are not enough clients. Also, the lack of a proof of concept, whether it is in the form of a usable product or a beneficial service, is a massive contributor to a startup's failure because it increases the uncertainty surrounding the startup's success.

As previously mentioned by Kalyanasundaram (2018), the main reason for a startup's failure is shutting down the business. Some researchers conceptualize failure as the shutting down of a company that could not reach its goals and objectives, which in turn upsets the investors and the shareholders of the startup (Cardon and Mcgrath, 1999). However, it is very

important not to confuse a single failure of an objective or goal with the termination of the company (Headd, 2003). Researchers have commented that the learning process from failures is not well defined (McGrath, 1999). And in the general literature, failure is looked at as a learning tool of improvement. But, the failure of startups needs to be studied extensively in order to differentiate between the different types of learning aspects of responding to failures instead of looking at it as a single learning tool (Cope and Watts, 2000).

The majority of startup founders fear their small companies' failure because it exposes them financially and emotionally. At the same time, it also keeps them on the lookout for the impact on their professional image within their startups' ecosystems. Such an impact could potentially hinder the establishment or the progress of future ventures led by the founders of dead startups (Shepherd, 2003).

Another significant contributor to the failure of startups is the incompetence to attract investors, which can lead to the inability to maintain an operational cash flow of a startup. Governments worldwide interfere through business accelerators to tackle the funding issue and motivate investors to invest in the right startups (Munkongsujarit, 2016).

According to Barbero et al. (2012), Performance levels may differ, mainly according to the type of the business accelerator. There are four types of business accelerators, private accelerators, research accelerators, development accelerators. They surveyed over ninety accelerators, and the result was that some accelerator types perform competitively in some performance indicators, and others perform poorly in the same indicators. Five elements of performance indicators were categorized for use in the study. The first is the startup's growth, employment expenses, in and out research and development, and finally, the capability to join

research and development cohorts. In this study, private and research accelerators were highlighted in terms of performance, followed by university accelerators. Another study by

Barbero et al. (2014) examined results for a subsequent study he conducted, and found that the variance in innovation levels acquired is massive among the different types of accelerators. This was analyzed by Mas-Verdu et al. (2015) in a qualitatively conducted analysis to examine the role of business accelerators with other elements like the innovation level, logistics, and size. The findings of the study showed that business accelerators could not affect the survivability of a startup. Still, a combination of elements is necessary, as a company's operations under a specific market.

2.9 Research Hypotheses

The research hypotheses are derived from the last pieces of the literature analyzed and summarized in this chapter which corresponds directly to the five research questions stated in the introduction chapter. As such, five hypotheses were formulated in order to be tested in a survey targeted to accelerated and incubated Startups in Bahrain.

2.91 Hypothesis 1.

According to Borgek and Norrman (2008), a Business Accelerator and Incubator performance is defined by the productivity of the Accelerator and Incubator with respect to achieving their goals. The main goal of Business Accelerators and Incubators in Bahrain is to enable Startups by providing them business support in the form of various valuable services. Therefore, Hypothesis 1 was formulated to be tested to answer the first question of the research to find out whether the current state of the Business Accelerators and Incubators is beneficial to Startups or not illustrated in Table1.

Research question	Question 1: To what extent do Startups benefit from Business Accelerators and Incubators services in Bahrain?
Independent Variable Category	Category (A) - Accelerators and Incubators Impact.
H1	The services provided by Business Accelerators and Incubators in Bahrain have a statistically significant positive impact on Startups' success.

(Table 2-1)

2.9.2 Hypothesis 2.

Bellingtoft (2012) and Aerts et al. (2007) both described and emphasized the importance of the Business Accelerators and Incubators screening processes. Therefore, good screening and selection processes will most likely yield good Startups to be chosen for Acceleration and Incubation. However, the increasing screening and selection criteria might pose obstacles to many Startups that do not meet the criteria and send them away. As such, hypothesis 3 was developed to evaluate the extent of access in finding and joining a Business Accelerator and Incubator in Bahrain.

Research question	Question 2: To what extent Business Accelerators and Incubators in Bahrain are accessible and responsive?
Independent Variable Category	Category (B) - Access to Business Accelerators and Incubators
H2	Business Accelerators and Incubators accessibility and responsiveness have a statistically positive impact on access.

(Table 2-3)

2.9.3 Hypothesis 3.

This hypothesis was formulated to evaluate the difficulty of the screening and selection processes in Business incubators and accelerators in Bahrain. This will help to identify whether Accelerators and Incubators adjust their screening and selection processes or not.

Research question	Question 3: To what extent are the screening and selection processes undertaken by Business Accelerators and Incubators in Bahrain uncomplicated?
Independent Variable Category	Category (B) - Access to Business Accelerators and Incubators
H3	The screening and selection process of Business Accelerators and Incubators have a statistically significant positive impact on flexibility.

(Table 2-4)

2.9.4 Hypothesis 4.

Business Accelerators and Incubators help connect Startups with all stakeholders in the ecosystem, which will increase the innovation level of the Startup (Bogers, 2011). Therefore, this hypothesis is formulated to check whether Accelerators and Incubators helped foster innovation or not in Startups in Bahrain. This is important because innovation can make or break a Startup. It can be the source of a unique competitive advantage or it can be the source of an idea that cannot be applied and resulting in the death of the Startup.

Research question	Question 4: To what extent do Business Accelerators and Incubators in Bahrain help Startups foster innovation?
Independent Variable Category	Category (C) - Innovation
H4	Business Accelerators and Incubators have a statistically significant positive impact on Startups innovation in Bahrain.

(Table 2-5)

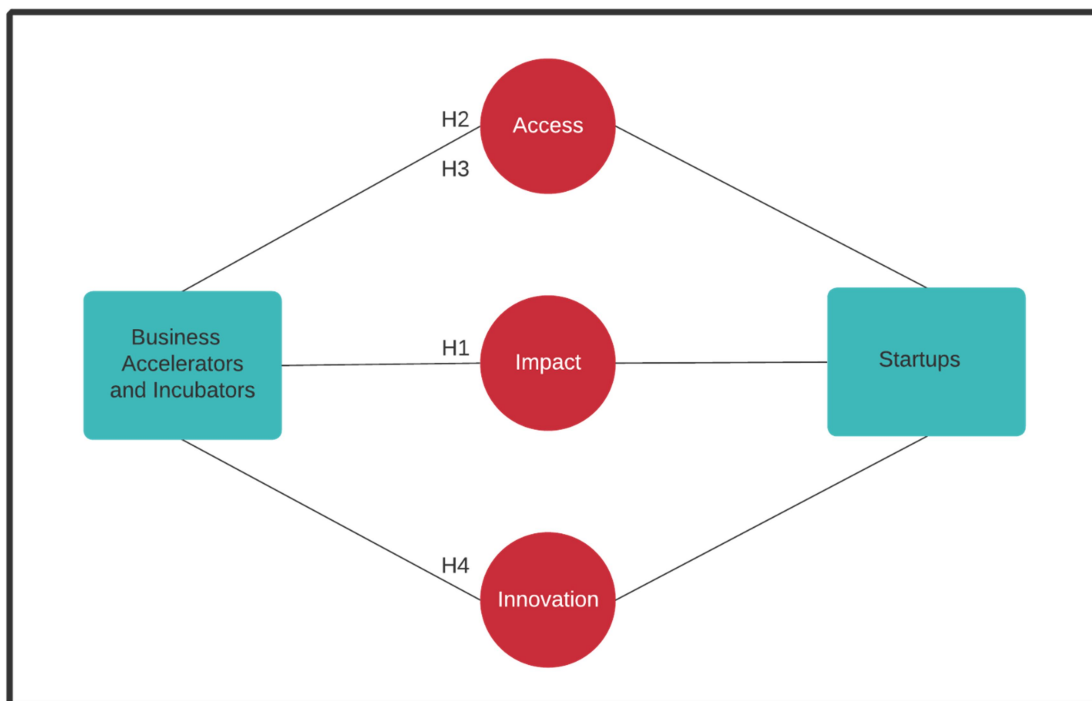
2.10 Research Variables

According to the segmentation of the hypotheses and research questions, the main dependent variable of the study is the Startups' Ecosystem Performance whereas the main three independent variables are:

- 1) Business Accelerators and Incubators Impact.
- 2) Access to Business Accelerators and Incubators.
- 3) Innovation.

2.11 Conceptual Model

The below model is the conceptualization of the four formulated hypotheses with highlighting the variables that are chosen to test the hypotheses.



(Figure 2-1)

2.12 Summary

The previous pieces of literature contained references, paraphrased, analyzed, and explained theories and studies from 74 different studies about Startups and Business Accelerators and Incubators which helped to give more background around the thesis topic and also helped in formulating the research hypotheses and aligning them with the research questions for further quantitative testing with the use of descriptive statistical analysis.

Chapter 3: Methodology

3.1 Introduction

This chapter will give thorough descriptions of the methods used and the type of the research. It will also identify the target population and the chosen sample while explaining the structure of the method used along with the analysis technique selected to interpret the results of the methodology. The methodology chapter will also explain the data collection methods used with justifications along with the limitations faced during the research work. The final part of the chapter will dissect the questionnaire's structure and design and the analysis of the data collected in order to provide a better insight when moving on to the data analysis chapter.

3.2 Research Design

The research aims to assess the status quo of Business Accelerators and Incubators' role in affecting Startups. Therefore, the research design is descriptive by nature since the relationship already exists and there is no need for a correlational approach. The descriptive approach will help provide an evaluation of the Accelerators and Incubators' current performance and set the tone for future studies. To get more accurate quantifiable results, a quantitative approach was used to quantify the study's questionnaire data and find out patterns that can interpret and explain the current state of Business Accelerators and Incubators' performance regarding startups and from Accelerated and Incubated Startups themselves, and how to improve it in Bahrain further.

3.3 Area of the Study

The study was conducted in Bahrain and was strictly focusing on incubated and accelerated Startups that were established and operated or still operate within the Kingdom of Bahrain.

3.4 Research Philosophy

The study follows a realism philosophical approach as it aims to evaluate the role of Business Accelerators and Incubators in an unbiased approach. Therefore, maintaining the independence of reality from assumptions is necessary.

3.5 Target Population and Sample

The targeted population of the study is Startup companies that have been incubated or accelerated by a Business Accelerator and Incubator in Bahrain. According to the Ministry of Industry, Commerce, and Tourism's SMEs development directorate, the total number of incubated and accelerated Startup companies in Bahrain is 791 as of the 31st of October 2021, which is a small population.

3.6 Sample Selection

A random sample of 30 incubated and accelerated startups were chosen to fill the questionnaire and give their honest opinions and feedback, representing 3.8% of the total population of Accelerated and Incubated Startups in Bahrain to represent and give an idea about the opinion of the overall population of accelerated and incubated Startup companies, using their own Acceleration and Incubation experience as a reference.

3.7 Data Collection

The study aims to collect data on Business Accelerators and Incubators in the form of feedback from the Accelerated and Incubated Startups regarding their acceleration and incubation experiences. Given the descriptive quantitative approach of the research, a survey questionnaire is one of the best methods to collect actionable data that can be analyzed with descriptive statistics to interpret it and turn it into information. It can also cover all of the hypotheses proposed and get more information around them efficiently.

Questionnaires also protect the identity of the Startups; an online questionnaire of 27 questions was structured using Google Forms and was sent to them via Email, Whatsapp, and Instagram. They were instructed to carefully fill the questionnaire with all honesty and under the disclaimer of their data protection. The questionnaire was also distributed to Business Incubators and Accelerators in Bahrain with the help of the Ministry of Industry, Commerce, and Tourism's SMEs Development Directorate and Bahrain SMEs Development Society (BDSME), and in turn, the Incubators and Accelerators circulated the questionnaire to their incubated and accelerated Startups to fill with the exact original instructions, to get a bigger sample from the population.

3.8 Limitations

One of the major limitations faced was the COVID-19 pandemic health restrictions. It eliminated the ability to observe the respondents, guide, and instruct them in person to ensure the accurate completion of the survey. This also resulted in the elimination of the possibility of having qualitative interviews with Startup founders, as any interviews would have been needed to be scheduled for only video calls which could have been very time-consuming.

The pandemic also resulted in lots of Startups shutting down, which made the population even smaller and more difficult to extract a larger sample. It also made everyone twice as busy in terms of figuring out their digital transformation strategies to cope with the pandemic.

Another major limitation is that Startup companies' founders are very busy individuals as time is a very important factor in running a Startup. Therefore, it was difficult to get a hold of a larger number of Startup founders who were willing to invest the time in filling out the survey questionnaire.

3.9 Ethical Consideration

The respondents' data and information about their Startups were treated with top confidentiality. This is important as it might create conflict of interest between Business Accelerators and Incubators, and might also give one Accelerator an advantage over another one.

3.10 Questionnaire Design

Because the research is the first of its kind in Bahrain about Business Accelerators and Incubators and Startups, a newly developed questionnaire is designed based on the hypotheses formulated in the Literature Review chapter. The questionnaire then was divided into four sections to

3.7.1 Section 1

Contains seven questions about the Startup's characteristics and demographics. Three of which are optional and four of which are mandatory to answer.

3.7.2 Section 2

The questionnaire will contain seven Likert scale questions and four multiple-choice questions related to the impact of Business Accelerators and Incubators on Startups in Bahrain - Category (A) Questions.

3.7.3 Section 3

The questionnaire will also contain three Likert scale questions and three multiple-choice questions related to Category (B) questions, which involves access to Accelerators and Incubators in Bahrain.

3.7.4 Section 4

The questionnaire will have three Likert scale questions related to Category (C) questions that will assess the innovation levels between Accelerators and Incubators and Startups in Bahrain.

A five-point Likert scale is used in 12 questions to understand the opinion of the respondents regarding specific topics about their Acceleration and Incubation experience. The following opinions in the Likert scale questions represent the following values that will be used in the descriptive analysis in the Data Analysis chapter.

1: Strongly disagree.

2: Disagree.

3: Neutral.

4: Agree.

5: Strongly agree.

However, the remaining questions are close-ended multiple-choice questions that aim to rank certain aspects related to Business Accelerators and Incubators in Bahrain.

3.11 Statistical Instruments

Since the research is descriptive, descriptive statistical analysis will be used to describe and understand the patterns of the data collected by extracting the questionnaire data and importing them into an Excel sheet that will help in calculating means, medians, variances, and the standard deviation when applicable, while summarizing them in tables and graphs for better visibility and understanding of the results and findings of the data.

3.12 Data Analysis

As the results are actionable and quantifiable, all of the techniques used for analysis will be quantitative.

The analysis section will have four main sections of analysis which are:

3.8.1 Section 1 - Sample Characteristics and Demographics Analysis

This section of the data analysis chapter will analyze the results from the first 7 questions in the questionnaire about the Accelerated and Incubated Startup company. The first three questions will optionally ask the respondent about their:

Question 1 -Startup name - The analysis of this question will indicate how many Startups are willing to give out their identities when giving feedback about Accelerators and Incubators.

Question 2 -Startup CR Number - Analyzing his question will also indicate the number of Startup companies willing to identify themselves when giving feedback.

Question 3 -The main activities of the Startup - This question will find out the patterns and overlap of activities that accelerated and incubated Startups have in common.

The remaining four questions will be mandatory to answer which are:

Question 4 -How old is the Startup - Question four will focus on identifying the patterns found within the respondents about their Startup age, this will give more insight into the age of accelerated and incubated Startups in Bahrain overall.

Question 5 -Whether the respondent joined a Business Accelerator and Incubator in Bahrain or not - This is to make sure that the respondents talk about their Acceleration and Incubation experience or of a Startup company they know that was Accelerated and Incubated in Bahrain.

Question 6 -Which Business Accelerator and Incubator was chosen - This question will aim to identify the entity of Acceleration and Incubation that is mostly used in Bahrain.

Question 7 - When were the Accelerator and Incubator joined by the Startup - The last question of section 1 will contribute more to the exploration of the respondents' characteristics in terms of their joining date in Accelerators and Incubators in Bahrain and will help in identifying the period that most Startups joined.

In section 1, demographic statistics analysis will be used by the extraction of the data of all the questions in this section and summarized in diagrams and tables that will illustrate the resulting data clearly along with the analytical commentary that will provide short conclusions based on the results of the respondents. The results of this section will serve educational purposes and will not be contributing to an acceptance or rejection of any of the proposed hypotheses.

3.8.2 Section 2 - Business Accelerators and Incubators Impact

Section 2 of the data analysis will be the largest and the primary section of the thesis as it will be focusing on analyzing four multiple-choice questions and seven Likert scale questions that will assess the respondents' experience and feedback during their acceleration and incubation programs in Bahrain.

Question 8 - What were the top benefits from joining a Business Accelerator and Incubator

- This question will be a check-box question that will have the three main value-adding activities by Accelerators and Incubators proposed by Blank (2005) in his research which are investments, mentorship, and networking opportunities. The respondents will be given the freedom to choose more than a question.

Question 9 - What were the difficulties during Acceleration and Incubation - Analysis of this multiple choice question will give the respondents four options to choose from. They will be limited to choosing one of the four options to identify the pattern of the respondents with respect to the question.

Question 10 - The duration of the Acceleration and Incubation program - This question will illustrate the average duration of Acceleration and Incubation of Startups in Bahrain.

Question 11 - Acceleration and Incubation program satisfaction - This is a Yes and No question to get the overall satisfaction of the respondents with regards to their Acceleration and Incubation experience.

Questions 12 to 18 - These are Likert questions that will be analyzed using indexes of umbilical and dispersion. Mean, medians, modes, variances, and standard deviations will be calculated for each question and displayed in graphs and tables to evaluate the respondents' view about:

- The benefits gained from Acceleration and Incubation to the Startup.

- The Accelerator and Incubator support post-program.
- The likelihood of recommending other Startups to be Accelerated and Incubated in Bahrain.
- The funding and financial support.
- The admin and operations support.
- The marketing support.
- Access to business opportunities.

The analysis of section 2 will help answer question 1 of the research which is translated into Hypothesis 1. The outcome of the analysis will determine whether the hypotheses will be accepted or rejected based on the descriptive statistical analysis of the respondents' answers in section 1.

3.8.3 Section 3 - Access to Accelerators and Incubators

This section of the analysis will analyze the three multiple-choice questions which are related to the process of joining a Business Accelerator and Incubator in Bahrain. It will also assess and analyze the respondents' views about the joining process in three Likert scale questions.

Question 19 - Difficulties faced during screening and selection processes - This will be a multiple-choice question that presents four logical difficulties Startups face during the screening and selection processes. Analyzing this question will rank the difficulties presented to the respondents based on the higher and lower frequencies of the answers.

Question 20 - Most important requirement of joining an Accelerator and Incubator - Analysis of question 19 will give more insight on what is the pattern of the requirements of

Accelerators and Incubators from Startups in Bahrain to allow them to join the Acceleration and Incubation programs.

Question 21 - Period of acceptance - This question will help in identifying the period of accepting Startups into Acceleration and Incubation programs and provide an overview of how long it takes to enter a program.

Questions 22-24 - The descriptive statistical analysis of these three Likert scale questions will assess and evaluate the respondents' opinions about:

- How easy or difficult it was to find an Accelerator and Incubator in Bahrain.
- How easy or difficult was it to join an Accelerator and Incubator in Bahrain.
- The acceptance period.

The findings of this section will help in answering the research questions 3 and 4 which are the basis of Hypothesis 3 and 4 that evaluates the Access to Accelerators and Incubators in Bahrain.

3.8.4 Section 4 - Innovation

The last section of the analysis will focus on analyzing three Likert scale questions using descriptive statistical analysis to evaluate the role of Business Accelerators and Incubators in Bahrain in fostering Startup's business innovation.

Question 25-27 - Those are three Likert scale questions that will ask the respondents about their innovation experience during their Acceleration and Incubation programs in terms of:

- The Accelerator and Incubator impact on the Startup's innovation level.
- Sparking up new ideas that assisted in improving the Startup's concept.
- Referring back to Accelerators and Incubators in the future for innovation guidance.

The quantitative analysis of this section will give insight in answering the fifth research question which will lead to accepting or rejecting Hypothesis 5 and better understanding the role of Accelerators and Incubators in fostering innovation within Startups in Bahrain.

3.13 Summary

This section of the research investigated the methodologies that will be used in the upcoming chapter 4 to analyse the results collected. It also gave an overview of the research approach and design along with an outline of the targeted population, the sample of the study, and the sampling methods used.

Chapter 4: Results, Discussion, and Recommendations

4.1 Introduction and Pilot

This thesis chapter will analyze the data collected from the questionnaire using statistical analysis in the form of frequency tables and percentages for the multiple-choice questions and descriptive statistics analysis for the Likert scale questions. At the end of each question, data commentary and short discussion will be written. The analysis is divided into four main sections. At the end of the chapter, the relevant hypotheses will be addressed and evaluated in acceptance or rejection. The questionnaire was piloted with five incubated Startups as the pilot respondents. The main concern was that the questionnaire was long. Therefore, it was shortened.

4.2 Section 1: Sample Characteristics

This section will analyze the data collected in section 1 of the questionnaire, and the results will be displayed in frequencies tables to be commented on.

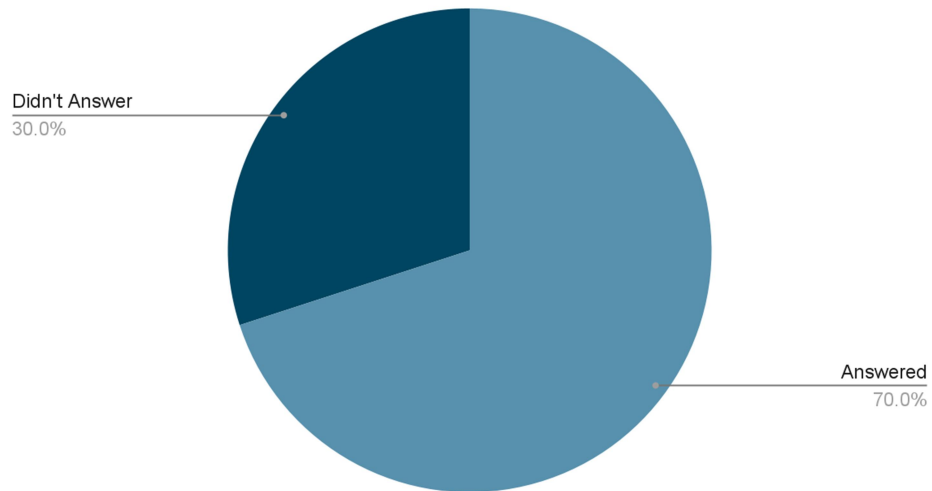
4.2.1 Questions 1-3.

Table 4-1 will display the number of Startups that chose to answer the optional questions.

Item	Classification	Frequency	Percentage
Startup Names (Optional).	Answered	21	70%
	Did not Answer	9	30%
Startup CR Numbers (Optional).	Answered	11	37%
	Did not Answer	19	63%
Startup Activities (Optional).	Answered	20	67%
	Did not Answer	10	33%

(Table 4-1)

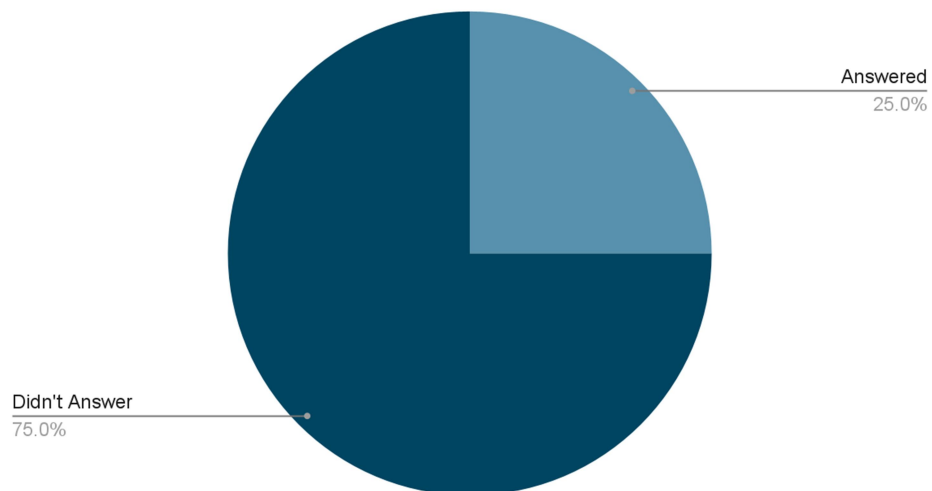
Diagram 4-1 - Startup Name



(Figure 4-1)

According to Figure 4-1, 70% of the Startups chose to declare their names and lowered their anonymity which indicates that they were not hesitant to declare their feedback. While 30% of the respondents chose not to declare their Startup names and stay anonymous.

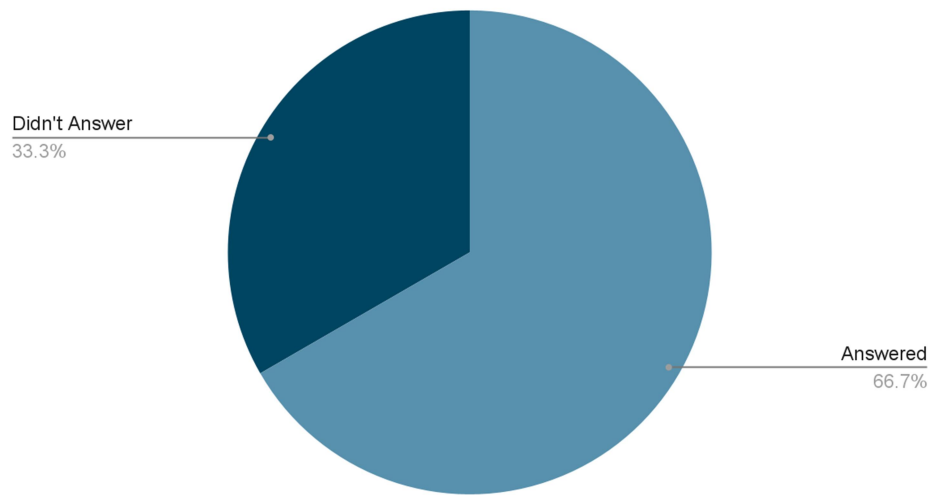
Diagram 4-2 - Startup CR Number



(Figure 4-2)

Figure 4-2 shows that the majority 75% of the respondents chose not to declare their Commercial Registration numbers in the Ministry of Industry and Commerce, whereas 25% did declare it. This is a logical result as companies are generally protective over their Commercial Registration information.

Diagram 4-3 - Startup Activities



(Figure 4-3)

The majority of the respondents, which are 66.7% of the sample chose to declare their Startups' activities whereas 33.3% of the respondents chose not to state their area of speciality.

4.2.2 Question 4 - How old is your Startup?

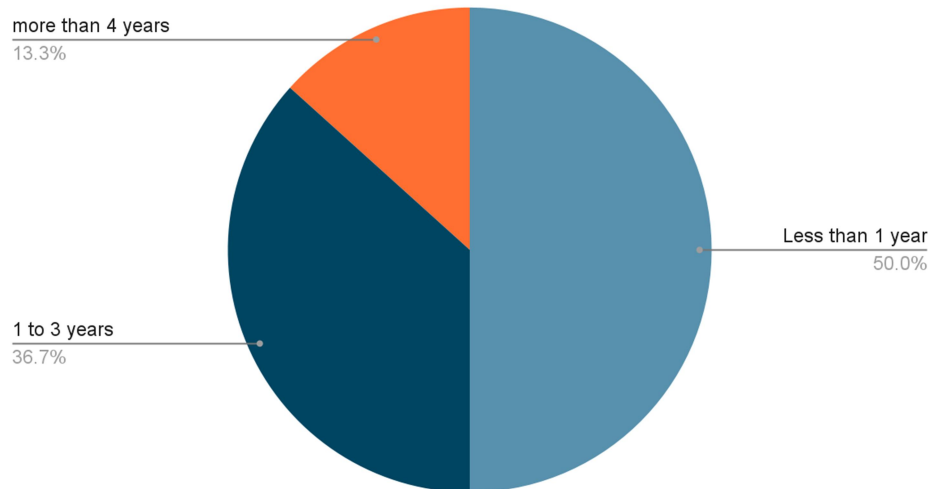
The below Table 4-2 will demonstrate the frequencies of the respondents' answers about the age of their Startups.

Item	Frequency	Percentage
Less than 1 year	15	36.7%
1 to 3 years	11	50%
4 years+	4	13.3%

(Table 4-2)

The below diagram will illustrate the frequencies and percentages of Table 4-2 visually through a pie-chart.

Diagram 4-4 - Startups' Age



(Figure 4-4)

According to Figure 4-3, 50% of the respondents own a Startup company in Bahrain that is operating for less than 1 year, followed by 1 to 3 years old and more than 4 years old Startups. This indicates that at least 15 of the respondents were recently Accelerated and Incubated.

4.2.3 Question 5 - Did you join a Business Accelerator and Incubator in Bahrain?

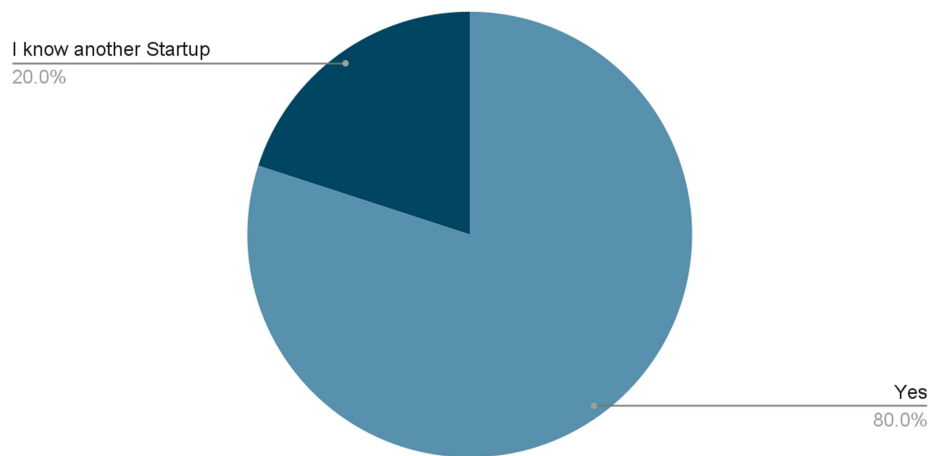
Table 4-3 below will illustrate the frequencies and percentages of the respondents and whether they actually were Accelerated and Incubated or answered the questionnaire on behalf of an Accelerated and Incubated fellow Startup company.

Item	Frequency	Percentage
Yes.	24	80%
I know a Startup that joined.	6	20%

(Table 4-3)

The below graph will display the data from Table 4-3 visually on a pie-chart.

Diagram 4-5 - Did you join an Accelerator and Incubator in Bahrain?



(Figure 4-5)

According to figure 4-5, the majority of the respondents were actually Accelerated and Incubated themselves whereas 20% of respondents were not directly Accelerated but were responding on behalf of Startups that were Accelerated and Incubated and provided their feedback.

4.2.4 Question 6 - Which Business Accelerator and Incubator did you join in Bahrain

(Optional)?

The below Table 4-4 will list the Accelerators and Incubators that the respondents were in along with the frequencies and percentages.

Accelerator and Incubator Name	Frequency	Percentage
Brinc	11	36.7%
Flat6Labs	8	26.7%
Undeclared	2	6.7%
The Collective Hub	1	3.33%
CH9	1	3.33%
Diwan	1	3.33%
Prosky	1	3.33%
Alwane	1	3.33%
Brilliant Labs	1	3.33%
MAZ Incubator	1	3.33%
Kickstart Bahrain	1	3.33%
Biban	1	3.33%

(Table 4-4)

According to Table 4-4, the majority of the respondents' Startups were Accelerated and Incubated by Brinc and Flat6Labs. This indicates that these two Accelerators and Incubators are proactive which is logical as these are international Business Accelerators and Incubators that have sizable network, expertise, and operations, which are also based in Bahrain and are supported by The Labor Fund (Tamkeen). Two of the respondents chose not to declare which

Accelerator and Incubator they were in. In contrast, the remaining 9 respondents named local Accelerators and Incubators that are based in Bahrain.

4.2.5 Question 7 - When did you join a Business Accelerator and Incubator in Bahrain?

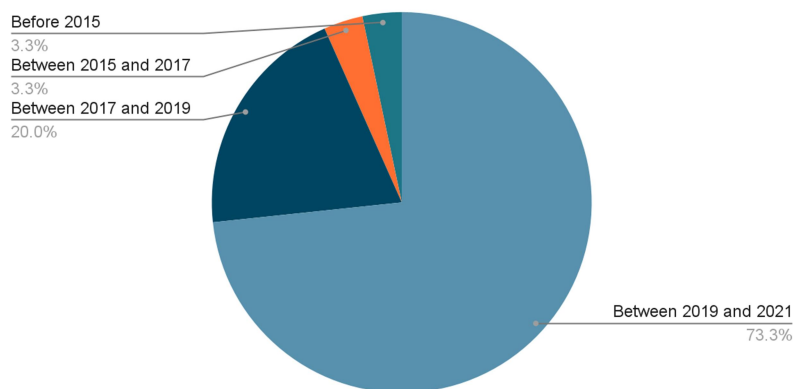
Below is Table 4-5 that will list the periods that the respondents joined Acceleration and Incubation programs.

Years of joining	Frequency	Percentage
Between 2019 and 2021.	22	73.3%
Between 2017 and 2019.	6	20%
Between 2015 and 2017.	1	3.3%
Before 2015.	1	3.3%

(Table 4-5)

The below graph will be derived from Table 4-5 and will illustrate the joining years in a pie-chart.

Diagram 4-6 - When did you join a Business Accelerator and Incubator in Bahrain?



(Figure 4-6)

As displayed in Figure 4-6, 73.3% of the respondents joined their Business Accelerator and Incubator between 2019 and 2021, followed by 20% of the respondents who joined between 2017 and 2019. The minority of the respondents joined between 2015 and 2017 or before. This is a positive indication that the concept of Acceleration and Incubation is becoming increasingly popular within Bahrain. As the results show, as years go by, more Startup companies join Acceleration and Incubation programs which could be due to the awareness increase or the sense of benefit other Startups can see from such programs becoming more apparent within the Bahraini Startup ecosystem.

4.3 Section 2: Questions and Hypotheses - Accelerators and Incubators Impact

This section will analyze four multiple-choice questions using frequency tables and graphs to illustrate the results. The remaining seven Likert-scale questions will be analyzed in a descriptive analysis table that will display the mean and standard deviation of each Likert item.

4.3.1 Question 8 - What were the top benefits from joining a Business Accelerator and Incubator?

Table 4-6 below will illustrate the frequencies and percentages to rank the top benefits of joining a Business Accelerator and Incubator in Bahrain.

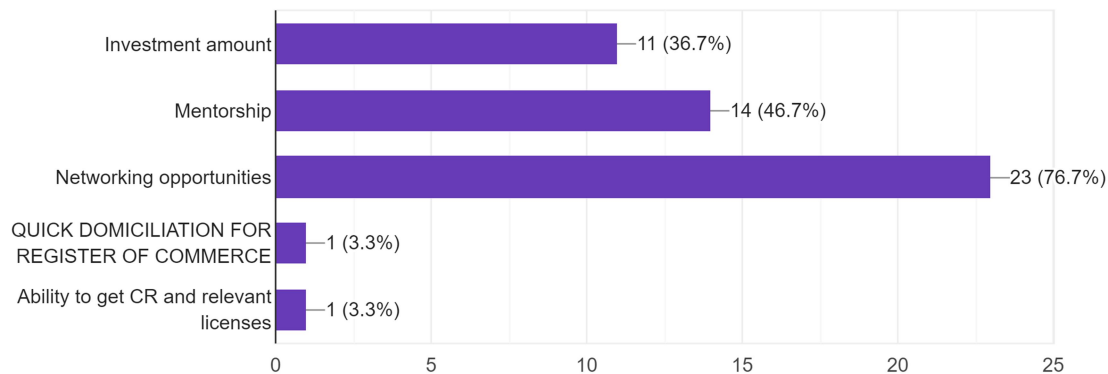
Item	Frequency	Percentage
Networking Opportunities	23	76.7%
Mentorship Sessions	14	46.7%
Investment Funds	11	36.7%
Commercial Registration	2	6.6%

(Table 4-6)

The below graph will illustrate the respondents' answers visually.

What were the top benefits from joining a Business Accelerator/Incubator?

30 responses



(Figure 4-7)

According to Figure 4-7, 76.7% of the sample stated that the top benefit of joining a Business Accelerator and Incubator in Bahrain is the networking opportunities it provides to the Startup which acts as a valuable value-adding service that Accelerators and Incubators provide worldwide that opens a lot of doors to the Startups in terms of expertise, clients, and investors. This finding correlated with Blank's (2005) when he stated in his research that one of the most value-adding services to a Startup is the networking opportunities Accelerators and Incubators provide. This finding also backs the claim of Hansen et al. (2000), as they stated in their research that Business Accelerators and Incubators have a solid competitive advantage when it comes to networking. The second most value-adding service Accelerators and Incubators provided is mentorship sessions which 46.7% of the respondents thought was helpful in the Acceleration of their Startups. This finding is supported by Christiansen (2009) as it was stated in his research that mentorship services are very important to advance Startups operations overall.

The third benefit was the investment amount which 36.7% of the Startups chose. This finding is logical because referring back to section 1 of the analysis, questions 4 and 7; it can be indicated that the majority of the respondents are very early-stage Startups, and some of them are in the seed stage, which means that seed funding investments will help the Startup to operate faster. Many Startups struggle to get seed funding because of the uncertainties (Salamzadeh, 2015). Therefore, this finding shows that Accelerators and Incubators in Bahrain are willing to facilitate and also invest in the seed funding stage.

4.3.2 Question 9 - What difficulties were faced during the Acceleration and Incubation program?

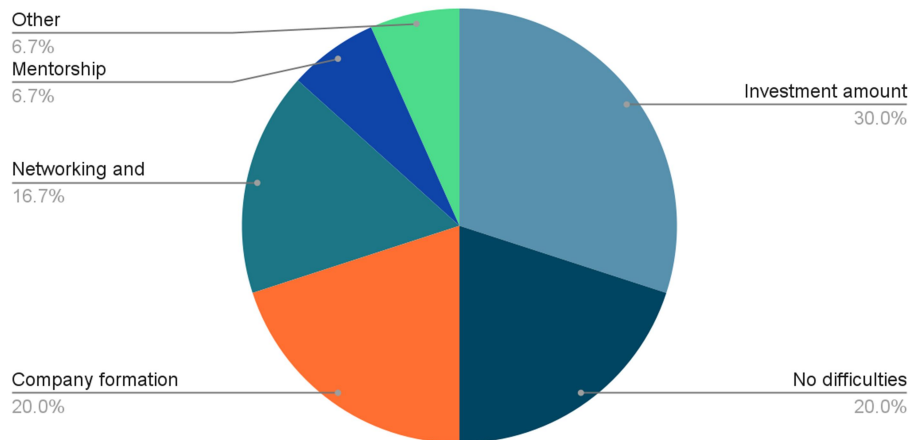
Table 4-7 will illustrate the frequencies and percentages to rank the difficulties Startups faced during their Acceleration and Incubation periods in Bahrain.

Item	Frequency	Percentage
The investment amount was not enough.	9	30%
No difficulties	6	20%
Company formation was difficult.	6	20%
Networking and Marketing were not helpful.	5	16.7%
Mentorship sessions were not helpful.	2	6.7%
Other difficulties	2	6.7%

(Table 4-7)

The above table will be displayed in a pie-chart graph below in Figure 4-8.

What difficulties were faced during the Acceleration and Incubation program?



(Figure 4-8)

Figure 4-8 shows that the majority of the respondents found that the investment amount provided by their Accelerator and Incubator was not enough. This finding sets the tone for future research to determine what would be an adequate investment amount for Startups in Bahrain. The other 20% of the respondents stated that the company formation in Bahrain was complex and it slowed their operations. The increased complexity of the company formation could be due to external environments such as the COVID-19 pandemic which forced many employees to work from home or slow them down. This is a natural conclusion as environmental changes can potentially slow down or prevent Startups from forming up (Boeker, 1988). 16.7% of the respondents faced difficulties in the networking and marketing field, which also could be due to the COVID-19 pandemic as all networking opportunities shifted into virtual methods as opposed to face-to-face meetings with stakeholders. The last difficulty that 6.7% of the respondents faced was with the mentorship. This could also be an indirect impact of the COVID-19 pandemic.

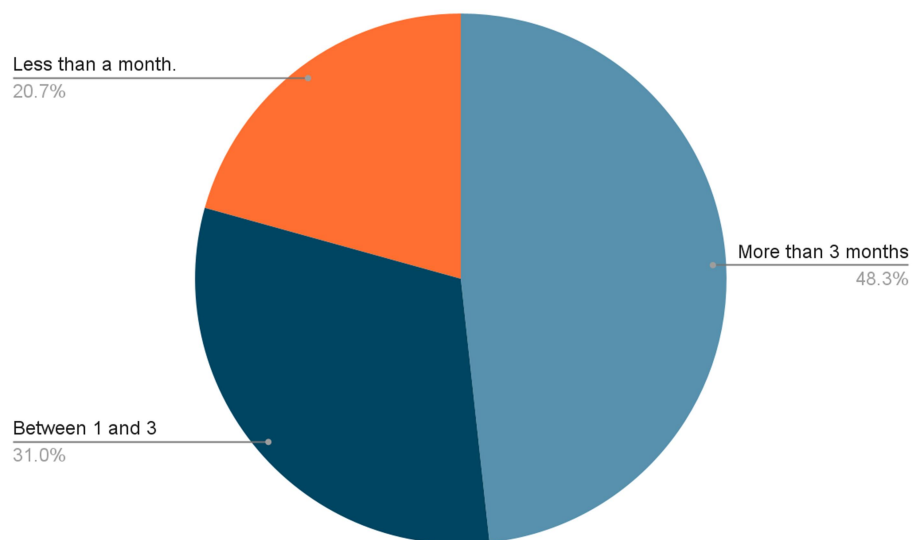
4.3.3 Question 10 - How long was the duration of your Business Acceleration and Incubation program??

Table 4-8 below will illustrate the categorical data collected from the respondents about their Acceleration and Incubation program durations in Bahrain.

Item	Frequency	Percentage
More than 3 months	14	46.7%
Between 1 and 3 months.	9	30%
Less than a month.	6	23.3%

(Table 4-8)

The below pie-chart will display the data presented in Table 4-8



(Figure 4-9)

Figure 4-9 shows that 48.3% of the Accelerated and Incubated Startups in Bahrain went through a program that exceeded the duration of three months. This finding is important and can act as an informational indicator to all Startups that plan to get Accelerated and Incubated in Bahrain.

This is also mainly because startups need to go through legal entity registration and company formation in Bahrain, which includes setting up bank accounts, depositing the capital, and then going through the actual Acceleration and Incubation program. Another factor that could have contributed to extending the length of the programs is the COVID-19 pandemic which caused a lot of delays in the Kingdom of Bahrain and worldwide. The second finding is that 31% of the 30 respondents stated that their Acceleration and Incubation duration was between one month and 3 months maximum. This duration should indicate a regular program running. However, 20.7% of the respondents stated that their Acceleration and Incubation programs lasted for less than a month, indicating an underlying problem within the programs they have joined.

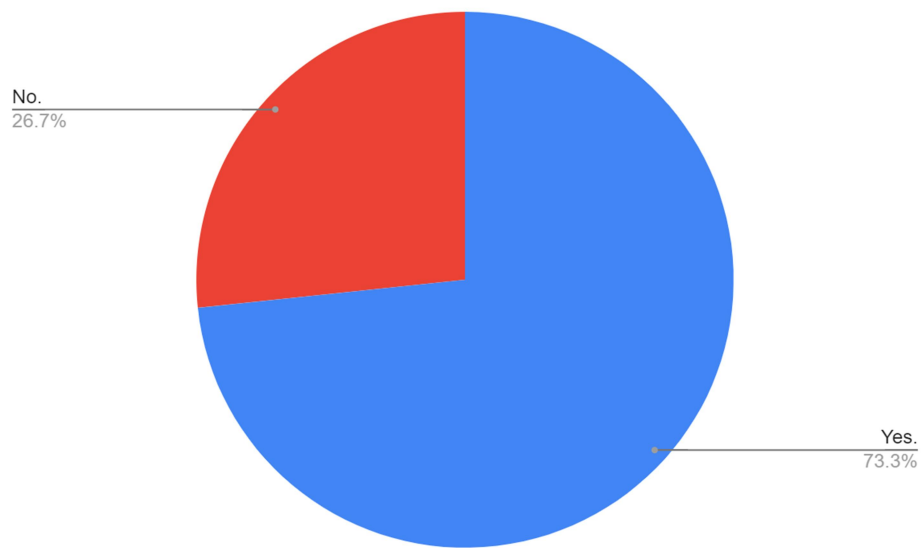
4.3.4 Question 11 - Were you satisfied with the duration of the Business Acceleration and Incubation programs?

The below table 4-9 below illustrates the frequency of the Yes and No answers the 30 respondents have answered to get an insight that will complement the previous question and give insight into whether the program's duration was to the Startups satisfaction or not.

Item	Frequency	Percentage
Yes.	22	73.3%
No.	8	26.7%

(Table 4-9)

The below figure 4-10 will display the data presented in Table 4-9 in a pie chart for a visual presentation of the results.



(Figure 4-10)

Figure 4-10's pie-chart shows that 73.3% of the 30 respondents were satisfied with the duration of their Acceleration and Incubation programs whereas 26.7% of the respondents were not satisfied. It appears that the majority of the respondents are satisfied with the Acceleration and Incubation period whether it was more than three months or even less than one month. This indicates that each duration has its own benefits and downsides. The longer the program takes, the more the Startup will be solid in terms of operations; However, at the cost of delayed operations. Also, the shorter Acceleration and Incubation periods could also indicate a speedy launch of the Startup's operations; However, at the cost of not being Accelerated and Incubated long enough. Therefore, the minority of the respondents that were not satisfied with their Acceleration and Incubation periods, could have been affected by one of the mentioned downsides.

4.3.5 Questions 12 to 18 - Likert-scale questions about the Business Accelerator and Incubator impact on the Startup.

The below table 4-10 will summarize the frequencies of 7 Likert scale questions and calculate their means and standard deviation.

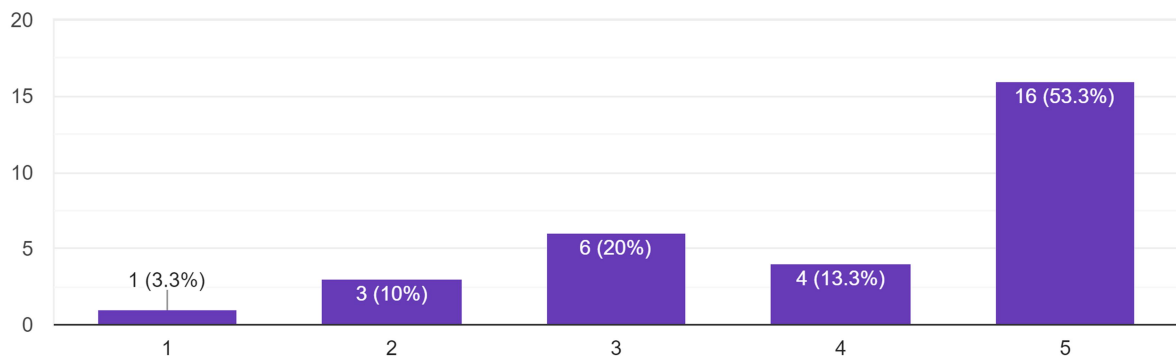
Likert Item	N	Scale Mean	Mean	Standard Deviation
1.1Joining a Business Accelerator and Incubator in Bahrain was beneficial to your Startup.	30	3	4.03	1.22
1.2The Business Accelerator and Incubator continued their support after the program.	30	3	3.43	1.30
1.3How likely would you recommend other Startups to join Business Accelerators and Incubators in Bahrain?	30	3	4.13	1.11
1.4Business Accelerators and Incubators Funding and Financial support was useful	30	3	3.2	1.37
1.5Business Accelerators and Incubators admin and operations support was useful	30	3	3.63	1.30
1.6Business Accelerator and Incubator's marketing support was useful	30	3	3.03	1.16
1.7Business Accelerator and Incubators access to business opportunities was useful	30	3	3.23	1.07
Mean of all items	3.53			

(Table 4-10)

4.3.5.1 Likert Item 1.1

As shown in Table 4-10, item 1 of the Likert scale questionnaire received a mean of 4.03 which is a significant result that indicates that the majority of the frequency distribution was between Strongly Agree, Neutral, and Agree respectively as shown in Figure 4-11 below. This also indicates that the majority of the Startups actually benefited from joining a Business Accelerator and Incubator in Bahrain. According to Munkongsujarit (2016), Business Accelerators and Incubators are very important to help startups expand and survive. This backs up this particular finding.

Joining a Business Accelerator/Incubator in Bahrain was beneficial to your Startup
30 responses



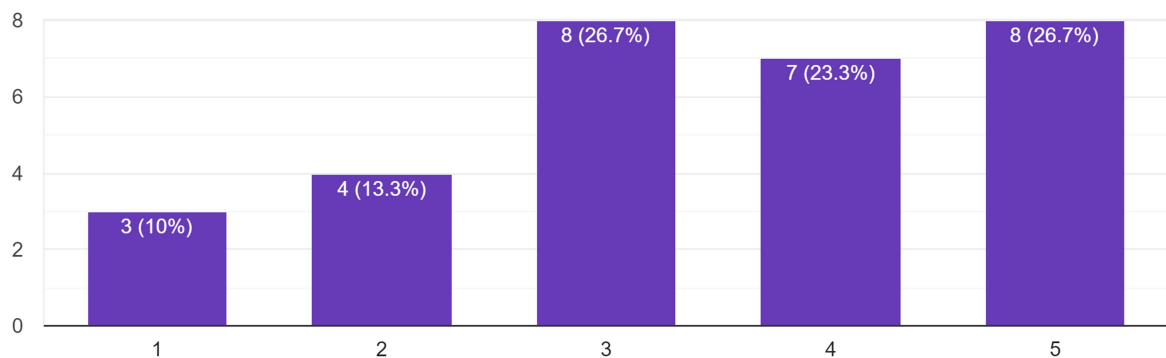
(Figure 4-11)

4.3.5.2 Likert Item 1.2

The second Likert item in Table 4-10 scored a mean of 3.43, which is higher than the scale means but also close to it. This indicates that for the majority of the Accelerated and Incubated Startups, their Accelerator and Incubator continued their support. However, according to the frequency Figure 4-12 below, 8 respondents were not sure, but 7 of them disagreed with the statement. This is an indication that the post-acceleration and incubation program support exists but also needs improvement in some areas. Another aspect to be looked into is the type of Business Accelerator and Incubator and whether they actually provide post-acceleration and incubation support or not.

The Business Accelerator/Incubator continued their support after the program.

30 responses



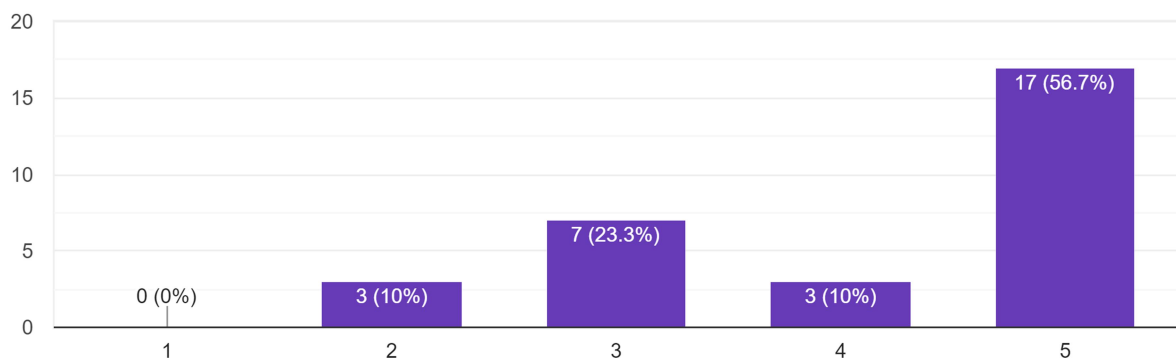
(Figure 4-12)

4.3.5.3 Likert Item 1.3

According to Table 4-10, item 1.3 from the Likert scale scored the highest mean of all the items, which is 4.13. This indicates that the majority of the respondents would actually recommend other Startups to join Business Accelerators and Incubators in Bahrain. This finding correlates with item 1.1 as the majority of the respondents stated that they benefited from joining a Business Accelerator and Incubator in Bahrain. Therefore, the recommendation to other Startups to benefit is reasonable. Since item 1.2 had a lower mean than 1.3, it can also be indicated that the respondents would recommend other Startup companies to be Accelerated and Incubated in Bahrain, regardless of the post-acceleration and incubation support.

How likely would you recommend other Startups to join Business Accelerators/Incubator in Bahrain?

30 responses



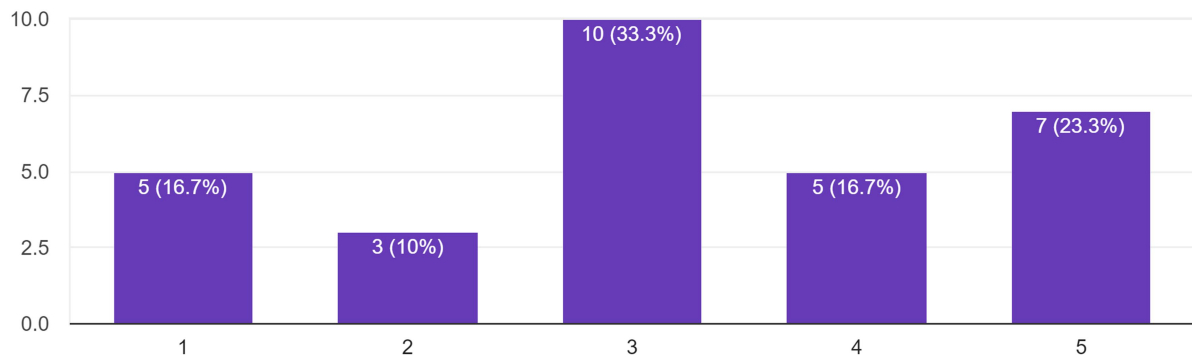
(Figure 4-13)

4.3.5.4 Likert Item 1.4

Item 1.4 scored a mean of 3.2 and the highest standard deviation of 1.37. Taking into consideration the mean and the standard deviation, it can be indicated that the high spread of data points on both ends of the scale resulted in the mean of item 1.4 being close to the scale mean of 3. As such, the majority of the respondents were neutral about the funding and the financial support they received from Business Accelerators and Incubators in Bahrain. This finding can be linked to question 8's finding, as shown in Table 4-6, the funds had one of the lowest frequencies in the question from the Startups. This indicates that a sizable portion of the sample finds the investment amounts and funds from Business Accelerators and Incubators in Bahrain was not sufficient for them to actually count it as a benefit from their Acceleration and Incubation program that helps them to operate their Startups more effectively. Figure 4-14 shows that the highest frequency was the neutral answer followed by the agreement then disagreement.

Business Accelerator/Incubator's Funding and Financial support was useful

30 responses



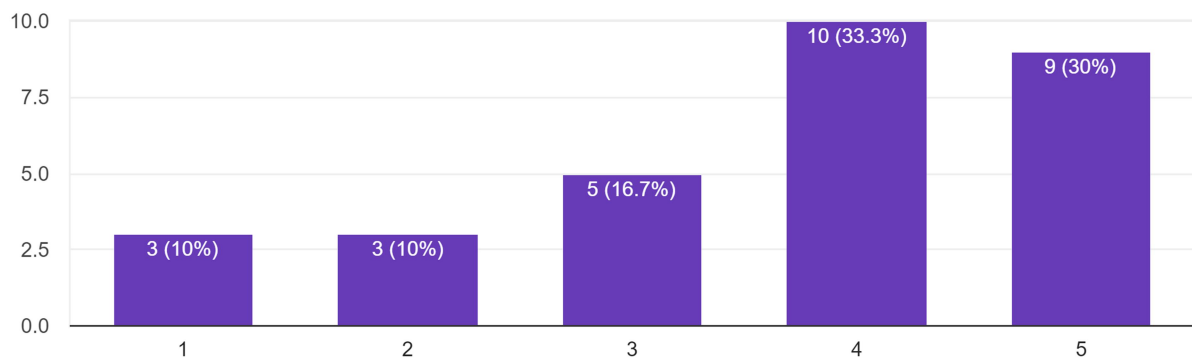
(Figure 4-14)

4.3.5.5 Likert Item 1.5

According to Table 4-10, item 1.5 had a mean of 3.63 and a standard deviation of 3.63. This indicates that the majority of the respondents found the administration and operations support they received from their Business Accelerator and Incubator was helpful. As seen in Figure 4-15, 6 of the respondents disagreed with the Likert item 1.5 statement. One possibility for this finding is that those Startups could have been more advanced than the early-stage ones in the sample, which means they could have their own set of operations and administrative processes in place and did not need to be Accelerated or Incubated in that area. However, 19 of the respondents agreed with the item, which indicates that Business Accelerators and Incubators in Bahrain are performing well with their administration and operations support.

admin and operations support was useful

30 responses

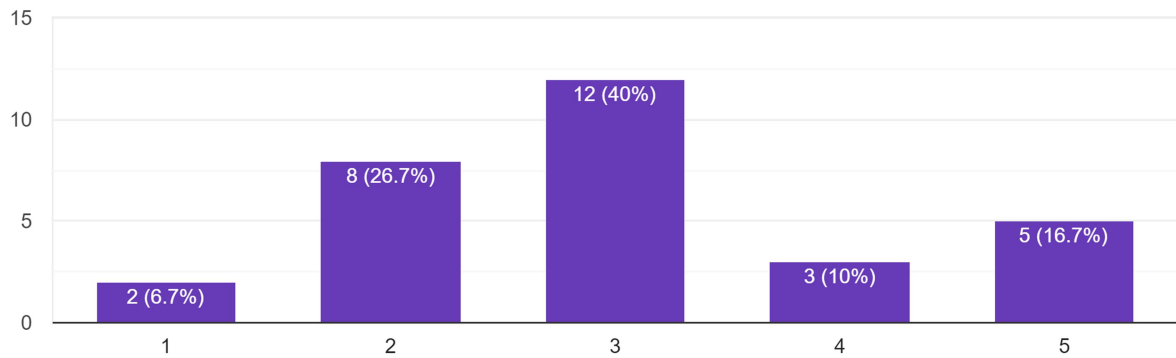


(Figure 4-15)

4.3.5.6 Likert Item 1.6

In Table 4-10, the sixth item scored a mean of 3.03 and a standard deviation of 1.16. Considering the scale mean is 3, the majority of the respondents had a neutral opinion about the marketing support Business Accelerators and Incubators in Bahrain have provided them. Furthermore, it

Business Accelerator/Incubator's marketing support was useful
30 responses



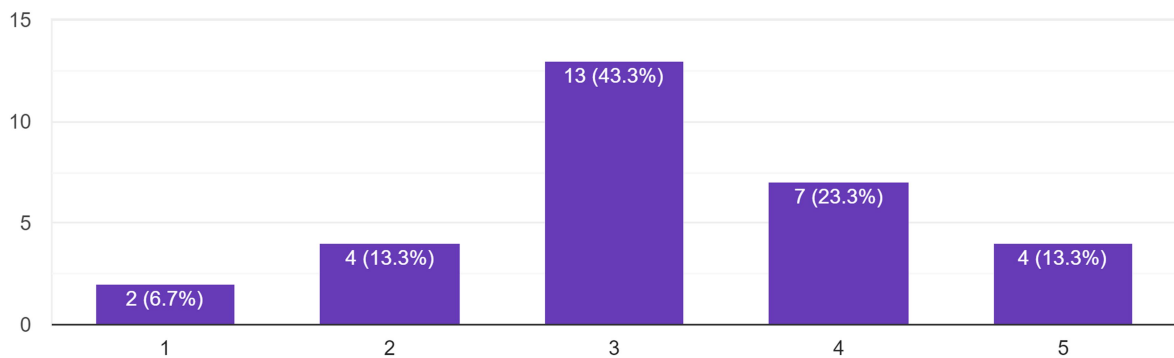
can also be indicated in Figure 4-16 that the second majority disagreed with the Likert statement.

(Figure 4-16)

4.3.5.7 Likert Item 1.7

The final Likert statement in Table 4-10 had the second-lowest mean of 3.23 and the lowest standard deviation of 1.07. The low distribution of the answers indicates that the majority of the respondents had a neutral opinion towards Business Accelerators and Incubators in Bahrain, giving them access to business opportunities. As shown in Figure 4-17, the second major finding is that 11 respondents agreed with the statement. Thus, it indicates that many of the respondents actually benefited from utilizing the Accelerator and Incubator's network of business partners that provided them with business opportunities.

Business Accelerator/Incubator's access to business opportunities was useful
30 responses



(Figure 4-17)

4.4 Section 3: Questions and Hypotheses - Access to Accelerators and Incubators

Section 3 will provide the analysis for three multiple-choice questions using frequency tables and graphs to display the findings with commentary interpretation. Three more Likert-scale questions will be analyzed using a descriptive analysis table with the calculated means and standard deviations for each of the Likert items.

4.4.1 Question 19 - Difficulties faced during the Accelerator and Incubator's screening and selection process.

Table 4-11 below will display the respondents' selected answers in frequencies and percentages to evaluate the difficulties the Startups faced during the screening and selection process of Business Accelerators and Incubators in Bahrain.

Item	Frequency	Percentage
No difficulties faced.	8	26.7%
My concept was not developed enough.	6	20%
The requirements were not clear.	5	16.7%
The requirements were too difficult.	4	13.3%
Other difficulties.	4	13.3%
The screening and selection process was complicated.	3	10%

(Table 4-11)

According to Table 4-11, 26.7% of the Startups that went through the screening and selection process of an Accelerator and Incubator in Bahrain faced no difficulties at all.

However, the majority of the respondents faced various difficulties. 6 of the respondents stated that their concept was not developed enough, which indicates that many of the Accelerators and Incubators in Bahrain require Startups to have a more developed concept in early-stage. A pre-acceleration and incubation program is a possible solution to this difficulty. The majority of the respondents had difficulty with the Accelerator and Incubator's requirements, 16.7% stated that the requirements were not clear, whereas 13.3% stated that the requirements made it too difficult for them to join the Acceleration and Incubation program. The significant finding of this question is that Accelerators and Incubators in Bahrain have to review their requirements.

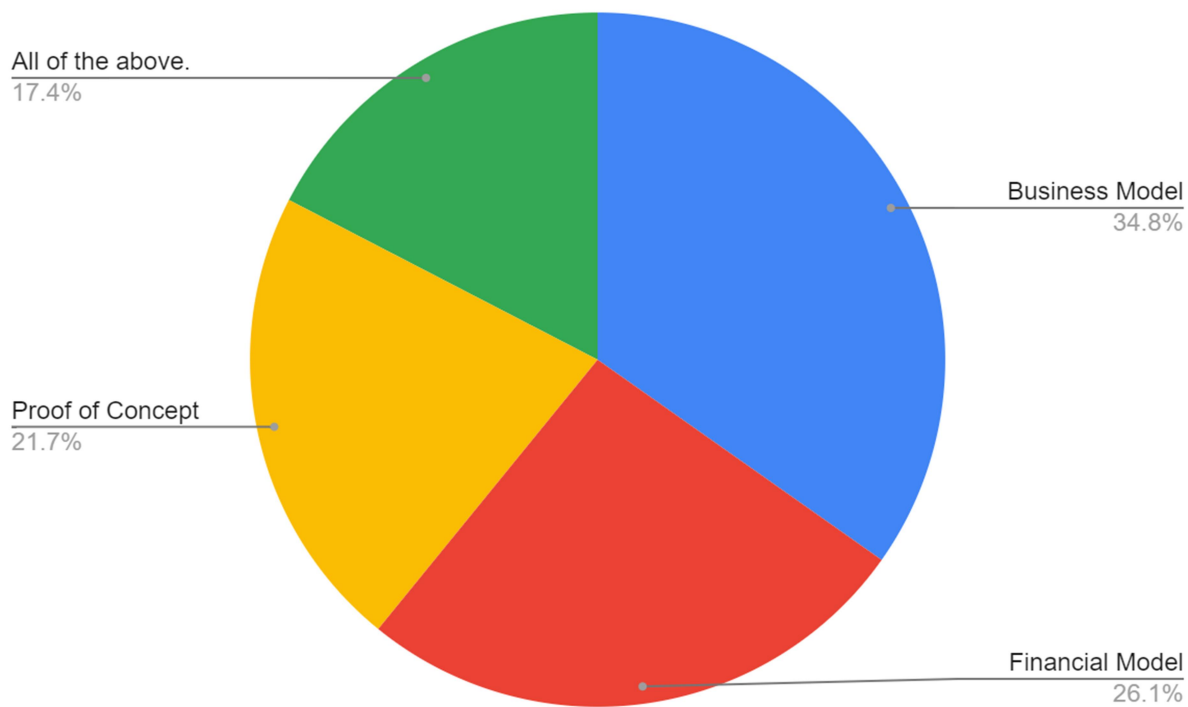
4.4.2 Question 20 - What were the most important requirements of joining a Business Accelerator and Incubator.

In the below table, frequencies of the respondents' answers regarding the most important requirements of joining a Business Accelerator and Incubator in Bahrain will be displayed.

Item	Frequency	Percentage
Business Model	8	26.7%
Financial Model	6	20%
Proof of Concept	5	16.7%
All of the above.	4	13.3%

(Table 4-12)

Table 4-12 will be displayed in Figure 4-19 below for further illustration and discussion of the results.



(Figure 4-19)

According to the data collected from question 20, the majority of the respondents stated that their Startup's business model was the most important requirement of the Business Accelerator and Incubator they have joined. This is a logical finding as a review of a company's business model is important to assess and evaluate its likelihood to succeed. The second important requirement was the financial model of the Startup. Financial models in the form of projected cash flows are essential to forecast the financial requirements of the Startups, the capital they need to operate until breakeven, and to display all of the financial projections to investors and stakeholders to attract them in investing in the Startup. The third most important requirement was the proof of concept, the Startups need to demonstrate the feasibility of the product or service they are trying to provide. 13.3% of the respondents stated that all of the three requirements were important.

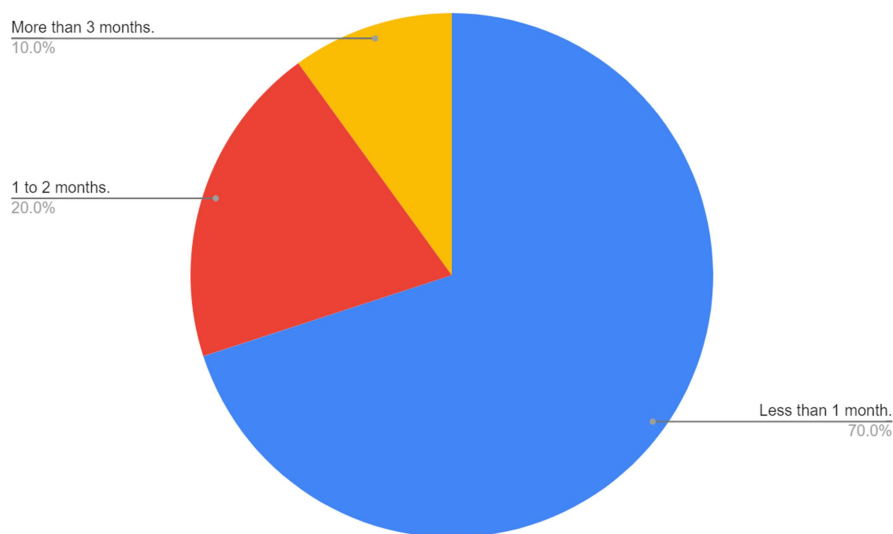
4.4.3 Question 21 - How long did it take to get accepted in a Business Accelerator and Incubator.

In the below table, frequencies of the respondents' answers regarding the most important requirements of joining a Business Accelerator and Incubator in Bahrain will be displayed.

Item	Frequency	Percentage
Less than 1 month.	21	70%
1 to 2 months.	6	20%
More than 3 months.	3	10%

(Table 4-13)

Figure 4-20 below will illustrate the data in Table 4-13.



(Figure 4-20)

According to the data presented in Table 4-13 and Figure 4-20, the significant majority of the respondents got accepted into the Accelerator and Incubator within one month of application.

This finding shows that getting accepted into Accelerators and Incubators in Bahrain is a speedy process that is important to Startups as time is a vital aspect of the Startups success. 30% of the respondents got accepted within three months of application. This delay could be the result of the COVID-19 pandemic impact and some other factors.

4.4.4 Questions 22 to 24 - Likert-scale questions about the Access to Business Accelerator and Incubator.

Table 4-14 below will summarize the data collected from 3 Likert scale statements about the respondents' opinions towards their access to Business Accelerators and Incubators in Bahrain. The means of each statement will be calculated along with the standard deviation.

Likert Item	N	Scale Mean	Mean	Standard Deviation
2.1 Finding a Business Accelerator/Incubator in Bahrain was easy.	30	3	3.83	1.18
2.2 Joining a Business Accelerator/Incubator in Bahrain was easy.	30	3	4.2	0.92
2.3 The acceptance period was quick.	30	3	4.2	1.06
Mean of all items	4.078			

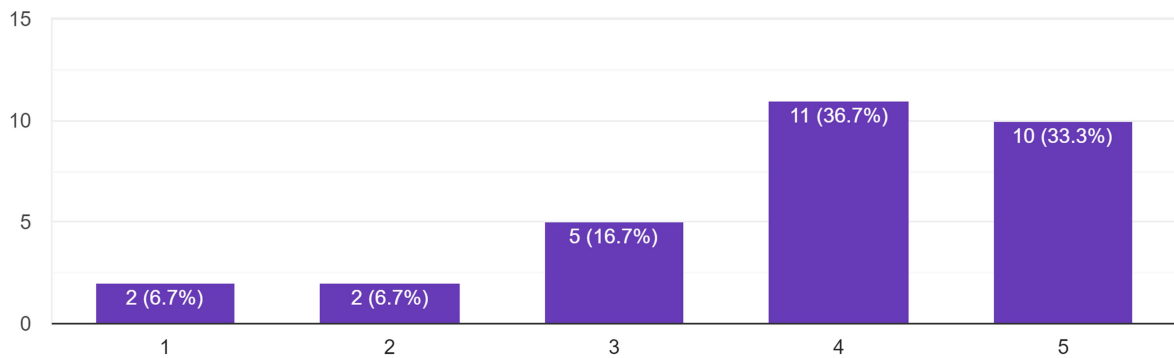
(Table 4-14)

4.4.4.1 Likert Item 2.1

According to the data displayed in Table 4-14, Item 2.1 data had a mean of 3.83 with a standard deviation of 1.18. The majority of the respondents agreed with the Likert item and stated that finding a Business Accelerator and Incubator in Bahrain is easy. This finding reflects the reality of the situation as Accelerators and Incubators were made very accessible in Bahrain.

This high level of accessibility is the result of the Bahraini government support to Business Accelerators and Incubators in the form of the Labor Fund (Tamkeen), the SMEs Development Directorate, and Startup Bahrain to foster Startups in an effort to enrich the economy with local Startups that are based in Bahrain. This finding correlates with the study done by Almubartaki and Busler (2010) as they also stated that governments value Business Accelerators and Incubators, and more than 70% of Accelerators and Incubators are supported by governments worldwide. As shown in the below Figure 4-21, 5 of the respondents had a neutral opinion about the Likert statement and 4 respondents disagreed. The disagreement could be a sign that some Business Accelerators and Incubators can improve their outreach to Startups and have solid awareness campaigns whenever a program rolls out.

Finding a Business Accelerator/Incubator in Bahrain was easy.
30 responses



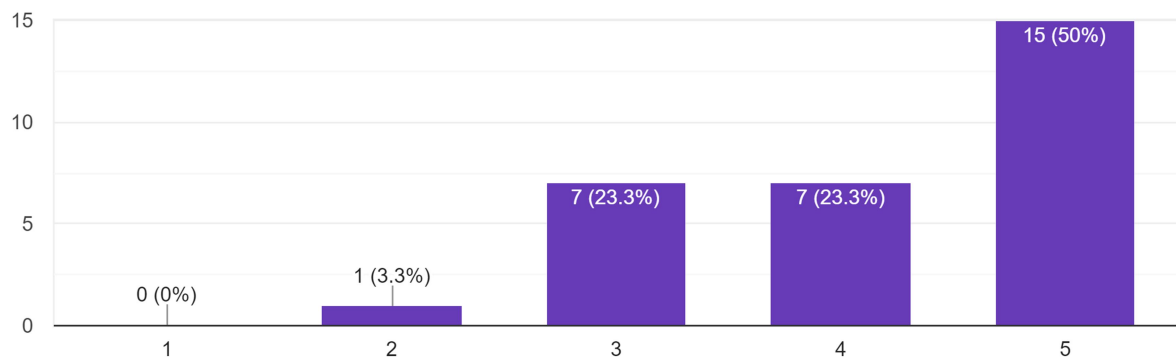
(Figure 4-21)

4.4.4.2 Likert Item 2.2

Table 4-14 shows that statement 2.2 had the highest mean of 4.2 with the lowest standard deviation of 0.92. This finding indicates that the majority of the respondents strongly agreed that joining a Business Accelerator and Incubator in the Kingdom of Bahrain was easy. This is a controversial finding as the majority of the respondents in question 19 faced at least one type of difficulty in the screening and selection process. However, it can be justified that only one requirement was difficult and the rest of the process was easy. This is also an indication that Business Accelerators and Incubators in Bahrain are being very flexible with the Startup companies that are applying into their programs without sacrificing the quality of the program.

Joining a Business Accelerator/Incubator in Bahrain was easy.

30 responses



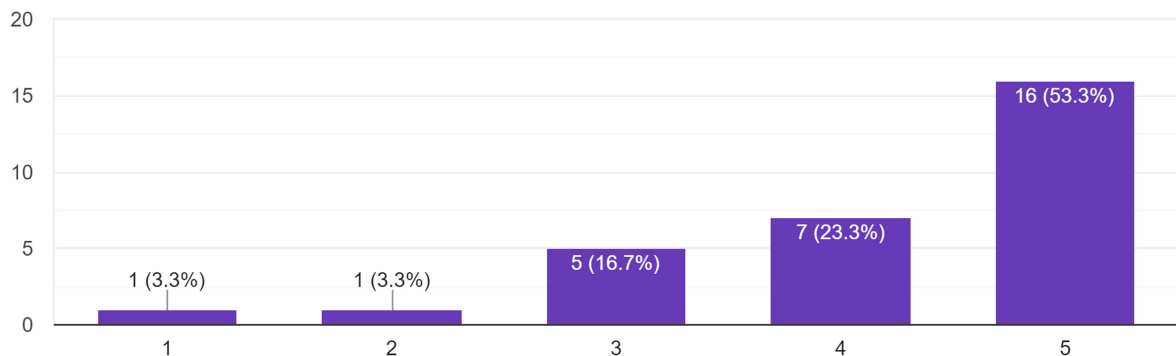
(Figure 4-22)

4.4.4.3 Likert Item 2.3

The last Likert item had a mean of 4.2 with a standard deviation of 1.06. This indicates that the vast majority of the respondents experienced a quick acceptance period into the Acceleration and Incubation programs in the Kingdom of Bahrain. This finding is an important one as accepting periods can be challenging to both Startups and the Accelerators and Incubators. The longer it will take to accept a Startup company into the Acceleration and Incubation programs, the higher the chances that the Startup will not operate effectively in the market. Another indicator to evaluate is the quality of the screening and selection process of the Accelerator and Incubator, quick acceptance periods could also indicate that some of the Accelerators and Incubators are not reviewing the Startup applications deliverables thoroughly, which could lead to low-quality Startups being accepted for Acceleration and Incubation.

The acceptance period was quick.

30 responses



(Figure 4-23)

4.5 Section 4: Questions and Hypotheses - Innovation

This final section of the analysis will analyze three Likert scale questions using descriptive statistics by calculating the means of all the Likert items and their standard deviations. The items will focus mainly on the relationship between the innovation variable of the theoretical framework and the role of Business Accelerators and Incubators. The below Table 4-15 will be used as a reference for the data calculated.

Likert Item	N	Scale Mean	Mean	Standard Deviation
3.1The Business Accelerator and Incubator helped your Startup foster innovation.	30	3	3.47	1.04
3.2The Business Accelerator and Incubator sparked new ideas to improve your main Startup concept.	30	3	3.4	1.10
3.3Would you ask the Business Accelerator and Incubator for innovation guidance in the future?	30	3	3.53	1.25
Mean of all items	3.47			

(Table 4-15)

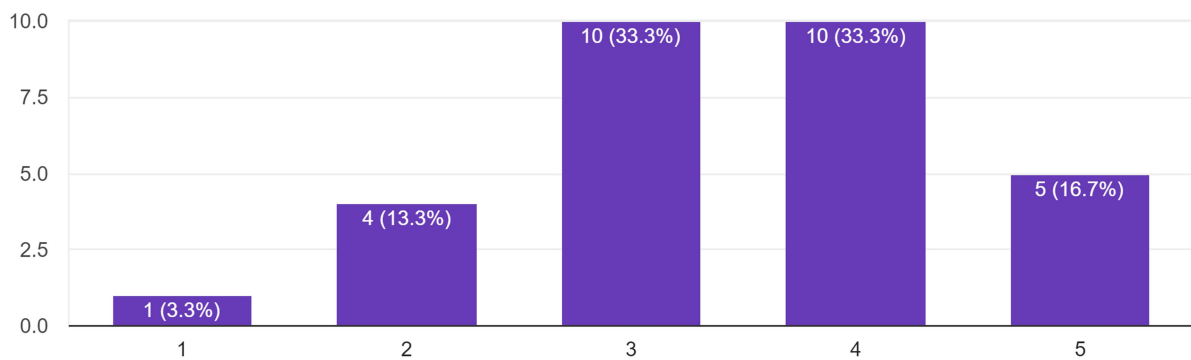
4.5.1 Likert Item 3.1

According to the data displayed in Table 4-15, Item 3.1 received a mean of 3.47 which is greater than the scale mean 3 and a standard deviation of 1.04. This indicates that the majority of the sample respondents Business Accelerators and Incubators in Bahrain helped them to foster their innovation. This finding proves Freeman and Engel (2007) theory that the process of innovation does not only occur in large companies but also in Startup and early-stage companies.

It is also a very important observation that Business Accelerators and Incubators in Bahrain are actually focusing on improving the innovation levels of Startups as it is a key element in the Startups' survival and growth. Innovation floods the markets with unique products and services that actually fill a need or change the traditional way of conducting businesses or doing things. This innovation is the result of Startup companies trying to survive in the competitive markets they operate in and grow their business. This argument is further supported by Spender et al. (2017) in their research, as they stated that innovation could be the result of repeatedly facing challenges.

Although the mean of item 3.1 is higher than the scale mean, as shown in Figure 4-24, 10 respondents had a neutral opinion about Accelerators and Incubators fostering their innovation. This can indicate that some of the Business Accelerators and Incubators in Bahrain lack the necessary knowledge in Startup companies to help them improve their innovation levels. Another possibility could be the nature of the Startups' activities that prevented them from being

The Business Accelerator/Incubator helped your Startup foster innovation.
30 responses



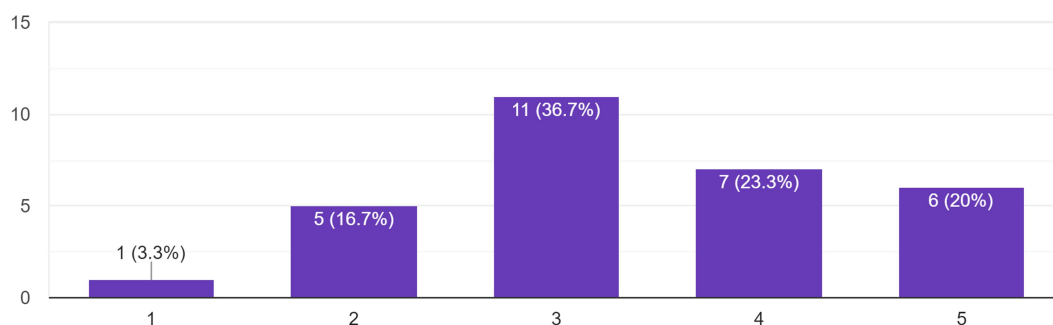
innovative.

(Figure 4-24)

4.5.2 Likert Item 3.2

The second Likert item in the data reference Table 4-15 scored a mean of 3.4 and a standard deviation of 1.1. This result indicates that the majority of the respondents agreed with the Likert statement, which can be interpreted that Business Accelerators and Incubators in Bahrain helped Startups to improve their Startup idea through innovative new ideas. The sparking of new ideas is not limited to only one variable that the Business Accelerator and Incubator need to focus on but many different variables that will eventually lead to the creation of new and innovative ideas. This argument is also supported by Papulova and Mokros (2007) as they stated in their research that even the focus on the skillset of the founders would foster innovation in some capacity. This indicates that the Accelerators and Incubators are performing well and as expected in Bahrain when it comes to innovation and new ideas. However, as shown in the frequency figure 4-25 below, 11 of the respondents were neutral about the statement. This could be a result of confusing the source and the main reasons for the new ideas. These neutral respondents may not be sure whether the new ideas came as a result of their own thinking or if they were influenced by the Accelerators and Incubators.

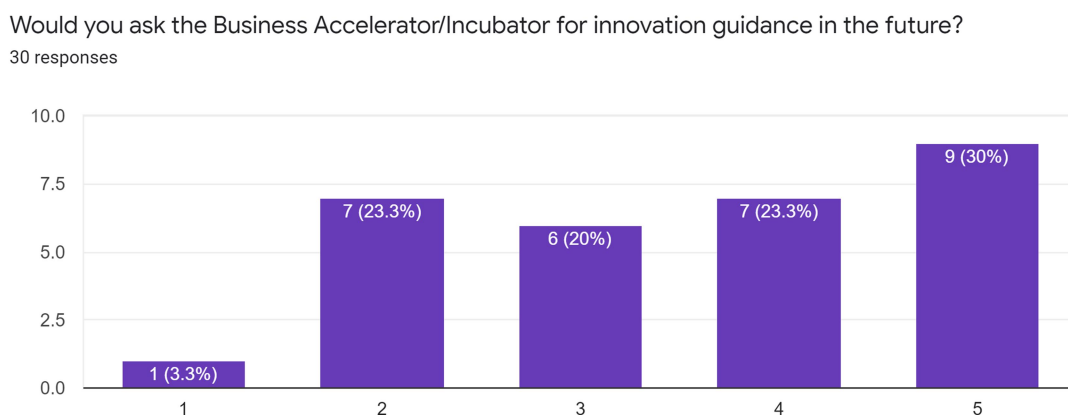
The Business Accelerator/Incubator sparked new ideas to improve your main Startup concept.
30 responses



(Figure 4-25)

4.5.3 Likert Item 3.3

The final Likert item in section 3's questionnaire scored the highest mean of 3.53 that had a standard deviation of 1.25. This mean is higher than the scale mean 3, which indicates that the majority of the respondents are actually considering referring back to Business Accelerators and Incubators for more innovation guidance in the future. This leads to the conclusion that Startups in Bahrain trust the innovation process of the Accelerators and Incubators to the point that they would go back to them to get more innovative ideas. Another indication of this finding is that it shows that the innovation process of Business Accelerators and Incubators in Bahrain is working effectively and that a lot of work and time was invested into learning the skills of being innovative gurus. However, in Figure 4-26, it is shown that 6 of the respondents had a neutral opinion, 7 of the respondents disagreed, and 1 respondent strongly disagreed with the Likert item 3.3. As a result, the mean was drawn back closer to the scale mean, this could also be an indication of a link between the previous items 3.1 and 3.2 as a pattern of similarity in responses was found among the three Likert items which can group those responses into one category which is Startups that did not benefit from the Business Accelerators and Incubators innovation.



(Figure 4-26)

4.6 Summary

This chapter showcased and illustrated the analysis of the data collected from the Accelerated and Incubated Startups. Statistical analysis and Descriptive Statistical Analysis instruments were used to measure the frequency of the responses for the close ended questions. However, for the Likert-scale questions, the mean and the standard deviation of the responses in numerical values were the key indicators of the analysis. All of the Likert-scale statements received a mean above 3, therefore, all of the four hypotheses were accepted.

Chapter 5: Conclusions and Recommendations

5.1 Conclusions and Discussions

Referring back to the research problem, it is clear that the findings of this research can be very educational to Startup companies and Business Accelerators and Incubators in Bahrain as the results are quite positive and informational. A summary of the analyzed and discussed sections will be categorized into four short summaries to give an overview of the sections.

5.1.1 Section 1 Discussion Summary: Characteristics

The majority of the sample was not hesitant to remain anonymous and did declare their activities specialization. However, 75% of the sample were hesitant to share their Commercial Registration number in the questionnaire. The main theme of the respondents' activities revolved around information technology, consultancy, and marketing. It is also found that the majority of respondents are operating a Startup that is between 1 to 3 years old, which indicates that they are recent participants of Acceleration and Incubation programs. Most of the respondents were Startup companies that were Accelerated and Incubated by Brinc, followed by Flat6Labs and 73.3% of them were accelerated and incubated between 2019 and 2021, which also supports the previous finding that the majority of the respondents are recent accelerators and incubators graduates.

5.1.2 Section 2 Discussion Summary: Impact

According to Table 4-10, all of the means were greater than 3. Moreover, the mean of all means is 3.53, which answers the first research question and accepts the first hypothesis. The results from this section indicate that the majority of the respondents benefited from Accelerators and Incubators in Bahrain and found it a generally positive experience.

5.1.3 Section 3 Discussion Summary: Access

According to Table 4-14, all of the Likert scale items that are related to the second variable of the theoretical framework, access, scored means greater than 3. Moreover, the mean of all the items is 4.078, which indicates a statistically significant result favoring access to Business Accelerators and Incubators in Bahrain. Therefore, hypothesis 2 and hypothesis 3 will be H1 accepted as finding and joining a Business Accelerator and Incubator in Bahrain was in fact easy for the respondents, and the screening and selection process of the Accelerators and Incubators in Bahrain was easy as well.

5.1.4 Section 4 Discussion Summary: Innovation

All of the Likert scale statements that are associated with the third variable of the theoretical framework in Table 4-15 scored means greater than the scale mean 3. Also, the mean of all the statements was 3.47 which indicates that the results are in line with **hypothesis 4** which will lead to the acceptance of the alternate hypothesis as the majority of the respondents found that Business Accelerators and Incubators in Bahrain did help them foster their innovation.

5.2 Recommendations

The descriptive design of the study gives an overview of what is currently happening but not how it is happening. Therefore, a correlational research design will be very beneficial for future studies in order to better understand the relationship between Startups and Business Accelerators and Incubators in Bahrain.

More studies in the field of Business Acceleration and Incubation is needed globally and regionally, as the current business literature is missing large segments of information and data about Business Accelerators and Incubators that needs to be filled. Adding to the current literature will help governments worldwide to maximize their understanding of accelerators and

incubators that will in turn foster and create more successful Startups that will continue to contribute to national economies around the world.

Also, an interesting research topic is to study the failure rate and causes of Startups. According to Vesper (1990), more than 70% of Startups fail. Therefore, investigating the failure of Accelerated and Incubated Startups, can give more insight into what can be wrong and how it can be fixed.

5.3 Limitations

The research results could have been further supported by a T-test to measure the satisfaction of the Startup. ANOVA can also be done between the Accelerators funding with the age of the Startup. The innovation section of the research can also compare between innovation levels and types of the Startup.

5.4 Future Research

A new field of the Startups and Accelerators and Incubators is on the rise which is the Scaleups model. Scaleups can also be Accelerated and Incubated and the literature around the topic is currently scarce, but it will need to be investigated at some point in the future as Scaleups are a new model that evolves from Startups.

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Appendix A

4/5/22, 4:25 AM

Section 1: Evaluating the role of Business Accelerators/Incubators on Startups

Section 1: Evaluating the role of Business Accelerators/Incubators on Startups

Dear all,

If you made it to this page, thank you for your effort! (This will only take less than 5 minutes).

This questionnaire aims to evaluate your experience as a Startup who's been in a Business Accelerator/Incubator journey. This research will help Accelerators/Incubators in Bahrain to further improve their performance, services and experience to foster and develop new Startups in the Bahraini, regional, and global market.

Would like to ask you all to kindly rest assured that this questionnaire is treated with top confidentiality and the results will be analyzed to benefit of the Bahraini Startups Ecosystem only and will NOT be used for any other purposes.

Thank you all in advance for your precious support!

*Required

1. Startup Name (Optional).

2. Startup CR Number (Optional).

3. What are the main activities of your Startup? (Optional)

4. How old is your Startup? *

Mark only one oval.

- ☐ Less than 1 year
- ☐ 1 to 3 years
- ☐ 3 to 4 Years

5. Did you join a Business Accelerator/Incubator in Bahrain? *

Mark only one oval.

- ☐ Yes
- ☐ I know another Startup who joined

6. Which Business Accelerator/Incubator did you join in Bahrain? *

Mark only one oval.

- ☐ Brinc
- ☐ Flat6Labs
- ☐ C5
- ☐ Nest
- ☐ Collective Hub
- ☐ CH9
- ☐ Diwan
- ☐ Space340
- ☐ Other: _____

7. When did you join a Business Accelerator/Incubator in Bahrain? *

Mark only one oval.

- ☐ Before 2015
- ☐ Between 2015 and 2017
- ☐ Between 2017 and 2019
- ☐ Between 2019 and 2021

Section 2: Business Accelerator/Incubator Impact

This section aims to mainly focus on how did the Business Accelerator/Incubator benefit your Startup and to what extent.

8. What were the top benefits from joining a Business Accelerator/Incubator? *

Tick all that apply.

- ☐ Investment amount
- ☐ Mentorship
- ☐ Networking opportunities

Other: ☐ _____

9. What were the difficulties you faced during an Acceleration program/Incubator? *

Mark only one oval.

- ☐ Mentorship was useless
- ☐ Investment amount was not enough
- ☐ Networking & Marketing was not strong
- ☐ Company formation was difficult
- ☐ Other: _____

10. How long was the duration of a Business Acceleration/Incubator program? *

Mark only one oval.

- ☐ Less than a month
☐ Between 1 to 3 months
☐ More than 3 months

11. Were you satisfied with the duration of the Business Acceleration/Incubator program? *

Mark only one oval.

- ☐ Yes
☐ No

12. Joining a Business Accelerator/Incubator in Bahrain was beneficial to your Startup *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

13. The Business Accelerator/Incubator continued their support after the program. *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

14. How likely would you recommend other Startups to join Business Accelerators/Incubator in Bahrain? *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

15. Business Accelerator/Incubator's Funding and Financial support was useful *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

16. admin and operations support was useful *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

17. Business Accelerator/Incubator's marketing support was useful *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

18. Business Accelerator/Incubator's access to business opportunities was useful *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

Section 3:
Screening &
Selection

This section aims to explore and evaluate the screening and selection processes of Business Accelerators/Incubators in Bahrain.

19. Difficulties faced during the screening and selection process *

Mark only one oval.

- ☐ My concept was not developed enough
- ☐ The Business Accelerator requirements were too difficult
- ☐ The Business Accelerator requirements were not clear enough
- ☐ The screening and selection process was too complicated
- ☐ Other: _____

20. What were the top most important requirement of joining a Business Accelerator/Incubator *

Mark only one oval.

- ☐ Business Model.
- ☐ Financial Model.
- ☐ Proof of concept.
- ☐ All of the above.
- ☐ Other: _____

21. How long did it take to get accepted in a Business Acceleration/Incubator program? *

Mark only one oval.

- ☐ Less than 1 month
☐ 1-2 months
☐ more than 3 months

22. Finding a Business Accelerator/Incubator in Bahrain was easy. *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

23. Joining a Business Accelerator/Incubator in Bahrain was easy. *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

24. The acceptance period was quick. *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

**Section 4:
Innovation**

This section aims to study the relationship between Business Accelerators/Incubators affect on a Startup's innovation.

25. The Business Accelerator/Incubator helped your Startup foster innovation. *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

26. The Business Accelerator/Incubator sparked new ideas to improve your main Startup concept. *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

27. Would you ask the Business Accelerator/Incubator for innovation guidance in the future? *

Mark only one oval.

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

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