Master's Thesis /Research Report

Impact of Awareness, Responsible Behavior, and Attitude on the Project Success with the Moderating Role of Innovation and Technology: Evidence from Guinea Bissau

by

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Certification of Originality

I am here to confirm the originality of the work and declare that this master's Thesis is a record of original work undertaken by me for the award of a Master`s Degree. Its contents are original and true, and it has not been submitted to any other university or educational institution for awarding any degree or diploma.

All information in this work derived from other published or unpublished sources has been explicitly cited and acknowledged accordingly.

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Summary

Organizations' success and failure depend on the success of their projects. Project members personal traits, attitudes, responsible behaviour, and awareness regarding the importance of project success led to the project success. For project management, it is mandatory to create awareness among the employees or the project members regarding the importance of the project's success. Different risks are associated with the project activities in a project, so the team members need to be aware of these risks.

An organization needs to consider two aspects related to its success, the first is awareness among its workforce, and the second is technology. A previous study has found that to be a competent, effective project manager; one must first understand oneself in terms of strengths and shortcomings. Project leaders' choices determine the success of a project, and their attitude toward their team members influences the team's effectiveness. Today's world relies heavily on innovation. By integrating technology, awareness can substantially impact project success, in the same way, that responsible behaviour has a more substantial impact on project success.

This research will explore the impact of awareness, responsible behaviour, and attitude on the project's success with the secondary objective of analyzing the moderating role of innovation and technology on the connection between awareness, responsible behaviour, attitude, and project success. The secondary aim of this research is to check the sparing role of innovation and technology. The author will analyse these results according to Bandura's social learning theory.

This research is divided into two sections, introduction, literature review, conceptual framework and hypothesis developments, research methodology, results and interpretations, and conclusion. A self-administered questionnaire is used to collect the data with the help of a convenient data collection technique. The retrieved responses were processed and analysed to test the study hypotheses with the help of statistical analysis by employing SPSS. At first, the correlation was checked, multi-collinearities were analysed through the variance inflation test, and the regression analysis was performed to test the hypothesis. At the final stage

The results indicated that awareness, attitude, and responsible behaviour significantly related to project success. Results also show that technology and innovation positively moderate the relationship between awareness, attitude, and responsible behaviour, indicating a significant relationship with project success.

Further, this research is significant for the practitioners providing that only having the latest technologies is not sufficient to ensure the success of a project. However, the individual behaviour who are part of project teams also impacts the project's success. Further, this research enriches the literature by providing the fact that the presence of technical expertise with awareness, responsible behaviour, and attitude will increase the chance for the success of the project.

KEYWORDS: Awareness, Responsible behaviour, Attitude, Technology, Innovation, and Project Success

1. Introduction

This section introduces the research, highlighting the study's background and supporting the design of the research model. This chapter also contains the motivation, explaining why the author has selected this research topic and how this research will be significant. This chapter also includes the research objectives and research questions.

This chapter illustrates the background of research, problem statement, research significance, research questions, research objectives, and how this study can play its part in helping practitioners by adding value to literature.

Organization success depends on how an organization is achieving its milestones; small and large public projects' success directly affects the performance of an organization or company. When an organization completes its projects on time and delivers high-quality products and services to its consumers, that results in a positive attitude of consumers regarding the company (Wortmann, 2010). Many factors contribute to the success of a project. For example, on-time delivery of the projects, achieving the entire target within the allocated budget to manufacture the products or designing a service. Because that is precisely the customer needs and the customer's demands, the project team's attitude towards the project's importance, awareness, and individual responsible behaviour, primarily affects the project progression. Along with these variables, innovation and technology are also essential factors for the success of an organization. This examination will explore factors that positively enhance the project's success.

1.1 Research Background

A project fails when an organization cannot complete it on time. Tiny or colossal project success or failure decides an organization's strategic and market position. Teams need good communication and expertise in concepts for the project to succeed (Wortmann, 2010). A balanced workload is also an essential factor for the success of a project. As not everything ever goes as planned, the organization needs to monitor the ongoing activities in a project to take control measures to ensure the success of a project (Mantel, 2011). Along with the monitoring and other technical issues, the management and the coordination among the team members are very crucial for the success of an organization.

Along with the factors mentioned above, Hubbard defines project success based on three factors; first, the time taken by the project to get completed; second, the cost of the project and the third is the performance or the functionality of the product or services that is the final output (Hubbard, 2009). These three factors highly depend on the inherent characteristics of the project leaders, members and everyone involved. Previous research highlights that different projects require different attitudes according to the project's requirements and nature. However, as not everything ever goes as planned, it is essential to have a solid perspective to overcome the hurdles that come in the way. Project members and leaders need to have positive attitudes towards the problem. Most of the time, when the team member and the leader have an attitude like “we or I cannot do it”, this results in project failure. Therefore, it is crucial to have a positive attitude towards the project's success. A positive attitude does not mean there will be no problems. However, a positive attitude towards some issues solves those problems and assists in finding alternative paths that are essential for the project's success. A positive attitude will help you be more resistant to

different issues and hurdles encountered in the way of its success. Not only for a project, has positive attitude helped an individual to deal with the uncertain circumstance. A positive attitude makes you optimistic and results in a constructive mindset.

Along with the attitude, responsible behaviour is another important factor that could strongly impact the project's success or failure. Along with the technical skills, an organization must include such people with responsible behaviour in the project team. Responsible behaviour is the inherent characteristic of an individual about how they proceed regarding the tasks assigned to them. The organization is responsible for hiring an individual with responsible behaviour towards the project and is skilled with the ability to perform the job on time. Responsible behaviour leads to the on-time delivery of the project, an essential element that defines a project's attainment. Responsible behaviour enables the project team and the organization to achieve all predefined objectives and goals, a success factor defined by Hubbard.

The cost is an essential factor that tells whether a project is a success or a failure. Responsible behaviours of the individuals help in realistic planning and, after that, help an organisation complete the project within the allocated budget. In 2014, Ambadapudi concluded that 30 – 40% success of a public construction project depends on an individual's technical skills ideal, while 60-70% of the project success depends on the behaviour of the employees or people involved in the project (Ambadapudi, 2014). Human psychology and the inherent characteristics of a human being integrate into project management. Another research states that the project managers need to be completely aware of the project member's attitudes, culture, and behaviour towards different situations. Responsible behaviour defines individual characteristics, like accepting change, following the command and trust among

the members. Based on the literature, the author concludes that responsible behaviour is a significant factor contributing to a project's success.

Along with responsible behaviour and attitude, awareness contributes to a project's success. With the advent of technologies and new project management software like Minitab, excel, and project manager, the project members, need to be aware of the latest technologies. How to use these devices effectively helps managers to deal complete the project with success. Along with the technologies, if an individual is aware of the importance of the project's success and its impact on the organization, it will positively enhance the project's success chances. On the other hand, when a project leader or team member is not aware of project success, the technicalities involved in the project result in project failure contributing to a negative impact on the organization.

Most of the existing literature is related to the skills an individual has and how their technical skills can play a critical role in shaping the success of a project. On the other hand, very little literature is available on the impact of attitude, awareness, and responsible behaviour in shaping the project's success—another reason why this research is significant.

Advanced software and technologies are adopted in our research to deal with the complexities of the project structure. Innovativeness and the latest software are the best ways to deal with complex environments. Innovation led to competitive project performances, and the involvement of innovations resulted in unexpected success. It also helps in avoiding the failures that could harm the success of projects. With time the needs and the claim of the consumers are converting, and organizations are trying to manufacture a product that precisely conforms to the consumers' necessities and demands that require innovation plus

the latest technologies for the success of these projects. So, innovation has a critical role to play in the success of a new project.

Moreover, when the individuals involved in a project are aware of the importance of project success, the process needed to complete the project and having innovative perspective results in project success. Innovation will enhance the chances of the project's success. Moreover, when the project lead is responsible for the processes involved in a project and has a positive attitude toward the project's success, it will increase the likelihood of its success. Awareness is another essential factor that contributes to the organisation's success, and older literature concluded that when awareness and innovation combine, the chances for project success increase.

As far as is known, past studies lack deficiency to explain how innovation and technology moderate the relationship between attitude, awareness, responsible behaviour, and project success. Most of the previous studies on project success focus on developed countries like America and European countries with no work on a collectivist society. This is the first work on a collectivist society, that is., Guinee Bissau.

Along with innovation, technology is another essential factor contributing to the project's success. The author defines technology as using the latest gadgets to deal with uncertain situations of projects. Organizations that provide employees with the latest technologies and devices to deal with the complexities are more successful. When the team leaders are aware of the situation and have the latest technologies, it improves project success. Similarly, responsible behaviour is another factor contributing to a project's success. When a responsible leader and a team are provided with the latest technologies, it will succeed in a project. Similarly, when the organization can deliver the latest technologies to its employees

and employees are aware of their duties and the impact of their role on project or organization performance, it will enhance the project's success. Here, in this research, technology and innovation are both used as moderators in this research.

Projects are open to different risks like financial, and it is vital to deal with such threats. After analyzing the existing literature on project management, and the difference between small and large-scale projects, we have drawn the following challenges faced by small projects (Pinto and Slevin, 1988).

1. During a small project, it is essential to differentiate between what is a project and which task is not a part of a project.
2. Most of the time, the planning phase is considered of no use; a wastage of resources and time results in project failure in the later stages.
3. Always follow the plan made at the start of the project. Although everything never goes as planned, the project needs to have other plans in case of any uncertainty. This static attitude increases the difficulties in the path of small project success.
4. Micromanagement is another that creates problems in the way to the success of an organization.

A project task conducted without planning could result in higher costs, hindering the team deliverance of the project on time, frustration in the stakeholders, and higher management attitude as well as in the team members of the project. So, an organization needs to plan their small projects before execution (Tukel and Rom, 2001). Unrealistic deadlines are another problem that needs attention from the project leader to increase project success (Tukel and Rom, 2001). the research will focus on the factors that contribute to the success of a small project and analyze the existing literature related to the small project while keeping an eye

on the historical success and failure of different projects. The formula to check the success of a project is simple and easy. A project succeeds if all deliverables are achieved, and the final project is delivered within the assumed time and the assigned budget (Kerzner 2001). Another factor that needs attention more deeply is managing the risks associated with small projects. The success of small-scale or large-scale projects highly depends on the risk evaluation process, mostly carried out at the beginning of a project. After analyzing the existing literature on risk management and small project management, most small projects fail because of poor planning and risk identification. We conclude from the previous research that the project team and the project lead must identify risk factors that negatively affect the project's success or the stakeholder's interest (Kloppenborg, 2019).

According to another researcher (Cooke, 2017), the project team can identify the risk associated with project activities and increase the success probability of the project. Risk identification helps increase the project's success probability but also helps manage the project effectively (Eldash, 2012). Moreover, the risk assessment help in managing the tolerance for making changes in ongoing processes in the project (Watson, 2002).

Moreover, most of the existing literature is related to the skills an individual has and how their technical skills can play a critical role in shaping the success of a project. On the other hand, very little literature is available on the impact of attitude, awareness, and responsible behaviour in shaping the project's success-another reason which makes this research more significant.

As far as is known, most of the previous studies related to project success are in developed countries like America and European countries; they, however, are deficient in explaining how innovation and technology moderate the relationship between attitude,

awareness, responsible behaviour, and project success. Moreover, innovation and technology are essential in enhancing the relationship between attitude, awareness, responsible behaviour, and project success. After scrutinizing the existing research, it ascertained that an individual's characteristics (attitude, awareness, responsible behaviour) strongly impact the project's performance. Secondly, most of the previous research explored the impact of these variables in shaping employee retention and in some other fields related to human resources management. All these factors have a substantial effect on shaping the project's success.

The study and market research stress that this phenomenon has not been so far investigated in Guinee Bissau in this approach. To the best of my knowledge, this is the first study centring on a collective society of Guinee Bissau to lay out the base by analyzing the role of attitude, awareness, and responsible behaviour in shaping project success with two moderators, innovation and technology. The study empirically and theoretically explores these factors to check the impact of these variables on shaping the project's success. This research will provide the basics for future research to examine these variables in shaping organizational performance.

The research uses online questionnaires to obtain primary data from the private institutions working on different personal projects in the Guinee Bissau industries. Therefore, our study will fill these research gaps. This study will discuss how awareness, attitude, and responsible behaviour develop project success and how innovation and technologies enhance the impact of attitude, responsible behaviour, and awareness on project success.

1.2 Research Significance

After considering the literature, most research correlates with projecting importance. Few studies are associated with personal traits (attitude, responsible behaviour, awareness) and their influence on project success with the moderating role of innovation and technology. Therefore, this study adds value to the existing project management literature. This examination adds importance by appending Guinea Bissau's standpoint of project management's role in motivating employees to have a positive attitude, responsible behaviour, and awareness of the project. The study and market research state that this paradox has not been explored in Guinee Bissau in this mode; hence, this research will provide a Guinea-Bissau perspective. Other than this, the outcomes will help policymakers and regulators devise strategies to analyse and manage an individual personal trait, enhance the positive behaviour toward the success of a public project, and create awareness among the project members and leaders regarding how to avoid future failures.

This empirical study will enrich the existing literature by adding the effect of attitude, responsible behaviour, and awareness in shaping the success of a project. Secondly, the impact of innovation and technology has been explored in making a new product successful, but how these factors influence the relationship between the personal trait and project success has not been studied. These two are the other two main contributions and significance of this research. Moreover, this will help practitioners work on their traits and how they can ensure their project success by exploring these factors.

1.3 Research Objectives

Empirical data from the Guinee Bissau is collected to fulfil the following two objectives of the study.

1. To examine the effect of attitude, responsible behaviour and awareness on project success.
2. To understand the abating role of innovation and technology in connecting attitude, responsible behaviour, awareness and project success.

1.4 Research Questions

After analyzing the existing literature and focusing on the importance of project management, I have designed the following research questions.

1. How can the awareness of individuals shape the project's success?
2. How does responsible behaviour shape project success?
3. How doe Attitude affects the project's success?
4. How do innovation and technology moderate the relationship between awareness, responsible behaviour and project success?

2 Literature Review

This Chapter of the thesis is on the literature review of the variables included in the theoretical model. The chapter shows the basic definitions of the variables and as well as how these variables affect each other. The chapter also contains literature about the concepts included in the research models, outcomes, and the antecedents of the variables. This research is based on three independent variables: attitude, responsible behaviour, and awareness. The dependent variable of this research thesis is project success. The study includes two moderators of innovation and technology. Conceptions of the variables, their outcomes, and the antecedents of the mediating and the dependent variables are explained. The chapter ends with a literature summary, identified research gap, and the research importance according to the variables.

According to Lovallo and Kahneman, individual behaviour predicts project success (Lovallo Kahneman, 2003). Geraldi (2008) claims that the conduct of project participants and the project lead determines the project's performance (Geraldi 2008). Bandura's Social learning theory application is viewed in many fields such as marketing, communication, and persuasion (Deming and Johnson, 2021; Rumjaun and Narod, 2020). This theory acts as a theoretical framework to provide ideas of personal traits that can predict the impact of unique traits like attitude, responsible behaviour, and awareness that affect the project's success (Schunk et al., 2020). This theory justifies that when a person interacts with the socialization agents directly or indirectly, that individual gets motivated and exhibits healthy behaviour (Le and Hancer, 2021). So, this theory helps support our models and the variables included in this research model. Bandura's social learning theory states that when an individual interacts with someone to get information, it influences that person's behaviour (Schunk et

al., 2020). For this research, the author has focused on attitude, awareness, and environmental behaviour; when higher management train, lowers management or provide information regarding these factors to the individuals, it will shape the behaviour of employees. Bandura's social learning theory best suits the independent variables and the relationship of these variables with the dependent variable.

Other than social learning theory, in 1980, Ajzen presented the theory of planned behaviour (Ajzen 1980). This theory explains an individual behaviour, attitude, subjective power, and perceived power (Lindh and Johnston, 2017). This theory explains an individual's favourable and unfavourable behaviour towards some specific situations; other than this theory also explains the behavioural intentions of individuals towards some problems (Chopra et al., 2021). This theory explains the factor that could motivate an individual’s behaviour to focus more on achieving goals.

In this study, the theory of planned behaviour by Ajzen is more factual to clarify our theoretical model. The awareness of all the parties involved in a project strongly impacts the project's success. Secondly, responsible behaviour is a crucial factor in a company's success. Social learning theory supports the current conceptual framework; it states that when an individual has a positive attitude and is more willing to learn, it will influence the habits and personal traits, i.e., awareness, attitude, and environmentally responsible behaviour.

All these independent variables depict the inherent characteristic of an individual, and the planned behaviour theory is also about the behavioural intentions of humans; therefore, it bests suits this research model

For project management, it is mandatory to create awareness among the employees or the project members regarding the importance of the project's success. Different risks are

associated with the project activities in a project, so the team members need to be aware of these risks. Awareness help organizations to have different strategies to deal with risks associated with project activities (Christenson and Walker 2008). When a project lead is not aware of the team members' skills and cultures, it will become difficult for them to assign tasks to the members. Therefore, it is essential for the project lead to be aware of the project team's skills. Awareness is mandatory for the project manager and the team members as it helps communicate effectively (Richard, 2012).

A previous study has found that to be a competent, effective project manager; one must first understand oneself in terms of strengths and shortcomings. Furthermore, it is claimed in a prior study that awareness helps managers identify the direction, whether the manager and the team are heading in the right way or whether the tactics need to be changed (Richard, 2012). Team members and the project manager gain confidence due to their increased awareness (Richard, 2012). The choice taken by the project lead determines the success of the project. Effective decision-making occurs when the project manager is well-versed in the team members' duties, objectives, and talents. Project success results from sound decision-making (Muller and Jugdev, 2012). Organizations may use awareness to develop distinct ways of dealing with hazards related to project operations (Christenson and Walker 2008).

Organizations that are aware are more likely to be proactive rather than reactive. The project's success is dependent on its timely completion. Awareness enables the team members to complete the project on time. When a team is not aware of the risks associated with the project and regarding the importance of the project, it will negatively affect the project's on-time delivery. Every initiative aims to benefit the organization. As a result, there

is a more excellent knowledge of the project's significance and influence on the organization's market position. Awareness does not only refer to being aware of the importance of the project but also to being aware of one's abilities that may assist the team in meeting its goals. It will be difficult for a project leader to give team members duties if they are unaware of their talents and cultures. As a result, the project manager must be well-versed in the competencies of the project team. Awareness is required for the project manager and team members since it aids in good communication (Richard, 2012).

The leader's attitude toward their team members significantly impacts team performance. According to official studies, employees' good attitude toward their obligations and tasks influences their performance. It helps them fulfil the objectives and goals of assigned projects more efficiently (Webster and Keller, 2004). Another recent study found that their mindset heavily influences the competitive behaviour of project team members. Individuals with a good attitude contribute significantly to the success of a project, whilst those with a bad attitude become roadblocks to achievement (Greyson, 2005). Appropriate behaviour is required to cope with the complexities and overcome project-related obstacles. According to Lovallo and Kahneman, individual behaviour predicts project success (Lovallo and Kahneman, 2003).

Geraldi released another study in 2008, claiming that the conduct of project participants and the project lead determines the project's performance (Geraldi, 2008). Qazi and others stated that the project managers' and project teams' attitudes are crucial in achieving the project's objective and goals (Qazi, Daghfous and Khan, 2021).

Responsible behaviour helps managers achieve the designed objectives and project milestones. According to R.M Beblin (1998), positive, responsible behaviour of the team

positively influences the project's success. Responsible behaviour keeps the team morale, and members motivated, resulting in project success (Lencioni, 2002). Literature continuously highlights more responsible behaviour as a critical requirement for the teams' large and complex projects and a way of overcoming hurdles associated with the project. According to Lovallo and Kahneman, the behaviour of individuals predicts the success of projects (Lovallo and Kahneman 2003). In 2008 Geraldi stated that the behaviour of the project members and the project lead defines the project's success (Geraldi, 2008). The literature further describes responsible behaviour among the project team members as essential in ensuring the project is within the allocated budget and delivered on time to ensure the final product's functionality (Baccarini, 1999).

Recently in 2020, Saad and Zahid presented research in which they stated that awareness is the critical factor that leads higher management to convince the stakeholders of a specific project (Saad, Zahid, and Muhammad, 2020). In 2018, another research presented by Sasu (2008) made a similar statement that awareness is the critical factor that leads to the quality of the project’s product (Sasu, 2018). Mcleod (2012) stated that when the project team members are aware of the importance of the project, it increases the chances for the success of an organization. After implementing the regression analysis, project members areaware of project importance results in project success. Further, in 2020, Saad and his co- researchers, who stated that the success of construction projects highly depends on the awareness among the project team members, presented another research.

In addition, awareness is an antecedent for technical skills; when the project team is entirely aware of the requirement for a project, they can list down the technical skills required for the completion of their project. According to Shehnai, Dvir and Levy, when the higher

management is aware of the project core, it will lead to positive results and the project's success (Shehnar, Dvir and Levy, 2001).

Innovation entails bringing new ideas to the table, which results in new machines (Sarwar et al., 2020). Today's world relies heavily on innovation. As technology advances, consumer expectations rise quickly, and firms must have solid and pragmatic concepts that align with customers' wants and aspirations to meet those expectations (Urbański et al., 2019).

From a micro and macroeconomic standpoint, information is a critical component of production and production (Jonscher, Charles 1983; Forsund 1983). In the previous fifty years, information technology (IT) has advanced. Without this IT, it is nearly impossible for any business to plan a project and other tasks (Afrdita, 2015). More about IT is that it is not just about personal computers and mobile phones.

2.1 Attitude

2.1.1 Conception of Attitude

Attitude is an individual's behaviour towards a specific object, and attitude develops based on different experiences. Attitude is a broad concept and has a different meaning in various fields. For instance, from a marketing perspective, consumers' opinion about the product value and how it helps satisfy customers' needs and demands defines the customer attitude. Similarly, for project management, attitude is defined as the behaviour of every individual involved in the project towards achieving the objectives and goals.

Attitudes are the combination of several processes that run through an individual's mind during a specific issue-related thinking process (Solomon, 2010). Attitude is an internal state of an individual that changes with changing of surroundings, objects, or the people they are living with-these are the basic definitions of attitude. Literature also notices attitude as a vast concept, and from descriptions, and concludes that attitude is the difference in an individual's behaviour in different circumstances. The study uses attitude as the first independent variable to check its impact on project success.

2.1.2 Outcomes of attitude

The leader's attitude toward their team members highly affects their performance. In formal research, it is stated that when employees have a positive attitude towards their duties and task, it influences their performance and help them to achieve the objectives and goals of assigned projects more efficiently (Webster and Keller, 2004). Another research presented states that the competitive behaviour of project team members highly depends on attitude. Members with positive attitudes contribute a lot to a project's success, while individuals with negative attitudes become the hurdles in the path to success (Greyson, 2005). With a positive attitude, people can cope with difficulties more effectively and deal with uncertain situations more effectively. In contrast, people with a negative attitude towards an uncertain situation cannot contribute to the success of a project or an organization.

A positive attitude does not mean there will be no problems in front of the project team, but a positive attitude will help team members deal with the difficulties more efficiently. Therefore, it is essential to have a positive attitude to make the projects successful. So based on my understanding regarding the impact of attitude toward the project success

and existing literature, it is concluded that along with technical skills, it is essential to have a positive attitude while working on a project, it will result in success.

2.2 Responsible Behavior

2.2.1 The conception of responsible behaviour

Responsible behaviour is the act of an individual fulfilling their duties that will lead to a goal or an objective. Responsible behaviour is a broad concept, with different definitions for different fields. Students define responsible behaviour as “When a student fulfils his or her every task on time, i.e., preparation for tests, following the schedule”. Similarly, for a professional or a person working in the industry, responsible behaviour is “when an employee completes all of the tasks assigned to him or her will regarding as a person having responsible behaviour”. In a different field, responsible behaviour has various definitions. Environmental or responsible behaviour is a person's attitude to take strategic actions to handle the radical environmental conversion and keep the environment clean (Sivek & Hungerford, 1990). So, the literature mentioned above is an overview of the literature related to the concept of environmentally responsible behaviour and responsible behaviour. In addition, this factor is used as an independent variable of this study.

A little different from attitude, responsible behaviour paves the way for confidence in work success. It also allows incorporating the demerit of a possible failure and the merit of potential success.

2.2.2 The outcome of Responsible Behavior

Responsible teams and leaders have a positive attitude toward project success and always think about how to overcome the hurdles. Responsible behaviour enables teams to be more focused on achieving the project objectives. According to R.M Beblin, the team's positive, responsible behaviour influences the project's success (Berlin, 1988). Responsible behaviour keeps the team morale, and members motivated, resulting in project success (Lencioni, 2012). When there is a trusty relationship between the members and every individual prefers to share the information and skills that result in project success and enable the team to achieve the objective of the project within the given time limit, within the allocated budget and functionality of the final product is as per planned designed.

On the other hand, when project team members have appropriate professional behaviour, are disciplined, and are focused on the goals set, they cannot achieve many desired goals, resulting in project failure. Some negative unappropriated as hesitate to communicate freely and openly create hindrance in the idea generation process, which reduces the chances of the project's success. So, after analyzing the existing literature on responsible behaviour and how it impacts the success of a project, it concludes that responsible behaviour is a critical aspect that positively influences project triumph. This research derives from the earlier literature, including responsible behaviour as an independent variable to collect the primary data and check the impact of responsible behaviour on project success.

2.3 Awareness

2.3.1 Conception of awareness

Awareness is an individual's understanding of a specific topic or techniques that help in solving problems and help to deal with changes in an environment. It is the mental state of an individual to analyze and feel the activities or to feel special after seeing some patterns. Awareness is a vast concept that has different meanings across fields. In education, awareness is having specific knowledge about a particular topic or idea. In psychology, awareness is an individual ability to analyze his or herself so that they or can take the moral decision for a better future or move in the right direction. Awareness is an evaluation process based on an individual's experiences and knowledge; awareness is one's ability to deal with specific situations. Awareness is the perception of individuals toward certain conditions.

2.3.2 Outcome of awareness

When an individual is aware of their responsibilities and the importance of the project, it will help in achieving the objectives more effectively and effectively. Previous research views organizations' ability to create awareness among its employees regarding the projects relying on the importance of these variables for the industry and their growth. This factor will motivate the employees to perform well, ultimately resulting in the project's success.

Mcleod (2012) stated that it is human nature to acquire knowledge related to the subjects of their interest or they need in their life. It is essential to create awareness among the project member regarding the project's importance. Most of the time, lower management is not aware of the project's primary goals while working on it, and the higher control is aware of the final objectives but does not share the core reason for a project. So, a lack of awareness

in the lower direction results in project failures. According to a report presented in 2014-2015 about Information System Development Project, around 60-70% of the project fails because of the lack of awareness among the project member regarding the project, and only 30-40% because of skills deficiencies this report was about the private companies working on different projects (Mcleod, 2012). So, it is vital to create awareness among the people involved in the project to improve the chances of success. In a project, different risks are involved. It is essential to be aware of all the risks involved to make a project successful while helping members make quality plans to overcome the risks and hurdles associated with the projects.

When the team members are aware of the risks associated with projects and have adequate plans to deal with these situations, it will result in project success. Secondly, the project managers need to be aware of their teams as it will help them understand their team members' nature and the skills a team possesses. Based on the information, project leaders can assign different roles to the team members based on their abilities.

Therefore, after analyzing the existing literature on awareness and its impact on the success of a project, it is concluded that along with technical skills, it is also essential to have a team that is aware of the project outcomes and objectives to make the project successful.

2.4 Innovation

2.4.1 Abstraction of Innovation

Innovation is the process of assembling new stuff. Innovation could be in the form of a physical product or could be an idea. Also, innovation is a challenging process of creating

something that helps solve a societal or an individual problem—innovation results from the struggles and challenges faced by an organization, an individual, or a society. Innovation is divided into two, disruptive innovation and sustaining innovation. Disruptive innovation is to manufacture or create something from scratch. The output of the disruptive innovation is complete. It could be a product or a service.

On the other hand, sustaining innovation is not entirely a new product but rather the improvement in the existing product. Sustaining innovation is preferred when an organization needs to make small product changes rather than something new. To adopt sustainable or disruptive innovation highly depends on the requirement.

Innovation is also a broad concept and has different meanings for experts or people working in various fields. For the automobile industry, innovation is manufacturing a new car in terms of its design, power capacity or average millage. Disruptive innovation is an entirely new design, ability, or efficiency vehicle. While sustaining innovation is defined as "improving the capacity of a vehicle by increasing the capacitors connected in series". Innovation is a moderator between the research's independent and dependent variables in this research.

2.4.2 Outcome of Innovation

When an individual is aware of the project, its success and how it will contribute to the success of an organization, it enhances the chances for the project's success. At the same time, when an individual is provided with the latest and innovative devices or software that help deal with uncertain situations or the complexities of the project, it will further improve

the chances of success. Secondly, when a project team or team member is responsible for project success, and that team or individual is provided with innovative ideas or software, it will result in an enhanced chance of project success.

Research conducted in 2007 stated that around 80% of organizations focus on innovation perspectives (Fagerberg, 2009). Palangkaraya states that innovation help organization to be different in term of product quality and results in a high market share of the organizations (Palangkaraya, 2010). So, to have the upper hand in the market and competitive advantage, organizations need to produce something different and new. Making small changes in the existing product help is called sustainable innovation, which helps organisations build the products at a higher rate. On the other hand, according to researchers, organizations also need to focus on disruptive innovation during their projects to make them more successful and improve the project's success. So, innovation is a crucial component of contributing toward the positive result of a project. Recently, because of the pandemic situation worldwide, it has become difficult for organizations and every individual to communicate, so platforms like Microsoft teams, Tencent, zoom, et cetera are used for smooth communication and the smoothness of ongoing processes. These all platforms are examples of innovation that help the organization and everyone to keep their lives soft.

After deep literature analysis and analyzing real-life facts, innovation is an essential element that contributes to a project's favourable outcome and helps an organisation have a competitive market position.

2.5 Innovation and Performance

The significance to the companies of measuring the performance of creative and innovative activities is without question. A lot of efforts and time has been spent on measures development for assessing initiatives at the national level for informing the policymaking process of governments along with at the company level to inform management activities or action also those stakeholders taking a direct interest in the firm's, or the company's future. However, little agreement exists regarding how and what should be measured (Christensen, 2018). As there has been a paucity of appropriate models or frameworks for the innovation process, no actual agreement exists on how such assessments may inform activities or actions to enhance performance without a yardstick.

Since their definitions disregard several facets associated with the innovation process, the defining line between radical and incremental innovation has seen several reworking attempts throughout time. To be precise, there may be some form of benefit lying in differentiating between three structures of changes: changes occurring during the innovative process or product level (quality, functions, characteristics); changes brought by the innovation process at the level of innovating agent (market position, structure of organization, all competencies); changes brought upon by the innovation during the value chain and thoroughly across it, for example, supplier involvement, or competency of the user.

The differences between radical and incremental innovation are mainly used to specify process or product-level changes. However, the radical-incremental continuum has various other applications as well. Christensen (1992, 1997) conceptualized innovation at artefact level changes and discussed it in two dimensions: the connection between components and

core aspects on one side and in replacement or reinforcement (¼ overturning) of core aspects on the other.

2.6 Technology

2.6.1 Conception of Technology

Information is “a kind of data which has no value until it is processed, extracted and utilized” (Auramo et al., 1988). From a micro and macroeconomic point of view, information has been treated as a critical element in the production and production process (Jonscher, 1983). Moreover, Information technology is closely related to changes in processes (Auramo et al., 2005). It provides the benefits like electronic data interchange (EDI), enterprise resource planning (ERP) (Davenport et al. 2004) used in e-commerce applications, information sharing in an organization (Da Silveira et al. 2006), online order processing (Kull et al., 2007), supply chain integration (Ambrose et al., 2007).

It’s almost impossible for any organization to plan a project and other activities without using this information technology (Afërdita Berisha-Shaqiri, 2015). More about IT is that it is not only about personal computers and mobile phones. New machinery in different sectors like automotive, aviation, textile, and even household appliances comes under information technology (Afërdita Berisha-Shaqiri, 2015). In general, the concept of technology is to automate different organisational functions.

Different machinery is implemented by individuals, professionals, organisations, or societies to ease life. For example, in recent times, the online teachings due to the Coronavirus pandemic lockdown. These platforms used for smooth and undisturbed education for students are the best example to define the technology's role and importance.

2.6.2 Outcome of Technology

The role of technology in shaping a project's success is very crucial. For instance, it is vital to have strong communication between different parties involved in the project. Technology is helping an organization to communicate smoothly via emails, telephone calls, and with the help of online meeting platforms. So, technology is an essential factor that affects a project's success.

For manufacturing industries, the single drive produces a high volume and wide variety of products. All the products are the same in size, dimensions, designs, and colours. At the same time, the robots and the latest machines perform tasks—this use of technology results in high-quality products that lead to consumer satisfaction.

So, technology is an essential factor in the help organizations to manufacture a high-quality products. In the guise of advanced technologies, the consumers' demands are increasing exponentially, and organization needs to adopt the latest technologies to fulfil the needs and desires of the consumers. As mentioned earlier, one factor that defines a project's success or failure is on-time completion. Latest technologies like Gantt chart and schedule software like project management help the project leaders schedule everything more effectively and support an organization complete the project on time. The second factor that defines the success of a research paper is the cost factor. When tasks are performed manually, there is a big chance of human error that results in poor product quality. However, when organizations adopt the latest technologies like robots to perform the task, it results in high-quality products at the first attempt - eliminating the cost of redoing the same job.

Technology helps organizations and team members to share information more smoothly. Implementing the technology enables project documents or any other related

material sharing. Enterprise and material resource planning are examples of technologies adopted by different organisations to schedule their products. They manage their supply chains and software like SAP (System, Application and Product) in data processing used by firms to drive future demands. So, these are the latest technologies that organizations adopt to make the project more successful. To conclude, technology is an important factor to consider in making the projects successful.

2.7 Project Success

2.7.1 The conception of Project Success

A project is a time-limited task assigned to a single person or group of individuals. Project success is defined based on three factors that are on-time delivery of the project, completion of the job within the allocated budget, and the third factor, which explains the success of the project, is the functionality of the final product or the service provided by the company (Hubbard, 2009). Also, project success is how efficiently and effectively all the objectives are achieved. Project efficiency means how organizations or the project team complete the project by utilizing the minimum resources and building good relationships with the internal and external parties involved. Project success is also explained based on three levels. The first level is named Project completion success. This level is on the four factors: the project's scope, quality, planned time and the time taken to complete the project,and the alignment between the allocated and actual budget. This level measures the efficiencyof the project completion, i.e., how well the resources are to be managed to achieve the project's objective. The second level of project success is related to the success of the results.At this level, higher management or the project leaders compare the final product or service

quality with the planned or the designed one. In other words, functionality is the primary concern at this stage of the project successfully. Then comes the third stage, called development success; defined based on the project's output, whether the production is helping an organization to grow or how worthwhile the project is for the organization.

2.7.2 Antecedents of Project Success

This research contains attitude, responsible behaviour, and awareness as antecedents of the project's success. The competitive behaviour of project team members highly depends on attitude. According to the research presented in 2020, it is essential to have an optimistic approach while meeting with the team members and keep a positive attitude as it improves the likelihood of project fulfilment (Villanovau, 2020). Most of the time, lower management is not aware of the project's primary goals while working on it, and the higher control is aware of the final objectives but does not share the core reason for a project. So, a lack of awareness among the lower management results in project failures. 2014-2015 report shows that around 60-70% of projects fail because of the lack of awareness among the project members; 30-40% of failure is due to skills deficiencies. Responsible behaviour contributes to the project's success and failure rates. When the employees or the project team members are responsible for the tasks related to the project, it results in project success. So, responsible behaviour is an essential factor contributing to project success. Early literature and the point made by the author is that attitude, responsible behaviour, and awareness are the study's dependent variables as antecedents of the project's success.

2.8 Summary

After reviewing the literature, the author concludes that most studies are related to attitudes, responsible behaviour, awareness and their effect on consumers' purchase intention, and waste management, which strongly impact the project's success.

As far as is known, past studies lack deficiency to explain how innovation and technology moderate the relationship between attitude, awareness, responsible behaviour, and project success. Most of the previous studies on project success are on developed

countries like America and European countries, but this study centres on collectivist society, i.e., Guinee Bissau, which has never been done before. To the best of my knowledge, very few empirical studies are available on this topic, so this study would reward existing research by granting empirical evidence. Moreover, industries believe in an individual's technical skills and their impact on project success. This research will elaborate on the effects of personal traits (attitude, responsible behaviour, and awareness) in shaping the project's success. This empirical research can be presented as evidence in front of the practitioners so that they can be more focused on these personal traits instead of focusing on the technical skills of their employees.

3 Research Development Framework and Hypothesis

Chapter 3 is divided into two parts: research model and hypothesis development. The first section of this chapter is a conceptual framework that briefly explains the study model; the study presents different researchers' opinions about the variables, the research model's diagram, and the theories that support the theoretical model. The hypothesis development section explains the relationship between variables and prior studies to compose the hypothesis. Based on these assumptions, data is tested, and the conclusion is stressed. The last part of this chapter is based on the hypothesis developments that show the relationship between different variables based on the previous literature and my understanding. In this section, the arguments focus on the relationship between the various models.

Conceptual Framework

3.1 Small and large Projects

Project success or failure plays a vital role in the success of a business, and modern business market position highly depends on the success rate of their projects. Along with technology, management is crucial for the success of a project or an organization. The success of an organization highly depends on its mini projects. Mini or small projects are unique kinds of projects that are low-scaled and low budgets are the requirement for the success of small projects. Other characteristics of such projects include small duration; few hours are required daily to complete the project under construction. Small projects also havesome standard features such as large-scale projects like team diversity, time delivery, activities carried out to achieve the goal and objectives of the project, and most importantly,how to manage the activities to increase the probability of the effectiveness of the project.

Small and medium enterprises are crucial for a country's economic development. From the existing literature, it is concluded that SMEs mainly focus on small projects as they have low finance and other resources that create hurdles in their way (Turner, 2009). Compared to more significant initiatives, small projects face unique obstacles whose planning procedure can be skipped with the work starting immediately (Turner et al., 2010). It is particularly true when projects carry out similar activities to the former projects or tasks, leading to a natural propensity to avoid planning and directly execute the work. Sometimes, critical stages are avoided, taken out of sequence, and in the later stages, if required, these steps are taken and reconsidered as a part of the project. Also, significant failures could arise if the risks associated with a small project are not identified at the beginning of the project (Schwaber, 2004). A small project is not sufficiently planned, and there is a chance that stakeholders are ignored, which results in resentment and modificationsrelated to the project.

Most of the time, problems relating to small projects arise because of inappropriate methodologies used to fulfil the task—similar steps taken for small and large-scale projects. For instance, in large projects like Burh Khalifa, the New York subway system, and interstate subway systems, it was required to work on the planning of these projects for more than one year as a single company could not fulfil any of the projects mentioned above (Abraham, 2019). However, if the manager or the project team spent this much time on its planning, it would not be feasible for a small project. It will waste money, time, and human resources (Papadaki et al., 2019). Therefore, separating the stages or stages involved in small and large projects is essential.

Whether a small or a large project, these factors (attitude, responsible behaviour, and awareness) substantially impact the project's success. Therefore, it is essential to have a team in which every individual strongly impacts project success. Moreover, for a large project, the complexities increase, and to deal with these complexities, an organization must adopt the latest technologies (Papadonikolaki et al., 2019). These technologies help an organization deal with the complexities of the project, and along with the technology, the innovative mindset also strongly impacts the project's success.

Project management is one of the core activities performed within an industry. The outcome of a project has a substantial impact on the organization's performance. An organization needs to have quality project management to make its projects successful. As project success strongly impacts the organisation's market value and affects the market position, it is essential to make efforts to complete the project successfully. From the previous studies, it is extracted that to make the project’s success defines the future of an organization; when an organization has successful projects, it can be more successful and have a great chance to compete with the giant of the market.

On the other hand, an organization having quality projects, innovative ideas, and designed projects precisely aligned with the consumer's demand but cannot achieve the objectives on time results in failure, shrinking market share, and a dark future regarding the market position and competitive advantage (Sauer, Gemino, & Reich, 2007).

With the advent of technologies, consumers' demand for products and services is frequently changing. Consequently, organisations must develop a product according to the consumers’ needs and demands. I can mention an example of Nokia, a market leader until 2007. Nokia manufactured products based on Symbian operating systems (Moslehpour et al.,

2019). In 2009, telecommunication was shifting towards the android and starting new projects as they sensed the changing future and the changing demands of the consumers. Nokia hesitates to change while other organizations keep focusing on the changing environment, which results in the success of the companies like Samsung, HTC, and other telecommunication brands becoming successful.

On the other hand, Nokia kept producing products based on Symbian, resulting in their failures. From this case study analysis, organisations that are not changing themselves with the changing environment result in losses (Moslehpour et al., 2019). Similarly, we are having the example of Apple vs HTC. In 2006 when apple was about to launch the assistive product for its potential consumers. Apple generated this idea, and the company invested a lot in the marketing of the product (Moslehpour et al., 2019). While HTC just copied the idea and manufactured the product before Apple. When the company released the product, the demand for the product was relatively high, and HTC sold the product more successfully. This case study shows that the time to deliver the product is crucial. Apple invested a lot in marketing the product, but in the end, HTC delivered the product before, which resulted in the company's success. These failures are primarily because of the team's irresponsible behaviour, lack of awareness, and negative attitude toward the sudden project objectives.

This research aims to check the direct impact of attitude, responsible behaviour, and awareness on project success. While technology and innovation are used as moderating variables, this model explains the implications of project members’ traits in shaping the project's success. In this study, I use three independent variables, i.e., attitude, responsible behaviour, and awareness, and two moderating variables are innovation and technology. This research contains only one dependent variable, which is project success.

Attitude is the action of a person toward some specific situation combining multiple processes in a person's mind during one issue-related thought process. A person's attitude depends on an individual's knowledge and experience. A project team must have a positive attitude toward the project objective, consider your effort as part of personal and workgroup growth fundamental, give your best, and be responsible, compassionate, and empathetic. Attitude is the study's first independent variable with the target to test its impact on project success. The second independent variable of the study is responsible behaviour. Responsible behaviour is an individual level of sincerity towards their duties for a project. When project members are responsible, it helps in the on-time completion of the project, within the allocated budget, and in a final quality product. This variable is added to the research to check its impact on the project's success. The third independent variable of the study is awareness. Awareness is a vast concept with different definitions depending on the field under which this variable is under discussion. The variable awareness is added in this research to check its impact on project success.

With the recent technological advancement and innovative products, consumers' demands are changing. Technology is simply adopting new machinery and software while developing new products or services. Technology is a moderator of the study. This research will analyse how this variable strengthens the relationship between attitude, responsible behaviour, awareness, and project success.

Innovation is the development of something resulting from new ideas. Innovation is also used as a research moderator to verify how this variable strengthens the relationship between awareness, attitude, and responsible behaviour and project success.

After examining the literature, a few studies focus on these personal traits (attitude, responsible behaviour, and awareness) and their effect on project success. New projects and organisations are multiplying in developing and emerging economies like Guinee Bissau because of the rising demands. The study and market research express that this case has not been explored in Guinee Bissau. For this reason, this study will supply Guinee Bissau vantage points in this specific area.

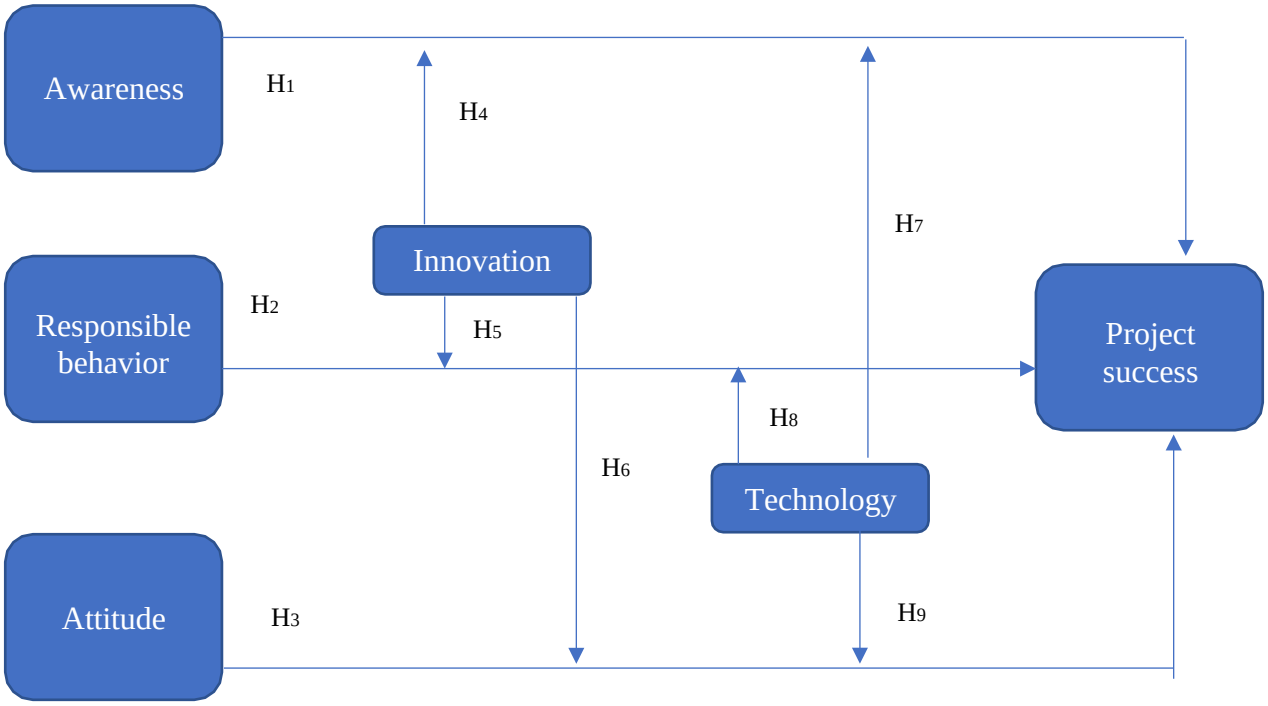

Table 3- 1 Research Model

3.2 Hypothesis Development

This hypotheses development part describes the relationship between independent and dependent variables and preceding research evidence to construct the hypothesis based on which data is tested, and inference is drawn.

3.2.1 The Relation between Awareness and Project Success

When an individual is aware of the results and the importance of success, it positively affects their actions. For project management, it is mandatory to create awareness among the employees or the project members regarding the importance of the project's success. Different risks are associated with the project activities in a project, so the team members need to be aware of these risks. Awareness help organizations to have different strategies to deal with risks associated with project activities (Christenson and Walker 2008). Awareness help organizations to be proactive rather than reactive. As for the project, success depends on the on-time delivery of the project. Awareness enables the team members to complete the project on time. When a team is not aware of the risks associated with the project and regarding the importance of the project, it will negatively affect the project's on-time delivery.

Every project starts with the aim to be beneficial for the organization. That is why the awareness about the project's importance and impact on the organisation's market position. Awareness does not mean being aware of the importance of the project only but also being aware of own skills that can help the team achieve the objectives. When a project lead is not aware of the team members' skills and cultures, it will become difficult for them to assign tasks to the members. Therefore, it is essential for the project lead to be aware of the project team's skills. Awareness is mandatory for the project manager and the team members as it helps communicate effectively (Richard, 2012). Previous research states that to be a successful project manager, one must understand oneself regarding strengths andweaknesses.

Moreover, it is also noted in the literature that awareness help manager determines the direction, whether the manager and the team are moving in the right direction or need to change the strategies (Richard, 2012). Awareness creates confidence among the team members and the project lead (Richard, 2012). Project success depends on the decision made by the project lead. When the project manager is aware of the tasks, objectives, and team members' skills, it results in effective decision-making. Quality decision-making results in project success (Müller and Jugdev, 2012).

So, based on the literature mentioned above and the arguments presented by the authors, awareness is an essential factor that helps in project success. So, this study has hypothesized that:

H1: Awareness is positively associated with the project's success.

3.2.2 The Relationship between Responsible Behavior and Project Success

Responsible behaviour helps managers achieve the designed objectives and project milestones. According to R.M Beblin, the team's positive, responsible behaviour influences the project's success (Berlin, 1988). Responsible behaviour keeps the team morale, and members motivated, resulting in project success (Lencioni, 2002). When team members are aware of their duties or the task assigned to them, and when they are responsible for the responsibilities, it helps complete the project on time. On time, delivery of the project defines the success of a project. When the team members are responsible, it enables managers to complete the project on time. I believe that when the team member is aware of their duties and the activities associated with the responsibilities like the project's timeline, deliverables related to tasks, and progress reports. This awareness is of no use until they have responsible

behaviour; it helps achieve all these objectives. Secondly, we know that not everything goes as planned, and there is always a chance of uncertainty. So, in case of delay and if a member is having irresponsible behaviour, it results in project failure. They do believe that it is not their responsibility to deal with the uncertainties, while the responsible behaviour of the team is always open to delays.

Researchers from previous work state that the teams' large and complex projects must have responsible behaviour, deal with the complexities, and overcome the hurdles associated with projects. According to Lovallo and Kahneman, the behaviour of individuals predicts the success of projects (Lovallo and Kahneman 2003). In 2008 Geraldi indicated that the behaviour of the project members and the project lead defines the project's success (Geraldi, 2008). According to Hubbard, the final product of the project determines the success of the project. Research presented by Flyvbjerg (2014) stated that the final product functionality depends on the attitude and the responsible behaviour of the individuals involved in the project.

From the literature and the author's argument, responsible behaviour is an essential factor that shapes project success. Therefore, this research hypothesized that:

H2: Responsible behaviour is positively associated with project success.

3.2.3 The Relationship between Attitude and Project Success

Attitude is an inherent character of a person that leads individuals to achieve designated goals and objectives in life. The parties involved in the project team's success attitude are crucial for project management and the project. When the team lead has a positive

attitude toward the project aims, objective, and goals associated with the project result in project success.

On the other hand, if the team member or the project manager has a negative attitude toward the project tasks, it will result in the project failure. For instance, with time and ongoing project processes, the project team faces uncertainties in terms of finance or skills required to achieve the project's objectives. At this stage, if the organization has a negative attitude and behaviour in which they think it is not their responsibility to deal with the uncertainties, it will result in project failure. While team and project managers with a positive attitude can deal with delays more effectively and result in project success, it is essential to have a positive attitude towards the tasks and the responsibilities associated with the project because it is mandatory to make the project successful.

With all kinds of projects, there are few associated with it. When the project teams are aware of those risks and are mentally ready to deal with risks results in project success. A positive attitude does not mean there will be no uncertainties, but a positive attitude helps teams deal with uncertainties more effectively. A positive attitude helps project members to be proactive rather than reactive. This pro-activeness led to the project's success, facilitating organizations to hold an expensive position in the market.

The research hypothesises based on the arguments presented by the author and the literature.

H3: Attitude is positively associated with project success.

3.2.4 Moderating Role of Innovation

Innovation means bringing new ideas, which result in new machinery. Innovation is an essential factor in today's world. With the advancement in technologies, consumers' expectations are exponentially increasing. To fulfil the consumers' needs and demands, organizations need to have solid and practical ideas that per consumers' needs and demands. Organizations are developing new products and services to fulfil the consumers' needs and starting new projects. When project managers are aware of the importance of the final product and the completion of their project, it affects the organization's performance. The awareness of the project members is that having innovative ideas will influence the success of a project. Awareness when project members are responsible behaviour also affects the project'ssuccess. According to the previous, it is essential to have responsible behaviour to deal withthe risks associated with the projects (Labuschagne and Brent, 2005). Another research presented in 2014 stated that innovation is a critical factor that leads to project success (Bowers et al., 2014). Responsible behaviour and innovative ideas further strengthen the success of a project. Therefore, innovation can play a positive and moderating role betweenresponsible behaviour and project success.

Attitude is also a critical factor that shapes the project's success. As every project faces different uncertainties, it is important to have a positive attitude toward the project's success to succeed. A positive attitude does not lead to an uncertainties-free project but helps deal with uncertainties. Innovation is also an essential factor, and when team members have a positive attitude plus provided with innovative ideas, it enhances the prospects positive outcome of the project.

So, based on the late literature and point exhibited, the research has hypothesized that:

H4: Innovation positively moderates the relationship between awareness and project success

H5: Innovation positively moderates the relationship between Responsible behaviour and project success

H6: Innovation positively moderates the relationship between Attitude and project success

3.2.5 The moderating role of Technology

Technology is the use of the latest technologies during projects to increase the success of the activities involved in a project. Along with the technology, the project and teams' awareness are essential for a project's success.

When the project team members are aware of the project's importance and how the project's output can help the organization affect the project's success. Along with awareness, when the project teams have the latest technologies like machinery and software required to carry on the required activities to help make the project successful. Therefore, when provided with the latest technologies, a team with effective awareness enhances the chances for project success; in other words, technology strengthens the relationship between awareness and project success. Along with awareness, responsible behaviour is also a significant factor that shapes the success of an organization or company. Previous researchers define the success of a project by its on-time completion, completion within the allocated budget, and the functionality of the final product or services (Frefer et al., 2018). In addition, to achieve all these, it is required to have responsible behaviour (Hubbard, 2009). When the teams have the latest technologies, i.e., project management software like Minitab, project manager, excel,

et cetera., it will enhance the project's success. Based on the literature mentioned, technology is a factor that strengthens the relationship between responsible behaviour and project success.

Attitude is also having an impact on the project's success. According to the previous research, 30-40% of the project success depends on the technical skills of the project team members, while 60-70% of the project's success depends on the team members' attitude (Ambadapudi, 2014). In this research, Ambadapudi referred to the construction projects. So, it is essential to have a positive attitude towards the team and the activities involved in a project, such as proactivity, resilience, commitment, professionalism, and interest in finding solutions. When a team with a positive attitude has the technologies used to help in planning project activities, it will enhance the chance for the project's success.

Based on the ancient literature mentioned above and the arguments presented above, the research hypothesises that:

H7: Technology positively moderates the relationship between awareness and project success

H8: Technology positively moderates the relationship between responsible behaviour and project success

H9: Technology positively moderates the relationship between attitude and project success

4 Research Methodology

Chapter 4 is titled Research Methodology, which explains the research methods adopted in this research. Detailed information about the variables, the questionnaire tool, the data set and how many respondents were necessary to take this research is explained in chapter 4 of this thesis. At the end of this chapter introduction to a few critical statistical tests is added. This chapter discusses surveys, data collection, and statistical methods to function the hypotheses produced. It is achieved by including data collection methods, tool selection, and samples used to gather data. Ultimately, the author conducts several durabilities and validity checks to determine the model's ability to test.

4.1 Research Design

A research design is well-planned to respond to all research questions (Cooper et al., 2005). It is a unique system that defines the associations between variables that produce effective results and directs the selection of references and necessary knowledge (Wiersma et al., 2005). The test method involves two approaches: quantitative and qualitative. In this analysis, a quantitative sectional sample design is introduced. Therefore, utilizing a survey research design with various statistical tools in this analysis effectively identified the association between entrepreneurial expectations and independent variables (Creswell, 2009).

This study is empirical, and for empirical studies, there are two types of analysis, quantitative and qualitative, that can be used depending on the variables used in the study.

This study uses quantitative analysis, collecting primary data from 160 respondents. An online platform is used to design a questionnaire which was then sent to different Senior

Managers from private companies coordinating public and governmental projects who had the experience of working with the project to get the responses. The questions asked in the quantitative analysis create quantifiable and discernible information in digital form. In this study, I have used SPSS to check the results of the designed hypothesis.

4.2 Data Collection and Sample Size

As this study is empirical, data is required from the given sample. To choose an appropriate sample for the analysis and accurate instruments to calculate the test variables in compliance with proven statistical techniques, a researcher may determine the essence of the study, its scale, and settings. The sample is a subset of the given population, which are generalized to the given population (Sekaran, 2006). Data collection depends on the given population. According to the nature of this study, the population is not given, so it was difficult for the author to get the desired sample. Sample size plays a crucial role in analyzing the results of the study.

After looking into this literature, I have concluded that the minimum data required for empirical studies depends on the variables used in the study population, designed questionnaires, and many more. The sample size also depends on the tests researchers must do on the data set. Based on all these theories, we decided to have data from at least 140 respondents, and within the time frame of two months, I was able to collect the data from 160 respondents.

As a researcher, I requested more than 250 Senior Managers to participate in the study, but the retrieving rate was about 64%. Respondents in the survey were working in different private project industries having large contracts with individuals working on governmental

projects. Like agriculture projects, construction projects, IT projects, educational programs, et cetera. These managers were the higher management of the private sector, mainly the team leaders, project managers and officials responsible for getting contracts for different projects.

Participants who agreed to participate were briefed about the study. Anonymity and information confidentiality was assured to the participants to increase the data set reliability and accuracy. A questionnaire was then sent to the respondents, who were requested to fill out the form without any incentives. The respondents returned 160 questionnaires. Before analyzing the data, I eliminated the invalid responses from the data set. Before testing the designed hypothesis, it is mandatory to check the reliability of the data, of which different factors like Cronbach alpha and reduction values are calculated. Regression tests are performed to study the impact of the independent variables and whether their effect is according to the designed hypothesis or not.

Study Variables and Measurements

4.2.1.1 Independent Variables

Awareness is the first independent variable in this study. Awareness is the perception or knowledge of someone about a particular thing (Gafoor, 2012). Awareness is the ability of a persona to know the environment they are living in and how different factors affect them directly or indirectly; to measure this variable, I have used the questionnaire format designed by Bernard J. Jaworski and Ajay K. Kohli in 1993. The second independent variable in this study is responsible behaviour. Responsible behaviour is “the measure to check a person's enthusiasm about some specific tasks”. Responsible behaviour of also defined as the combination of cooperation rules respecting and following the guidelines provided by the

firm managers during the different processes (Yi & Gong, 2013). I used the questionnaires designed by Bernard J. Jaworski and Ajay K. Kohli to measure this variable in 1993. The third independent variable used in this research study is attitude. Attitude is an individual's behaviour towards a specific object, and attitude develops based on different experiences. Attitude is built on three components: beliefs, an individual’s feelings, and the intention of a person toward anything (Peter, 2018). I used the questionnaires designed by Bernard J. Jaworski and Ajay K. Kohli to measure this variable in 1993.

4.2.1.2 Moderating Variables

This study consists of two moderators, technology and innovation. Technology is the use of the latest techniques or machines to ease or improve the productivity of an individual or a firm. Also, technology is the implementation of the latest machines to speed up operations and perform jobs with more efficiency and accuracy. Innovation is the second moderating variable used in this research. Innovation is described as manufacturing or bringing something new to society. Innovation is manufacturing a new product that is helpful for some specific community.

4.2.1.3 Dependent variable

Project success is the dependent variable in this study. Project success is set out as the proper fulfilment of procedures and approach to achieve the objectives related to the project and make the outcome. Previous research defines project success as the on-time delivery of the project by utilizing the given resources. I used the questionnaires designed by Bernard J. Jaworski and Ajay K. Kohli to measure this variable in 1993.

The following table 4.1 illustrates the variables and their measurement.

4.2.2 Table 4- 1 Variable and Measurements

Variables	Items	Authors
Awareness	**6**	Bernard J. Jaworski and Ajay K. Kohli in 1993
Responsible Behavior	**4**	Bernard J. Jaworski and Ajay K. Kohli in 1993
Attitude	**3**	Bernard J. Jaworski and Ajay K. Kohli in 1993
Technology	**4**	Bernard J. Jaworski and Ajay K. Kohli in 1993
Innovation	**5**	Bernard J. Jaworski and Ajay K. Kohli in 1993
Project Success	**3**	Bernard J. Jaworski and Ajay K. Kohli in 1993

4.3 Data Analysis

In this paper, the statistical analysis software SPSS is used as the instrument of data analysis to analyze the collected online questionnaire data. Statistical analysis will base on the following methods: descriptive statistical analysis, factor analysis, analysis of reliability and validity, correlation analysis, and regression analysis.

4.3.1.1 Descriptive statistical analysis

detailed information about the object is calculated to understand the questionnaire using the sample mean, standard deviation, maximum mathematical statistic value of the sample data, minimum value, and variance, or the like to describe the sample characteristics.

4.3.1.2 Factor Analysis

Factor analysis is found hidden in a common factor representative plurality of variables. These variables have a common factor as an essential feature, so that a plurality of complex research into several simple study factors, factor analysis can be on the assumption that relationships between variables are tested.

Factor analysis may achieve two goals: a test questionnaire construct validity; the other dimensions form latent test variables—Paper SPSS19.0 for data analysis tools as factor analysis. Factor analysis determines whether the sample, first by spherical KMO test and inspection, typically when KMO test indicator value of 0.5 to 1, indicates that it is acceptable when the spherical test is a significant level of less than 0.01, the data is proved for factor analysis. The second option is applying the composite reliability method, AVE, to check the analysis validity.

4.3.1.3 One-Way ANOVA

Further, One-Way ANOVA was tested to identify whether demographic factors like Age, Gender and Education are controllable or not. The results are reported in Chapter 5 of the thesis. Further, correlation analysis was applied to detect association among variables and any possibility of multicollinearity.

The doubt of multicollinearity is further verified via the variance inflation test (VIF) to avoid discrepancies in regression analysis. I finally applied stepwise multiple regression to test the study hypotheses. The results are highlighted in chapter 5 of the thesis.

4.3.1.4 Results

Following the analysis, the data set is drawn by implementing the regression analysis adj R square methods whether the respondents supported these hypotheses. These hypotheses are designed based on the existing literature, and there is a strong chance that these will be accepted. Results or conclusions can be derived based on the results of the statistical review.

4.3.1.5 Survey Platform

Google form was used to create the survey. The questionnaire was distributed among respondents online to reach as many people as possible between 18 years and 40 years. The online platforms used for distributing the questionnaire include google forms, email, WhatsApp, Instagram, and Facebook. All respondents were asked to fill out and share the questionnaire link with their family, friends, and colleagues. Finally, a minimum of 200 relevant responses will be collected and analysed.

This survey will be using a seven-point Likert - type scale. This simple scale guarantees more responses (Impellizzeri et al., 2007). On the seven-point Likert scale, one indicates "I strongly disagree" and 7, "I strongly agree." Since most previous research in this area used a Seven-point scale, the comparison was another explanation for the selection.

5 Result Analysis

This chapter contains various results conducted on SPSS software to analyze the data collected from the respondents. For instance, this chapter includes the demographics, descriptive analysis, Correlation analysis, Variance Inflation, Discriminatory test, Reliability analysis, Factor analysis, composite reliabilities, and the regression analysis of the data set. The chapter ends with the results summary.

5.1 Descriptive Statistics

Table 5-1 offers details of descriptive study variables. The mean of the first independent variable, Awareness, is 5.8359, which means most individuals agree and strongly agree that Project Success is relevant to their awareness level. The difference from the mean is 0.77914.

The mean of responsible behaviour is 5.8547, implying that most respondents agreed that Project Success is affected by responsible behaviour. The variation from the mean is 0.74736. The average of technology is 5.8021, meaning respondents stated that the deviation from the mean between agreeing and agreeing is 0.79858. Similarly, the first moderator technology has a mean of 5.8021, and the deviation from the mean is 0.79858 plus the mean of the second moderator, innovation, 5.8850 and the standard deviation from the mean is 0.71763. The dependent variable of this study is Project Success, with a mean of 5.7875 and a standard deviation is 0.88728. A Likert scale of 1-7 used for the analysis is shown in the chart below. The chart shows that the minimum value for all the variables is two (2) while the maximum is 7. Therefore, the range is 5 for every variable.

Table 5.1 shows the details of the descriptive study variables.

5.1.1 Table 5- 1 Descriptive analysis

Predictor	N	Mean	Std. Deviation	Minimum	Maximum	Range
Awareness	160	5.8359	.81844	2	7	5
Responsible Behavior	160	5.8547	.74736	2	7	5
Attitude	160	5.9859	.63707	2	7	5
Technology	160	5.8021	.79858	2	7	5
Innovation	160	5.8850	.71763	2	7	5
Project Success	160	5.7875	.88728	2	7	5
N = 160						

5.2 Correlation analysis

The table below shows the correlation analysis of the variables involved in this study. Correlation is the degree of similarities among the variables used in the study. The table below shows a strong correlation between awareness and the dependent variable, Project Success (r = .616** and p = significant). Similarly, there is a strong correlation between the second variable, responsible behaviour, and the dependent variable; there is a strong association among these variables (r=0.781, p= significant). Moreover, in Table 5.2, it is noted that the degree of association between the technology (moderating variable) and the dependent variable, Project Success is very high (r= 0.734 and p = significant). There are two moderators used in this study, which are innovation and technology. The correlation between

Innovation and Project Success is robust, and the relationship is also significant (r= 0.779** p = significant).

The correlation among the independent, moderating, and dependent variables is very high, so there is a need to check the multicollinearities among these variables. To detect the multi collinearities variance inflation test will be performed after correlation, as shown in Table 5.2.

5.2.1 Table 5- 2 Correlation analysis

	Gender	**Firm Age**	**Firm Size**	**AWR**	**RSB**	**ATd**	**Tch**	**INN**	**PS**
Gender	1								
Firm Age	-.051	1							
Firm Size	.049	-.042	1						
AWR	-.032	-.002	.046	1					
RSB	.021	.117	.042	.706**	1				
ATd	-.036	.095	.068	.278**	.410**	1			
Tch **Th chapter titled Resul**	.059	.025	-.020	.689***	.703**	.430**	1		
INN	.036	-.025	.056	.717**	.801**	.406**	.763**	1	
PS	.042	-.049	.045	.616**	.781**	.276**	.734**	.779**	1

"AWR" = "Awareness", "RSB" = "Responsible Behavior", "ATd" = "Attitude", "Tch" = "Technology", "INN" = "Innovation", "PS" = "Project Success"

*p<.1 **p<0.05, ***p<0.0

5.3 Covariance Analysis

Table 5-3 shows the co-variance among the variables included in the research model. The table shows that most co-variance values are less than 0.5, meaning there is a minimal chance for multi-collinearities. However, the co-variance among responsible behaviour and project success, technology, and project success, is higher than 0.5, which is why there is a chance for multi-collinearity and to detect the multi-collinearity, the author will run the variance inflation test. Table 5.3 explains the Covariance Analysis.

5.3.1 Table 5- 3 Covariance Analysis

Predictors	AWR	RSB	ATd	Tch	INN	PS
AWR	.670	.432	.145	.450	.421	.447
RSB	.432	.559	.195	.420	.430	.518
Atd	.145	.195	.406	.219	.186	.156
Tch	.450	.420	.219	.638	.437	.520
Inn	.421	.430	.186	.437	.515	.496
PS	.447	.518	.156	.520	.496	.787

"AWR" = "Awareness," "RSB" = "Responsible Behavior," "ATd" = "Attitude", "Tch" = "Technology", "INN" = "Innovation", "PS" = "Project Success"

*p<.1 **p<0.05, ***p<0.0

5.4 Variance Inflation

The variance inflation test is carried out to check the multi=collinearities among the variables. If the value of VIF is greater than 10, there is multi-collinearity among the variables; otherwise, there is no multi-collinearity among the variables.

Table 5.4 shows the Variance inflation.

5.4.1 Table 5- 4 Variance Inflation

Variables	Variance inflation (VIF)
Awareness	2.880
Responsible Behavior	3.240
Attitude	1.286
Technology	2.832
Innovation	**3.777**

5.5 Reliability

Reliability is one of the first steps before moving toward hypothesis testing through regression analysis. In SPSS, the reliability of the data set by focusing on the Cronbach alpha value. According to the standards, if the Cronbach alpha value is greater than 0.6, data is good for the analysis. If the value of Cronbach alpha is greater than 0.7, that means the data is exceptional for further analysis, as demonstrated in Table 5.5.

5.5.1 Table 5- 5 Reliability

Variable	Cronbach's alpha
Awareness	0.837
Responsible Behavior	0.840
Attitude	0.772

Technology	0.792
Innovation	0.866
Project Success	0.889

5.6 Validity of Instruments

The validity test aimed to check the data set's validity and reliability. Here it depends on the value of the construct reliability. The Table following table 5.6 shows the validity of the instrument.

5.6.1 Table 5- 6 Validity of Instrument

Variables	**Items**	**Factor Loading**	**Composite Reliability**
Awareness	A1	.817	
AVE = 0.673	A2	.811	0.892
	A3	.799	
	A4	.854	
Responsible	RB1	.793	
Behavior	RB2	.815	0.894
AVE = 0.678	RB3	.842	
	RB4	.842	
	ATd1	.757	
Attitude	ATd2	.784	0.854
AVE = .594	ATd3	.788	
	ATd4	.752	

Technology AVE = 0.713	Tch1	.835	0.881
	Tch2	.868	
	Tch3	.829	
Innovation AVE = 0.653	INN1	.802	.904
	INN2	.834	
	INN3	.783	
	INN4	.822	
	INN5	.798	
Project Success AVE = 0.707	PS1	.887	.923
	PS2	.871	
	PS3	.847	
	PS4	.816	
	PS5	.780	

5.7 Regression Analysis

This study focuses on 3 independent variables (Awareness, Responsible Behavior), 2 moderators (Innovation and Technology), and one dependent variable (Project Success). Tables 5-7 show the direct impact of independent variables on the dependent variable. Table 5-7 shows that the first independent variable, Awareness, has a positive and significant impact on the dependent variable (β=.669*** p< 0.001). Similarly, the second independent variable, competencies, has a positive and significant impact on adopting responsible behaviour (β=.946*** p<0.001). Moreover, the third independent variable, complexities, has a positive and significant impact on the depend on the variable, Project Success (β=.393***, p<0.01). The last independent variable, Technology, has a positive and significant impact on the dependent variable adoption of e-marketing (β= 0.807***, p <0.01).

Table 5.7 describes the Regression Analysis.

5.7.1 Table 5-7 1 Regression analysis

Predictor	Model 1	Model 2	Model 3
Gender	.198	.061	.159
Firm Age	-.072	-.230	-.118
Firm size	.006	.002	.010
AWR	.669***		
RsB		.946***	
ATd.			.394***
Adjusted R^2	.369	.620	.061
R^2	.385	.630	.084

"AWR" = "Awareness", "RsB" = "Responsible Behavior", "ATd." = "Attitude", "Tch" = "Technology",

*p<.1 **p<0.05, ***p<0.01

Two moderators' variables used in this study are Technology and innovation. The interaction effect of these moderating variables is shown in the table below. The moderating effect of Technology is positive and significant in the relationship between awareness and Project Success (β= 0.099* p= significant). Similarly, the technology positively and significantly moderates the relationship between responsible behaviour and Project Success (β= 0.149** p= important). Moreover, the technology positively moderates the relationship between the independent variable, Attitude, and the dependent variable (β= 0.148** p= significant). The second moderating variable of the study is innovation.

The second moderator variable is innovation. The following table shows this variable's moderating effect on the direct relationship between the three independent variables (Awareness, Responsible Behavior, and Attitude) and the dependent variable, Project Success. Table model 4 shows that innovation positively and significantly moderates the relationship between Awareness and Project Success (β= 0.76** p= significant). Similarly, the moderating effect of innovation is also significant and positive for responsible behaviour and Project Success (β= 0.122** p= significant). Innovation also positively moderates the relationship between attitude and Project Success (β= 0.328** p= significant).

Predictor	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Gender	.259	.122	.270	.051	.001	.014
Firm-Age	-.068	-.166	-.039	-.035	.130	.093
Firm-Size	.027	.020	.028	.002	.003	-.002
Awr	-.250			-.249		
RsP		-.090			-.045	
Atd			-.843*			.796***
Tch	.125	-.386	.031			
Inn				.464	-.137	.826*
AWR*Tch	.099*					
RsP*Tch		.149**				
Atd*Tch			.148**			
AWR*INN				.76*		
RSP*INN					.122*	
ATd*INN						.328***
Adjusted R^2	.567	.696	.554	.603	.679	.652
R^2	.586	.708	.571	.618	.691	.665

"Awr" = "Awareness", "RsP" = "Responsible Behavior", "Atd" = "Attitude", "TCH" = "Technology", "INN" = "Innovation"

*p<.1 **p<0.05, ***p<0.01

The following illustration explains the models in the table above

PS = α+ βAwr + βGender+ βFirm_Age+ βFirm_Size..... (1)

PS = α+ βAwr + βRsp+ βGender+ βFirm_Age+ βFirm_Size..... (2)

PS = α+ βAwr + βRsp+ βAtd+ βGender+βFirm_Age+ βFirm_Size……. (3)

PS = α+ βAwr + βRsp+ βAtd+ βTch+ βGender+ βFirm_Age+ βFirm_Size……. (4)

PS = α+ βAwr + βRsp+ βAtd+ βTch+ βInn+ βGender+ βFirm_Age+ βFirm_Size…… (5)

PS = α+ βAwr + βRsp+ βAtd+ βTch+ βInn+ $\beta_{Awr*Tch}$ + βGender+ βFirm_Age+ βFirm_Size. (6)

PS = α+ βAwr + βRsp+ βAtd+ βTch+ βInn+ $\beta_{Awr*Tch}$ + Rsp_{*Tch} + βGender+ βFirm_Age+ βFirm_Size…… (7)

PS = α+ βAwr+ βRsp+ βAtd+ βTch+ βInn+ $\beta_{Awr*Tch}$+ $\beta_{Rsp*Tch}$ + $\beta_{Atd*Tch}$ + βGender+ βFirm_Age+ βFirm_Size ..... (8)

$PS = \alpha + \beta Awr + \beta Rsp + \beta Atd + \beta Tch + \beta Inn + \beta Awr*Tch + \beta Rsp*Tch + \beta Atd*Tch + \beta AWR*INN + \beta Gender + \beta Firm\_Age + \beta Firm\_Size$ ..... (9)

$PS = \alpha + \beta Awr + \beta Rsp + \beta Atd + \beta Tch + \beta Inn + \beta Awr*Tch + \beta Rsp*Tch + \beta Atd*Tch + \beta AWR*INN + \beta Rsp*INN + \beta Gender + \beta Firm\_Age + \beta Firm\_Size$…… (10)

$PS = \alpha + \beta Awr + \beta Rsp + \beta Atd + \beta Tch + \beta Inn + \beta Awr*Tch + \beta Rsp*Tch + \beta Atd*Tch + \beta AWR*INN + \beta Rsp*INN + \beta Atd*INN + \beta Gender + \beta Firm\_Age + \beta Firm\_Size$…… (11).

5.8 Summary

Table 5.8 below shows the summary of the tested hypothesis

5.8.1 Table 5-7 2 Summary of the tested hypothesis

	Hypothesis	Supported/Not supported
H_1	Awareness of individuals can shape their intention toward Project Success.	Supported
H_2	Responsible behaviour of individuals can shape their intention toward Project Success.	Supported
H_3	The attitude of individuals can shape their intention toward Project Success.	Supported

H_4	Technologies moderates the relationship between awareness and the Project Success	Supported
H_5	Technologies moderates the relationship between responsible behaviour and Project Success.	Supported
H_6	Technologies moderates the relationship between attitude and Project Success.	Supported
H7	Innovation moderates the relationship between awareness and Project Success.	Supported
H_8	Innovation moderates the relationship between responsible behaviour and Project Success.	Supported
H_9	Innovation moderates the relationship between attitude and Project Success	Supported

At the outset of this study, it is hypothesized that awareness, responsible behaviour, and attitude influence Project Success. The data was collected from 160 employees working in different industries to test the hypothesis.

The first hypothesis was that “awareness positively influences the Project Success”. in 2018, research by Lakshmi Shankar stated that if an individual is aware of the impact of project success on firm performance, then it will influence the individual to be proactive and to work hard. Therefore, our first hypothesis aligns with the research presented by Lakshmi Shankar. Similarly, this second hypothesis was about the positive impact of responsible behaviour on Project Success. Respondents stated that having a responsible attitude is

required to deal with Project Success effectively. The third hypothesis is about the impact of perspective on Project Success, and the respondents supported this hypothesis.

Technology and innovation are both used as a moderator of the study. After applying the regression analysis to the data set, it is concluded that the interaction impact of the awareness and the technology is significant to the Project's Success. That is to say, the relationship between awareness and Project Success is the strength of the technology. Moreover, from the regression and analysis of the given data set, it is concluded that the interaction impact ofthe responsible behaviour and the technology is significant the Project Success. Similarly, itwas hypothesized that the technology strengthens the association between attitude and Project Success. In addition, statistical analysis shows that this was true. The secondmoderator of the study is innovation. The study aims to check the role of innovation and whether it strengthens the relationship between awareness, responsible behaviour, attitude, and Project Success. After running the statistical analysis, it is concluded that higher innovation strengthens the relationship between all the independent variables. It is consensusthat it will be better if consumers know the importance of Project Success and haveinnovative ideas to manage the project success.

Only awareness can let them understand the importance of Project Success, but when they have innovative machinery and ideas, they will practically manage It. Similarly, when industries have the latest technology and equipment, it will become easier for them to manage their projects. Only awareness, responsible behaviour, and a positive attitude toward the project's success will not enable it effectively. Therefore, from the discussion above, the author concludes that innovation and technology play a crucial role in strengthening the relationship between awareness, responsible behaviour attitude, and Project Success.

6 Discussion

The last chapter of the dissertation describes the conclusion drawn by the author based on the results. This chapter also contains the practical and theoretical contribution of this study, research limitations, and the future directions of the research. In the end, one paragraph conclusion is presented to end the dissertation**.**

This chapter is based on the analysis and practical impaction of the research thesis. How the results are in support of the previous research is explained in this chapter.

6.1 Analysis

This research proposal is to check the effect of awareness, responsible behaviour, and attitude in defining the project's success; this research will also explore the moderating role of innovation and technology on the relationship between awareness, responsible behaviour, attitude, and the project success.

H1: Awareness is positively influencing the project's success

The first hypothesis of this research is that "*Awareness is positively influencing the project success*". In 2012 research was conducted by Mcleod (2012), which stated that when the project team members are aware of the importance of the project, it increases the chances for the success of an organization. After implementing the regression analysis, project members are aware of project importance results in project success. Further, in 2020, Saad (2020) and his co-researchers, who stated that the success of construction projects highly depends on the awareness among the project team members, presented another research.

Again, this hypothesis aligns with the research presented in 2020. According to the Nawaz project, awareness and planning are the two crucial factors contributing to a project's success. Among these two factors, awareness is incorporated in this research, and statistical results show the significant impact of awareness on the project's success. When a project team or an organization is aware of the risk associated with the processes involved in a project, the firm can take proactive measures to deal with such situations and lead an organization to success. In 2012 research conducted by Mcleod, managers should acquire complete knowledge regarding the processes carried out during the project to take proactive action to strengthen the project's success. This research is entirely in line with the current study result that awareness is a crucial factor that could contribute to the success of a project.

Further, previous research stated that technical skills are essential, and every individual in a project team should have enough skills to make the project successful. But this study illustrates that only technicalities are not crucial for the company's success, but also awareness among the project teams regarding project management is essential. In his research, Olanrewaju (2021) and his co-researchers recently stated that awareness and the information-building process are critical factors to project success. In addition, awareness is an antecedent for technical skills; when the project team is completely aware of the requirement for a project, they can list down the technical skills required for the completion of their project. According to Shehnai, Dvir, and Levy, when the higher management is aware of the project core, it will lead to positive results and the project's success (Shehnar, Dvir, and Levy, 2001).

Our designed hypothesis aligns with the previous research based on the literature mentioned above. The organization should focus on creating awareness among the team members regarding the project to take strong measures.

The table below shows the previous research alignment with our designed hypothesis

Authors	Year	Research Theme
Mcleod	2012	Awareness among project team members is critical for project success
Saad et al.,	2020	Construction projects highly depend on the awareness
Anu	2017	Emotional intelligence and awareness are critical factors for the success of a project
Shehnar, Dvir and Levy	2001	Awareness is the critical factor for the success of projects success

H2: Responsible behaviour *is positively associated with the project's success*

After awareness, the second hypothesis of this research is "Responsible behaviour *is positively associated with the project success.*" According to the prior literature, academics argue that teams must exhibit more responsible conduct for large and complicated projects. Appropriate behaviour is required to cope with the complexities and overcome project-related obstacles. According to Lovallo and Kahneman, individual behaviour predicts project success (Lovallo and Kahneman, 2003). Geraldi released another study in 2008, claiming that the conduct of project participants and the project lead determines the project's performance (Geraldi, 2008). Managers that exhibit responsible behaviour are more likely to meet project objectives and milestones. According to R.M Beblin, good team responsibility positively impacts project success (Beblin, 1988). Responsible behaviour raises team morale and keeps members engaged, which leads to project success (Lencioni, 2002). Geraldi

released another study in 2008, claiming that the conduct of project participants and the project lead determines the project's performance (Geraldi, 2008). According to Hubbard, the project's result defines its success. According to a study by Flyvbjerg in 2014, the final product's functioning depends on the person's mindset and responsible conduct in the project.

In 2011, in another research presented by Chen and his co-fellows, responsible behaviour in any field strongly contributed to the project's success (Chen et al., 2011). Based on all this literature, the author concludes that many previous types of research support this research hypothesis.

The table below summarizes previous research supporting this study's results.

Authors	**Year**	**Research Theme**
Lovallo and Kahneman	2003	Appropriate behaviour is significantly related to the project's success.
Geraldi	2008	Project success is affected by responsible behaviour.
Beblin	1988	Responsible behaviour is one of the critical factors for the success of a project
Lencioni,	2002	Responsible is the critical factor for the success of projects success
Chen et al.,	2011	The behaviour of the individuals is critical to the success of a project

H3: Attitude is positively associated with the project's success

The third hypothesis of this research is that “attitude is positively associated with the project success”. This research stated that only the technical skills are insufficient for the organisation's success; attitude and behaviour toward the goals and objectives improve the chance for the success of information systems projects. The leader's attitude toward their

team members significantly impacts team performance. According to official studies, employees' good attitude toward their obligations and tasks influences their performance. It helps them fulfil the objectives and goals of assigned projects more efficiently (Webster and Keller, 2004). Another recent study found that their mindset heavily influences the competitive behaviour of project team members. Individuals with a good attitude contribute significantly to the success of a project, whilst those with a bad attitude become roadblocks to achievement (Grayson, 2005).

Based on this research mentioned above, attitude is an important aspect that contributes to the success of a project. The table below summarizes previous research that supports the results of this study.

Authors	Year	Research Theme
XJ et al.,	2008	A positive attitude is significantly related to the project's success.
Webster and Keller	2004	Employees' attitudes contribute to the success of projects.
Grayson,	2005	Attitude is one of the critical factors for the success of a project

H4: Innovation positively moderates the relationship between awareness and project success

H5: Innovation positively moderates the relationship between Responsible behaviour and project success

H6: Innovation positively moderates the relationship between Attitude and project success

Innovation entails bringing new ideas to the table, which results in new machines (Sarwar et al., 2020). Today's world relies heavily on innovation. As technology advances,

consumer expectations are rising quickly, and firms must have strong, effective concepts that align with customers' wants and aspirations to meet those expectations (Urbański et al., 2019). When project managers understand the significance of the product and the completion of their project, it impacts the organization's performance. Along with being aware of the project participants' awareness, having creative ideas will affect the project's chances of success.

Based on this literature, our hypothesis is significantly supported.

Authors	Year	Research Theme
Sarwar et al.,	2020	when a team is aware and has innovative ideas, it improves the chances of success
Urbański et al.,	2019	when a team is well appropriate behaviour and has innovative ideas, it improves the chances of success
Naeem	2018	when a team is a good attitude and innovative ideas, it improves the chances of success

H7: Technology positively moderates the relationship between awareness and project success

H8: Technology positively moderates the relationship between responsible behaviour and project success

H9: Technology positively moderates the relationship between attitude and project success

Perrow (1967) characterises Information technology as a collection of systems utilised to accomplish tasks. From a micro and macroeconomic standpoint, information is a

critical component of production (Jonscher, 1983). In the previous fifty years, information technology has advanced. Without this Information technology (IT), it is nearly impossible for any business to plan a project and other tasks (Berisha-Shaqiri, 2015). More about IT is that it is not just about personal computers and mobile phones.

When an organization has technical advancement awareness, responsible behaviour, and a positive attitude, it will increase the chances of the project's success. Past literature characterises the project’s success by its timely completion within the budgeted amount and the usefulness of the completed product or services. Furthermore, responsible behaviour is essential to attain all of this (Hubbard, 2009).

When teams use cutting-edge technology, such as project management software such as Minitab, Project Manager, Excel, and others, the chances of the project's success increase, according to the literature cited in, technology is a factor that strengthens the association between responsible conduct and project success.

Authors	**Year**	**Research Theme**
Daintith, John, ed.	2009	when a team is aware and has the latest technologies and ideas, it improves the chances of success
Perrow Charles,	1967	when a team is well appropriate behaviour and has the latest technologies and ideas, it improves the chances of success
Afrdita	2015	when a team is a good attitude and has technical advancement ideas, it improves the chances of success

So, this is a brief discussion of the results we got from the statistical analysis.

7 Conclusion and Implications

This chapter grounds the conclusion and the theoretical and practical implications of this research study. Theoretical implication elaborates how this study enriches the existing literature and how the earlier key concepts are changing. In the practical implication section, this research study explains how the practitioners can implement the output of this study to solve the problems they are facing.

7.1 Conclusion

This study checks the impact of attitude, awareness, and responsible behaviour of individuals in shaping the project success with two moderating variables, i.e., innovation and technology. Based on the research model adopted for this research model, our first research question was:

What is the impact of awareness on the project's success?

To answer this question author has collected data from employees working indifferent industries in Guinee Bissau industries. A questionnaire technique is employed to collect data for this research, and after collecting data, the author has used statistical methodsregression. In addition, the results state that awareness positively and significantly impacts the project's success. It is obvious that individuals can perform better when they are aware ofthe project requirements. For example, the most critical skill for a software project is technicalities. For such kinds of products, a team requires software skills. Therefore, before designing a team, organizations should be aware of the skills of their employees, as it will help the company to select the individuals with the skills needed to complete the project. Thatis why it is vital to have complete awareness among the employees regarding the project and

the skills required to complete the project. In 2020, Saad and Zahid presented research in which they stated that awareness is the critical factor that leads higher management to convince the stakeholders of a specific project (Saad, Zahid, and Muhammad, 2020). Similarly, Nawaz and Arsalan stated that higher management must be aware of the skills required for the project's success to complete the project on time and ensure the functionality of the project output (Nawaz and Arsalan, 2020).

When an organization is unaware of the skills required for successful project completion, it leads to project failure and negatively impacts the company's financial position (Nawaz and Arsalan, 2020). According to Sasu (2018), awareness is the critical factor that leads to the quality performance of the project’s product. In 2021 another research was based on the building of information modelling by Olanrewaju, Kineber, Chileshe, and Edwards in which they stated that when organizations have a project team that has the required skills for the project, led to quality completion of the project (Olanrewaju, Kineber, Chileshe, 2021). When a project team or an organization is aware of the risk associated with the processes involved in a project, it enables the firm to take proactive measures to deal with such situations and leads an organization to success. When a person is aware of outcomes and the significance of the achievement, it benefits their behaviour. Project management needs to raise awareness among employees or project participants about the importance of project success. Different hazards link with project activities in a project; thus, team members must be aware of these risks. A previous study has found that to be a competent, effective project manager; one must first understand oneself in terms of strengths and shortcomings.

Furthermore, it is claimed in a prior study that awareness helps managers identify the direction, whether the manager and the team are heading in the right way or whether the

tactics need to be changed (Richard, 2012). Team members and the project manager gain confidence due to their increased awareness (Richard, 2012). The choice taken by the project lead determines the success of the project. Effective decision-making occurs when the project manager is well-versed in the team members' duties, objectives, and talents. Project success results from sound decision-making (Muller and Jugdev, 2012).

Organizations may use awareness to develop distinct ways of dealing with hazards related to project operations (Christenson and Walker 2008). Organizations that are aware are more likely to be proactive rather than reactive. The project's success is dependent on its timely completion. Awareness enables the team members to complete the project on time. When a team is not aware of the risks associated with the project and regarding the importance of the project, it will negatively affect the project's on-time delivery. Every initiative starts with the intention of benefiting the organization. As a result, there is a greater knowledge of the project's significance and influence on the organization's market position. Awareness does not only refer to being aware of the importance of the project but also to being aware of one's abilities that may assist the team in meeting its goals. It will be difficult for a project leader to give team members duties if they are unaware of their talents and cultures. As a result, the project manager must be well-versed in the competencies of the project team. Awareness is required for the project manager and team members since it aids in good communication (Richard, 2012).

In addition, on the other hand, when the project teams are not aware of the project requirements, it leads to financial problems for the company. Moreover, the project performance centres on the employees’ skills and performance who are working on that project, so it is evident that when a team is unable to perform well while working on a project,

it will impact the project performance. The statistical analysis supports the literature while showing the positive and significant impact of awareness of project success. The regression analysis shows that the significant value is less than 0.1 ($p<0.1$), and the value of unstandardized coefficient beta is positive.

To summarize, the statistical results and the previous literature state that awareness significantly and positively impacts the project's success. To answer our first research question, I can note that "*there is a positive and significant impact of awareness on the project's success.*"

How do responsible behaviour shapes project success?

The second research question associated with this study is to analyse the impact of responsible behaviour on project success. During the first half of this research dissertation, the author examines the thematic and theoretical research to support these arguments and to make the basis strong for this research question. In 2002, Lencioni stated that when the project team members have good skills and responsible behaviour, it will boost the team's morale, and project members will always seek creative ideas to ensure successful project completion (Lencioni, 2002).

Responsible behaviour enables project members to be proactive and always look for a better options to enhance the success of the projects. Further, in 1988 another research presented by Berlin by which author also emphasized the impact of responsible behaviour on project success. According to Berlin, providing the latest technologies to the employees working on a technical project is essential. In addition, it is even more critical to create a responsible attitude in the project team because that strongly impacts the project's success

(Beblin, 1988). Previous work has continuously highlighted that it is crucial to create responsible behaviour among the project team members to ensure the project's on-time delivery is within the allocated budget and the final product's functionality (Baccarini, 1999). According to the prior literature, academics argue that teams must exhibit more responsible conduct for large and complicated projects. Appropriate behaviour is required to cope with the complexities and overcome project-related obstacles. According to Lovallo and Kahneman, individual behaviour predicts project success (Lovallo Kahneman, 2003). Geraldi released another study in 2008, claiming that the conduct of project participants and the project lead determines the project's performance (Geraldi, 2008).

Along with awareness, responsibility is also essential to the project's success. To empirically analyse responsible behaviour's impact on project success, the author has collected data from professionals working in different industries in Guinee Bissau. In this section, the arguments focus on the relationship between the various models. In this section, the arguments focus on the relationship between the different models through questionnaires. After collecting data, the author employed the regression analysis technique, and the results state that responsible behaviour has a strong and positive impact on the project's success. This empirical evidence is in support of the previous literature, which makes this research more meaningful.

Based on the research and the empirical evidence mentioned above, it is clear that *"there is a positive and significant impact of responsible behaviour on project success".*

How does Attitude affect the project's success?

Attitude is an inherent characteristic of an individual. In this research, attitude is the independent variable of this research study. When the project team member has a severe attitude toward the activities involved in a project, it influences the project's success. I collected data from different resources through questionnaires to empirically investigate the impact of attitude on project success. I then applied statistical analysis to check its effect on the project's success. Statistical results state that attitude significantly and positively impacts the project's success. This empirical evidence aligns with most of the prior research. For instance, in 2021, Qazi argues that the attitude of the project managers and the project teams is crucial in achieving the objective and goals of a project (Qazi, Daghfous and Khan, 2021).

Similarly, in 2013 research on schools analysed the attitude of teachers and how their attitude impacts the student's performance; the output of that research states that when teachers have a positive attitude toward the students, it enhances their learning process. When teachers are having rude behaviour toward the students, it negatively impacts the learning process of the students. Hence, attitude is a significant factor that leads to the success of a project (Melekoglu, 2013).

There are a few people affiliated with every type of endeavour. The project will succeed when project teams are aware of the dangers and psychologically prepared to cope with them. Although a positive attitude does not guarantee that there will be no uncertainties, it does assist teams in dealing with uncertainty more successfully. Members of a project with a positive attitude are more likely to be proactive rather than reactive. These proactive behaviours contribute to project success and help organizations maintain a competitive position in the market.

Marketers and practitioners want to understand consumers' sentiments rather than their behaviour (Solomon et al., 2010). The leader's attitude toward their team members significantly impacts team performance. According to official studies, employees' good attitude toward their obligations and tasks influences their performance. It helps them fulfil the objectives and goals of assigned projects more efficiently (Webster and Keller, 2004). Another recent study found that their mindset heavily influences the competitive behaviour of project team members. Individuals with a good attitude contribute significantly to the success of a project, whilst those with a bad attitude become roadblocks to achievement (Greyson, 2005). With a positive attitude, people can cope with difficulties more effectively and deal with uncertain situations more effectively.

In contrast, people with a negative attitude toward an uncertain situation cannot contribute to the success of a project or an organization. A positive attitude does not imply that the project team will have no challenges, but it will assist team members in dealing with obstacles more effectively. As a result, it is critical to have a positive mindset for initiatives to succeed. According to the study given in 2020, it is critical to have a good mindset and an optimistic approach while meeting with team members since this increases the odds of the project's success (Villanova, 2020).

Based on the research mentioned above, attitude is the prime factor that led to the project's success. In this study, I have employed regression analysis, and it is clear from the analysis that attitude positively and significantly impacts the project's success. Therefore, the third research question is answered as *"attitude is having a positive and significant impact on the project success".*

Further, this research contains technology as a moderating variable. This research question concerns how technology moderates the relationship between awareness, responsible behaviour, attitude, and project success. So, the fourth research question is: ***"How does technology moderate the relationship between awareness, responsible behaviour, attitude and project success"?***

Technology is an essential aspect of product and process development. When teams are aware, having a positive attitude and responsible behaviour but not having the latest technologies will make it difficult for the project teams to meet the goals and objectives of the projects. On the other hand, when employees are aware of the skills required to achieve the goals associated with the project, it increases the chances for the success of the project, and along with it, when the teams have the latest technologies, it enhances the chance to complete the project on time (Froese, 2010; Connor, Kumashiro, Welch, Hadeed, Braden and Deogaonkar, 2000). So, for the success of a project, an organization should have two aspects: the first is related to the workforce, that is, awareness, and the second is related to technology. Moreover, when the customer has responsible behaviour but does not have the required technology, it will affect the project's success. Along with responsible behaviour, technology is an important aspect that led to the project's success.

Focusing on all these factors makes it clear that only being responsible is not enough to ensure the project's success; instead, the latest technologies must provide the individuals working on a project which will increase the chances for success of a project. When a team is responsible and has the latest technologies improves the likelihood of the project's success. So, from the discussion above, the presence of technology enhances the impact of awareness on the project's success. Similarly, in the presence of technologies, the impact of responsible

behaviour is more strongly related to project success. In other words, it can be acknowledged that technology moderates the relationship between awareness and project success and that technology moderates the relationship between responsible behaviour and project success. Technology is the use of cutting-edge technology in projects to improve the success of the activities included in the project.

Along with technology and project understanding, teams are critical to the success of a project. When project team members understand the project's relevance and how the project's output might aid the company, the project is more likely to succeed and understand the technology. The project teams give the newest technologies such as machinery and software necessary to carry out the essential operations, which help the project's success. As a result, providing a team with effective awareness using the latest technologies increases the likelihood of project success; in other words, technology strengthens the link between awareness and project success. Along with awareness, responsible behaviour is a crucial aspect in determining an organization's success.

Furthermore, responsible behaviour is essential to attain all of this (Hubbard, 2009). The project's success is also affected by attitude. According to a prior study, 30-40% of project success is determined by the technical abilities of the project team members, whereas 60-70% of project success determines the attitude of the team members (Ambadapudi, 2014). As a result, it is critical to maintain a positive attitude toward the team and the activities included in a project. When a team with a positive attitude is equipped with technologies to aid in planning project activities, the chances of the project's success increase; from this, the author states that the technologies moderate the relationship between attitude and project success. To empirically analyse these results, I have conducted empirical research using

questionnaires to collect data from employees in the Guinee Bissau industries. The results state that technology moderates the relationship between awareness, attitude, responsible behaviour, and project success.

Research Implications

This research is theoretical and practically significant. First, it adds value to the literature by providing Guinee Bissau's perspective, i.e. how awareness, attitude, and responsible behaviour impacts project success, and practically it is vital for the companies and practitioners to train their employees to build their internal traits, i.e. attitude, awareness and environmentally responsible behaviour and their impact on purchase intentions**.**

Research Limitations

Limitations of this study include the size of the data set. In this research, the sample size was only 160; because of the small data set, there is a chance of error in the study's results. If the data set is increased from 200 to 500, then the results would be more reliable, and a more effective and reliable solution can be drawn that could serve society more effectively

Besides the future conceptual direction, some statistical ways could be adopted in the future while keeping the same statistical model but changing the statistical analyzing techniques. In the designed hypothesis, the U-shaped and Inverted U-shaped methods can be tested and applied to the same model. If there is a similarity among the results, these results are effective

and could be correct. However, if there is a contradiction, there is a probability of reinvestigating the designed hypothesis, maybe by increasing the size of the data set. Moreover, SEM (Structural Equation Modelling) could be adopted for statistical analysis with the U-shaped and inverted U-shaped techniques. Further, I haven’t used SNS (Social networking sites) for data collection; therefore, in future research, authors can use SNS to collect data in enormous amounts.

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