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The Perception of Project Managers toward Project Success in the Public and Private Services Sector in Mansehra Region

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Abstract: Project success is an ambiguous term and since lack of consensus among researchers regarding critical success factors. There is a lack of consensus regarding success factors in even industries of the same nature. Success factor varies with from project to project. This study determines the critical success factors separately for the public and private construction sector as well as the public and private services sector in Mansehra. The study also shows project manager's perception regarding success criteria as well as success factors in terms of their importance in respective sectors. This study also explores the relationship between success factors and success criteria. Multi sampling techniques are used in this study, simple random sampling for the construction sector and convenience sampling for service sector. 127 questionnaires were used to collect data from project professionals in the construction and service sectors. This study determines the separate set of critical factors based on their relative importance for construction and services sectors (public and private). SPSS 16.0 was used to analyze data. Pearson's correlation test results reveal that there exists a significant to moderate relationship between success factors (main/subsidiary) and success measures. Factors with high bearings on success measures are appropriate standards, secure funding, project planning and review, effective governance, and end-user and operators for the construction and service sector. This study also examines the difference between public and private departments in the same sector. Determining critical success factors for respective sectors, both public and private, are imperative for practitioners while planning a project.

Keywords: Critical success factor of project success, Success in services sector projects, Project success, Project success, Criteria of project success, Project management and construction project success

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INTRODUCTION

Past literature on Project Management since 1980 demonstrates that, despite progression in project management forms, devices, and frameworks, project success has not altogether moved forward. This highlights issues regarding the worth and viability of project management and project management frameworks. The results are not satisfying for the stakeholders of the project despite an increase in project work in industry and in organizational bodies of project management. So, what actually are the factors that have an impact on the success of the project? This thesis focuses on the factors which affect the project's success and knowing the relative importance of each factor in a particular sector, both public as well as private. The aim of this research is to determine the critical factors for success in the construction and service sectors because knowledge of critical factors for a particular sector is imperative for project success. Since success factors varies from project to project and managers/professionals put in effort into a project planning, much of the energy and resources get wasted on the least important factors on the cost of critical ones that affect the project performance and have a real influence on project.

The detailed literature review suggests that different projects are of different nature, so their success factors vary (Jugdev & Müller, 2005). Projects have got an imperative position in Pakistan in the last decade because of the steady rate of projects in this region. In recent past years, there has been a noteworthy increase in projects in

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Mansehra due to their success and efficiency. The region also gained the attention of foreign aid after terrorism and natural calamities. There are a number of projects implemented for the development of different sectors (Zafar & Haq, 2006; Fatima, Majeed, & Saeed, 2017).

There are differences in project nature so as their goals, and that is why there are differences in the factor that determine a project success for a project of particular nature. Jugdev and Müller (2005), argued that there are certain elements that are termed as characteristics that exist in the project determine the project's success, whereas there are certain factors that are agents which ensure the project's success. It is the "critical activity" or the factors that determine the project's success (Boynlon & Zmud, 1984; Ali, Ahmad & Saeed, 2018). Moreover, Joslin and Mullar (2016) stated the term critical success factors are essential for a project or organization to accomplish its objectives. The success criteria and the success factors also differ from sector to sector. This research attempts to identify the important factors that lead to success; furthermore the factors are codified to know the importance of each factor. This research also examines the differences between the private and public sector's perceptions regarding project success factors. The study of such nature has negligible literature available in the context of Mansehra, Pakistan. For this study, 82 papers were reviewed, and it is concluded that the concept of the project being called a successful project is a much more complex and ambiguous concept. The project success factors differ from one sector to another, and the project nature and type. According to Witt (1988) and Saeed (2017), the success of a project varies from one project to another. A critical factor for one project might be of least importance for others. Success factors are dependent on one another, and none of the factors is solely responsible for project success alone. Secondly, project success is ambiguous terminology that is measured differently by different people at different times.

As it is clear from the literature, there is not a single factor that is wholly responsible for a project's success. There are a number of factors that are responsible for a successful project delivery. The project managers/actors/drivers need to know about the importance of the individual factor for effective and efficient project delivery (Ullah et al., 2021). The important factors need to be identified for the particular sector and should be given the required importance. The factors should be considered according to their ranking and contribution to making a project successful. This will help the project professionals to focus on desired areas without extra efforts being utilized. The aim of this research is to answer the questions about the project manager/actor's perception of the success factors. For this study, 12 main success factors were identified with a set of 37 contributory/subsidiary questions, which further refines the framework. The main success factors are effective governance, competent project teams, goals and objectives, Project planning and review, commitment to project success, proven methods and tools, capable sponsors, secure funding, end users and operators, Aligned supply chain, supportive organizations, Appropriate standards. The success measures for this study are time, budget, specification, funder's satisfaction, stakeholder's satisfaction, and the overall project success.

Research Objectives

The objective of this study is to identify the project manager's perception of the success measures or benchmarks set for project success and to determine the critical success factors for construction and services sector projects. Moreover, this study attempts to identify a separate set of success factors for the individual sector as well as their departments (public/private) in Mansehra. Furthermore, this study also examines the differences between private and public departments in a similar industry regarding success factors and attempts to establish a relationship between success factors (main and subsidiary) and the success measures.

LITERATURE

Project Success and Project Management

It is an accepted fact that the last three decades show evidence of the efficiency of project management. The introduction of the new projects in the markets imposes certain demands on the established organizations; different techniques are required to tackle the projects because it is not daily operations. In circumstances where organizations have little understanding regarding the project, the techniques of project management are helpful and are applied for project success (Witt, 1988; Farid et al., 2021). However project management and project are separate things because the core objectives and goals of project management and the project does not coincide the core objectives of a project as time, cost, and performance are project management goals (Patanakul et al., 2010).

Bannerman (2008) indicated the difference between project success and project management success. He said that project resulting in a product or service that is beneficial to business is project success. However, a project on scope, schedule and budget is a project management success. Project success does not necessarily mean project management success and vice versa. Baccarini (1999) argued that a project could be within scope, on schedule, and on a budget but still deliver little or no value to the project stakeholders. However, a project can be finished with exceeding budget and years after the deadline and yet deliver a great service/product that is beneficial to both the project and stakeholders.

A distinction has been made between project success and project management success by other researchers. De Wit (1998), Munns and Bjeirmi (1996), and Davies (2002) clarified that project success is measured against the overall objectives of the project while project management success is measured mostly against cost, time, and quality. Moreover, Davies (2002) commented that delivering project success is necessarily more difficult than delivering project management success since it involves second-order control. Baccarini (1999) classified project success-related factors into Project Success Criteria and Project Success Factors. He demonstrated that it is important to differentiate between these two groups. He stated specifically that success criteria are used to measure success whilst success factors facilitate the achievement of success. This statement has been confirmed by some other researchers. Turner (2007) has strongly confirmed this statement.

Criteria for Project's Success

The concept of project success is complex as it differs from project to project. The different views regarding project management have changed over time. Any project can be successful for one and disastrous for another. The success of a project is time dependent. A project might be a successful one day and failure the next. Therefore, one cannot objectively measure the success of a project; measuring project success is an illusion (Wit, 1988). According to Kuen et al. (2008) success of a project varies from one project to another, and anyone cannot measure the project's success in any absolute terms. However, these can be measured in the form of the goal attainments and objectives achieved by the project. Factors that define the project success and have a particular influence over the project success can be measured. Baccarini (1999) stated that project success criteria are depended on Project success and Project management success. The author also explained that Project management success deals with meeting time, cost and quality objectives. However, project success deals with the ability of the project's final product to meet the project owner's strategic organizational objectives, a satisfaction of users' needs, and satisfaction of stakeholders' needs where they relate to the product (Khan, Saeed, Ali & Nisar, 2021). In a subsequent study, Collins and Baccarini (2004) discovered a positive relationship between project management success and product success.

Project Success in Service Sector Project

The service sector is the largest job-creating sector in developing countries and is highly competitive because of a huge number of projects; the failure rate in the service sector is also high. Yang (2014) highlighted that researchers are not in consensus about success factors in the service sector. However, Frefer (2018) stated that success factors vary even in the same sector. Bozeman and Ponomariov (2009) critically indicated different factors in the same sector due to different localities of research. Boyne (2002) pointed out that public and private organizations have different aspects of success factors. Gorog (2002) pointed out project failures because of some management aspects. He suggests that the uniform, single strategy to tackle some type of problem because all the projects are not in the same pattern, single strategy leads to project failure.

Projects need to be unique to the routine work normally done at the functional organization. So there are some other factors of project success that should be kept in mind; these factors are related to the different types of projects, like Davies (2002) stated that project success in medical and pharmaceutical projects are based on research and development and limiting vicious cycles. Applying research results from the developed countries to problems of developing and underdeveloped countries could be a convenient, easy and tempting solution (Saeed, 2018). However, Marianda et al. (2010) argue that such approaches run the risk of exporting failure. Karel de Bakker (2010) added that well strong research and development department is important, but in developing countries, minimizing working costs can provide provisions for success. The research is done in developing countries, so the concluded factors might be the same in other developing countries.

Project Success in the Construction Sector

In developing and developed countries, the construction industry is the largest industry project undertaking industry. Yang (2014) termed projects in the construction sector as highly competitive; numerous project failures suggest that important factors are not acknowledged. Some factors identified by Sandbhor et al. (2014) for the construction industry are effective project control, productivity of the labor, client input, financial capability, participant competence, and a proper project delivery channel. However, Akintoye and MacLeod (1997) suggested that supply tracking in a construction project is critical. Aligned supplies develop the venture's performance and allow unproblematic project deviations. Gray (1999) stated that construction projects involve a significant number of supplies that go through the design stage, fabrication, intermediate processing, delivery, and the shortcomings before the scheduled implementations. Sandbhor et al. (2014) stated that the planning mechanism of supplies requires a team of workers to validate the accessibility of supplies and other resource necessities. Although an aligned supply chain is critical for project success yet, construction projects encompass several other factors to be factored in.

Additional Critical Success Factors

Any project can be successful for one and disastrous for another. The success of a project is time dependent. A project might be a successful one day and a failure the next probably. Therefore, one cannot objectively measure the success of a project; measuring project success is an illusion (Wit, 1988). However, striving for a higher degree of homogeneity among success factors is required that ensure project success in the true sense.

Literature generally revealed many success factors. Different authors justify different success factors for project success. There is a lack of consensus on success factors for project success (Frefer et al., 2018; Khan, Kaewsaengon, & Saeed, 2019). Martin (1976) suggested effective governance as a critical success factor. He further added that many papers include top management support as a critical success factor. However, top management support takes the form of governance. Similarly, Remington (2005) and Burki et al. (2020) stated that good governance is considered to align the role of governing bodies and the organization. Organizations across the globe strive to establish good governance. Rhodes (2004) defined governance as an ordered rule to govern organizations. Wortmann (2009) stated that governance is a desirable value substance that identifies the meriting areas for the project. However, Patrick et al. (2017) indicate that there is little understanding of project governance and, due to lacking alignment of definitions and scope, often mixing concepts without clear distinctions hinders its ability to shape success.

PROPOSED THEORETICAL FRAMEWORK

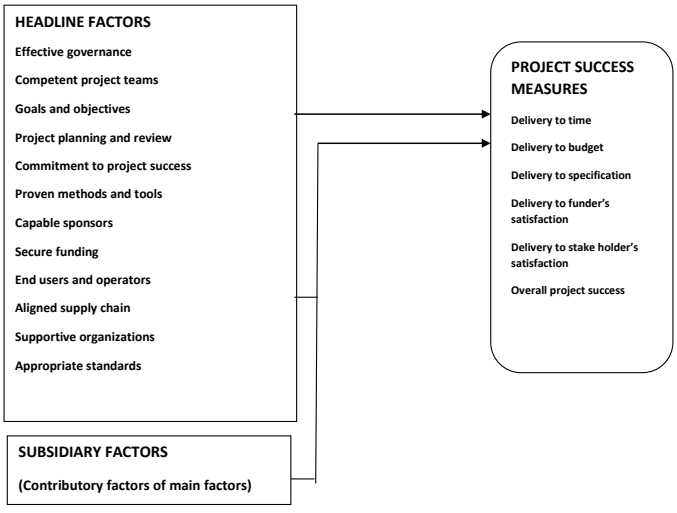

Figure 1: Theoretical Framework

Muller and Turner (2007) oppose the fundamental assumption of the research by focusing on projects size variation, complexity, uniqueness, scope and nature, because of which the project success criteria also varies. So, therefore, it is meaningless to develop critical factors that are common in all projects, not keeping in view the project's type. The project's success terminology is not absolute, and there exist variations among different stakeholders regarding the term project success; however, there are still disparities in success criteria (Shenhar, Levy, & Dvir, 1997). Similarly, a number of alternative frameworks have been described in the literature that provides the basis to research e.g., Pinto and Prescott (1988) the project implementation framework provides the independent variables that can lead a project to its success. Furthermore, Lim and Mohamed (1999) categorized the project success into micro and macro and further modified the project implementation framework for the critical success factors of a project regardless of project type into a group of seven factors that positively impact project success.

The overarching theory associated with this study is the Triple constraint theory. While its origin is unclear but it has been used since the 1950s. Similarly, in the modern landscape, a project is bound by three constraints. The triple constraint theory is also called the iron triangle of the project management triangle (Atkinson, 1999; Al Hassan, Fatima, & Saeed, (2019). While the names of the constraints may change, they measure the same thing; fixed budget, fixed schedule, and fixed expectations or deliverables. The concept of quality is sometimes introduced as another factor (Kuen et al., 2008; Zia, Saeed, & Khan, 2018). The main factors are; "Effective governance, competent project teams, goals and objectives, Project planning and review, Commitment to project success, proven methods and tools, capable sponsors, secure funding, end users and operators, Aligned supply chain, supportive organizations, and Appropriate standards".

RESEARCH METHODOLOGY

Methods and Methodology

Since 'project success' is an ambiguous term that varies from one project to another project (Witt, 1988), and it is also a relative term with respect to a project; however, it can be measured in terms of goals attained and success measures (Belout & Gauvreau, 2004). The aim of this research is to investigate the important factors for project success in the construction & service sectors. According to Shekhar et al. (1997), the questionnaire has been described as the best approach to determine the project success factors. Similarly, Kuen et al. (2008) stated that for determining the success factors, the researcher could collect primary data fairly, and the collected data is coded easily and accordingly to the nature of a variable. Mir and Pinnington, (2014). The projects are unique by nature and vary by the type of the project, so there is a need to select a sample that can represent the population well (Muller & Turner, 2007).

Projects utilize considerable amounts of money, time and other organizational resources. Not a single project operated perfectly with perfect desired results. Post-project reviews are the opportunities for organizations to seek valuable lessons in running the next project more effectively and efficiently. Allan (2010) suggested that project success criteria fall into three areas; hard measure, soft measure and benefits realization. The hard measure means if the project is delivered within the allocated budget on time and within the project scope. Soft measures account for project clients, team members and the stakeholder's satisfaction with the project. And the benefits realization accounts for the delivery of the proposed organizational benefits. Similarly, Eskander (2016) proposed six factors for project success i.e. schedule, scope, budget, team satisfaction, customer satisfaction and quality.

The dependent variables for this study are headline factors along with their subsidiary factors in Mansehra. The dependent variables were measured using 10 point Likert scale questionnaire. Whereas, the independent variables were also measured using 10 point Likert scale questionnaire. According to Pakistan engineering council PEC (2018), in Mansehra, a total number of licensed govt contractors was 141 and contractor association Khyber Pakhtunkhwa CAP (2017) which is affiliated to All Pakistan contractors association (APCA); total registered private contractors in Mansehra were 103. Out of this population, 33 respondents from govt and 35 from private construction sector were selected through simple random sampling. The respondents in the construction sectors were contractors, project managers and project engineers. Since the sampling frame is unknown service sector and is diversely working in the city. The convenience sample helped gather useful data and information that would not have been possible using probability sampling techniques, which require more formal access to lists of populations.

59 respondents were selected in the service sector through nonprobability convenience sampling. Among them, 33 and 26 were from the public and private sectors respectively. The collected data was analyzed in two-phasephases. In the first phase descriptive analysis are done and frequencies are recorded and in the second phase of statistical analysis, the 'Pearson correlation test' is done to test the hypothesis and establish the relationship between success measures and success factors.

Respondents were asked, how important each factor in the framework is to project success in general to rate their most recent project as to its success and to report the degree to which each success factor was in place in that most recent project.

Respondents to the survey were widely varied in respect of age, length of project experience, sectors, types and values of project and project roles. However, there was a particularly strong representation of middle-aged and older respondents who worked in senior positions on high-value projects.

Research Objectives

The objective of this study is to identify the project manager's perception about the success measures or benchmarks set for project success and to determine the critical success factors for construction and services sector projects. Moreover, this study attempts to identify a separate set of success factors for the individual sector as well as their departments (public/private) in Mansehra. Furthermore, this study also examines the differences between private and public departments in similar industries regarding success factors and attempts to establish a relationship between success factors (main and subsidiary) and the success measures.

Research questions/Hypothesis

- **Research question 1 (RQ1):** what is the project manager's perception of the success factors?
- **Research question 2 (RQ2):** What is the relationship between success measures and the main success factors?

  Hi = there is a relationship between success measures and main success factors.
- **Research question 3 (RQ3):** What is the relationship between success measures and the subsidiary success factors?

  Hi = There is a relationship between success measures and subsidiary success factors.

Main factors:

Hi = There is a relationship between "effective governance" and "success measure".

Hi = There is a relationship between "goals & objective" and "success measure".

Hi = There is a relationship between "competent project teams" and "success measure".

Hi = There is a relationship between "project planning & review" and "success measure".

Hi = There is a relationship between "commitment to project success" and "success measure".

Hi = There is a relationship between "proven methods and tools" and "success measures".

Hi = There is a relationship between "capable sponsors" and "success measures".

Hi = There is a relationship between "secure funding" and "success measures".

Hi = There is a relationship between "end-users and operators" and "success measures".

Hi = There is a relationship between "aligned supply chain" and "success measures".

Hi = There is a relationship between "supportive organization" and "success measures".

Hi = There is a relationship between "appropriate standards" and "success measures".

Subsidiary factors:

H1 = There is the relationship between "The overall goal of the project is clearly specified and recognized by all stakeholders involved in the project" and "success measures".

H1 = There is the relationship between "Project leadership has a clear vision of what project outcomes should be, maintains continuity of vision, and disseminates this vision to all involved in project delivery" and "success measures".

H1 = There is the relationship between "The project has strong, clearly identified leadership" and "success measures".

H1 = There is the relationship between "All parties involved in the project are and remain committed to the project's success" and "success measures".

H1 = There is the relationship between "Project professionals heading up or forming a core team are fully committed" and "success measures".

H1 = There is the relationship between "There is regular and careful progress (time, scope, cost) monitoring and review throughout the project" and "success measures".

H1 = There is the relationship between "there is a relationship between "The project has realistic time schedules" and "success measures".

H1 = There is the relationship between "Project leadership, particularly, has and maintains a commitment and has the skills and resources to inspire commitment in others" and "success measures".

H1 = There is the relationship between "The project team engages in positive behaviours which encourage success" and "success measures".

H1 = There is the relationship between "The project team has the influencing skills to engage with necessary internal and external support" and "success measures".

H1 = There is the relationship between "End users or operators are able and enabled to take on what the project has produced effectively and efficiently" and "success measures".

H1 = There is the relationship between "The project has sponsors who have ultimate responsibility and accountability and are effective" and "success measures".

H1 = There is the relationship between "The project has a secure funding base at the point where the decision to start is taken" and "success measures".

H1 = There is the relationship between "Pre-project planning is thorough and considered" and "success measures".

H1 = There is the relationship between "The project has active risk management and is flexible enough to respond to unforeseen hazards and opportunities" and "success measures".

H1 = There is the relationship between "Good practice project management techniques are applied" and "success measures".

H1 = There is the relationship between "The project has clear reporting lines" and "success measures".

H1 = There is the relationship between "The project environment provides sufficient resourcing and access to stakeholders" and "success measures".

H1 = V is the relationship between "End users or operators are engaged in the design and progress of the project" and "success measures".

H1 = There is the relationship between "Tight control of budgets is in place to ensure that the value of available funding is maximized" and "success measures".

H1 = There is the relationship between "All direct and indirect suppliers are aware of project needs, schedules and quality standards" and "success measures".

H1 = There is the relationship between "The project has clarity as to how authority is distributed below the overall leadership level" and "success measures".

H1 = There is the relationship between "Other team members are also fully competent in their roles" and "success measures".

H1 = There is the relationship between "The project has named and active sponsors" and "success measures".

H1 = There is the relationship between "The first, start-off, phase of the project is effective" and "success measures".

H1 = There is the relationship between "Overall goals and subsidiary objectives are not in conflict" and "success measures".

H1 = There is the relationship between & "Where there is any lack of commitment, this is clearly recognized and dealt with" and "success measures".

H1 = There is the relationship between "Quality standards are actively used to drive quality of outputs" and "success measures".

H1 = There is the relationship between "The environment in which the project operates is project-friendly rather than project-hostile" and "success measures".

H1 = There is the relationship between "Where end users or operators are reluctant to engage, the project team has the skills and techniques to increase and improve the quality of their engagement" and "success measures".

H1 = There is the relationship between "The organization provides embedded support for project activity" and "success measures".

H1 = There is the relationship between "Any needs for contingency funding are recognized from the start" and "success measures".

H1 = There is the relationship between "Post-project review is undertaken to learn lessons for the future" and "success measures".

H1 = There is the relationship between "Subsidiary objectives are clearly specified and recognized by all stakeholders who need to be aware of them".

H1 = There is the relationship between "Higher and lower tiers of supply chains are co-ordinate" and "success measures".

H1 = There is the relationship between "Adherence to other standards is regularly monitored in order to ensure delivery is to best practice levels" and "success measures".

H1 = There is the relationship between "The project has sponsors who stay in a role for the life-cycle of the project" and "success measures".

Research Approach and Strategy

Researches that are associated with the positivist paradigm are generally "Quantitative research". Stephen et al. (2015) termed quantitative research as the one in which the researcher decides what to study, asks narrow and specific questions, quantifiable data is collected from participants, followed by statistical analysis of data and conducts the examination in a neutral, objective manner. This is quantitative as it deals with collecting data and then converting this data into numerical forms so that statistical calculations are performed and draw conclusions. Gulati (2009) argued that the deductive approach could be explained by means of hypotheses, which can be derived from the propositions of the theory. The deduction begins with an expected pattern "that is tested against observations. This study also has a deductive approach.

Furthermore, this is a descriptive/correlation study. A descriptive strategy is used for describing a particular situation. The behavior of an individual, community, group or a thing is observed here without affecting it. In descriptive strategy, the subject of matter is observed in a completely natural environment. Rangarajan (2013) said that descriptive studies do not answer how/when/why questions; rather, it addresses the "what" question since in this study, the characteristics of the population are studied. Similarly, Hamza (2015) argued that descriptive studies have no manipulations as it describes the already existing in surroundings and help to unveil hidden facts and figures. In this study descriptive strategy helps to answer the project manager's/actor perception about the success factors. In such a research strategy, the researcher does not have any control over the variables; it can be only stated what is happening and what has happened (Patricia, 2013).

Siddharth (2011) argued that a correlation study determines if any two variables are correlated or not. A correlation study determines whether an increase or decrease in one variable corresponds to an increase or decrease in the other variable. However, Kendra (2015) stated that a correlation study suggests that there is the relationship between two variables. At the same time, it cannot prove that one variable causes a change in another variable. In other words, correlation does not equal causation. This study is also correlated as this research attempts to look for the relationship between the main success factors and subsidiary success factors with the success measures. Since such strategies are adopted when the researcher looks for a relationship between the variables. The purpose of such studies is to measure and determine the relationship between two variables without attempting to explain the cause of the relationship. This research lies in the paradigm of positivism, which focuses that the differences in the stance don't validate the ambiguity instance; however, there are factors and agents that lead to a different answer to the same question. Positivism adheres to only factual knowledge obtained through observation. Positivism (also known as logical positivism) holds that the scientific method is the only way to establish truth and objective reality.

It is a strictly empirical approach that claims that knowledge is based directly on experience and emphasizes facts and the causes of behavior (Bogdan & Biklen, 2003; Gul, Ali & Saeed, 2021). The researcher's role in such studies is restricted to data collection and its interpretation in an objective way. Research findings are quantifiable and observable. Moreover, in such positivist studies, the researcher is free from study and no provisions for human interests are present within the study. Similarly, Crotty (1998) stated that positivists and post-positivists view reality as being objective and knowable. Such research is value-free and based on precise observation and verifiable

measurement. Regarding empirical knowledge and knowledge derived from metaphysics or theology. Schwandt (2001) proposed that scientific knowledge is more representative of truth than that derived from metaphysical speculation. Positivism today is viewed as being objectivist – that is, objects around us have existence and meaning, independent of our consciousness of them (Crotty, 1998; Nadeem, Saeed & Gul, 2020). Crowther and Lancaster (2008) stated that, positivist studies usually take on the deductive approach. The research is quantitative and a deductive approach is adopted, and a survey will be conducted for data collection through 10 points Likert scale questionnaire. Moreover, the research will be based on the mono-method and the cross-sectional data

Data Collection

Primary data :

The primary data was collected with the help of a questionnaire. The author collected primary data from project managers, contractors, project engineers and top management and other project actors that are related to projects regarding project success.

Population :

The population for this study is project managers and contractors in both private and public, construction and service sector projects sector in Mansehra.

Sampling :

According to the PEC (2018), a total number of govt contractors in the construction sector was 141 and according to contractors association Khyber Pakhtunkhwa CAP (2017), the total registered private contractors were 103. Out of total 244 contractors, 68 respondents were selected through a simple random method. Out of 68 respondents, 33 respondents were from govt department and 35 respondents from the private construction sector. The respondents in the construction sectors were contractors and project managers. Since the sampling frame is unknown in the service sector and is diversely working in the city. The convenience sample helped gather useful data and information that would not have been possible using probability sampling techniques, which require more formal access to lists of populations. 59 respondents were selected in the service sector through non-probability convenience sampling. The respondents in service sectors were project directors, project managers, operations managers and departmental officers. Out of the total respondents in the services sector, 33 respondents were from the public sector and 26 respondents from the private sector. The respondents were from different service providers i.e. banks, forest department, police department, Education, NGOs, Multinational firms, KP IT Board, NADRA, and cellular companies franchises.

Data collection tool :

A questionnaire was used to collect data. The questionnaire used for collecting data is an adapted questionnaire. Project manager's perception of the project's success and the imperative benchmark in the recent projects is measured through a ten-point Likert scale. The most important and the least important subsidiary factors will also be measured through Likert scale as well. Pearson correlation test is used to find the relationship between main and subsidiary

DESCRIPTIVE ANALYSIS

Sample of Respondents

Age distribution of respondents :

The Figure 2 below shows the sample of respondents in quantitative survey. The figure shows the age distribution of respondents. It can be seen that the majority of respondents are from 31 to 50. But there is a representation across the spectrum. Among a total of 127 respondents, the highest number of respondents were from (41-50) i.e., 31.4% of total. Almost the same number of respondents i.e., 30.7% were from (31-40). Only 7 respondents i.e., 6% were age limit 61 and above. 20 respondents that constitute 16% were from the age limit (51-60) and 13% respondents were (20-30).

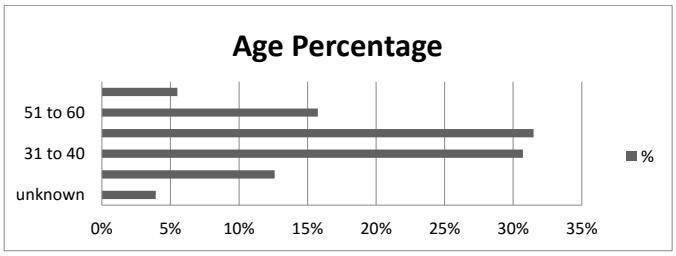

Figure 2: Age Percentage

Length of experience in project roles :

Fig 3 below shows the experience of respondents in the quantitative survey. The highest experience in years held by the respondents was 35% from the range of (10-19) years. 20% of the total sample was from respondents having experience less than 5 years. 15% of respondents from the experience range of (5 - 9). 23% from (20-29) and 5% of respondents have experience of 30 years and above. 4 respondents i.e. 3% represented missing value.

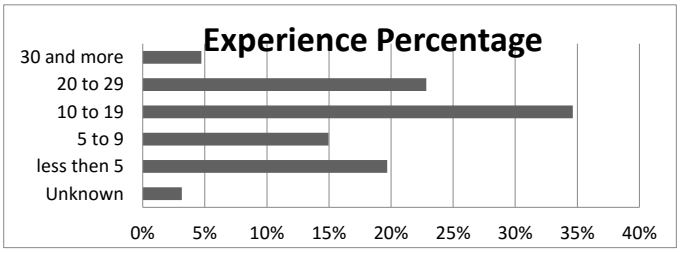

Figure 3: Experience Percentage

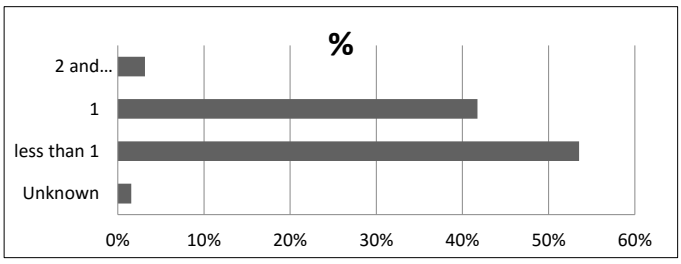

Figure 4: Duration of Respondent's Most Recent Completed Project

Figure 4 shows the duration of the respondent's most recent project. It is shown in the figure that the majority of the undergoing projects are of less than an year. It accumulates 54% of the total respondents. 42% of respondents are working on a project of more than one year and less than two. 3% of respondents have project durations of more than 2 years.

Benchmarks

It is recognized that a project can be successful in various ways: i.e., time, budget, specifications and appropriate standards, funder's satisfaction, and overall project success.

The following figure provides a benchmark based on the respondents from the construction and service sector of project success level from the view point of the project professionals. Rating were made on 10 point scale in which 1-4 = unsuccessful, 5-7 = moderately successful, 8-9 = very successful and 10 = wholly successful.

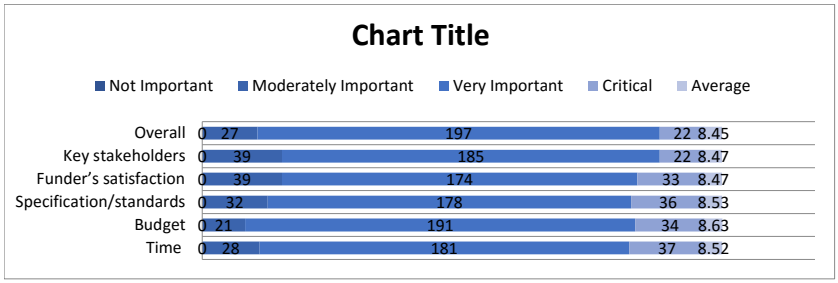

Figure 5: 1-4 = Unsuccessful, 5-7 = Moderately Successful, 8-9 = Very Successful and 10 = Wholly Successful

It is observed that all of the benchmarks are above 8. Delivery within the allocated budget has the highest average of 8.63. Delivery within the time and budget are the most important and also much problematic as APM (2014) suggests that 1 out of 8 projects fails on the budget and 1 out 6 fails on time measure. Key stakeholder's satisfaction and funder's satisfaction had the same rating of 8.47.

RQ1: What is the project manager's perception of success factors?

Respondent's Perceptions of the Importance of Main Factors to Project Success (Ratings and Average Scores) in the Construction Sector (Public)

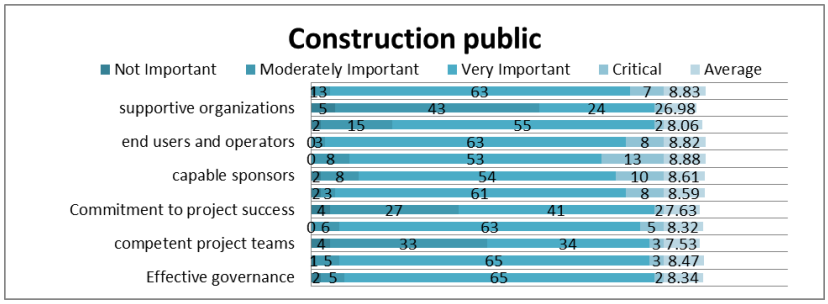

Figure 6: 1-4 = Not Important, 5-7 = Moderately Important, 8-9 = very Important and 10 = Critical

Figure 6 shows that all the main factors were considered important to project success in the public construction sector. However, there is variation between the factors. The highest average of 8.88 was recorded for "secure funding". "Appropriate standards" and "end-user and operators" are also ranked above 8.8. i.e. 8.83 and 8.82 respectively. However, a supportive organization is the least one with an average score of 6.98. Average scores of the main factors are shown in Fig 6. Proportion of respondents assigning values to the respective categories are shown in the figure. i.e., critical, very important, moderately important and not important.As it is quite evident from the figure, supportive organizations have been marked moderately important 43 times and 5 five times as not important hence making its score relative low to the other main factors. Secure funding, on the other hand, has been marked critical for project success in public construction sector 13 times makes its average rating the highest. However, there is a little variation between the main factors, the factors which are given the highest rating were secure funding, appropriate standards and end-users and operators. Supportive organization, commitment to success and competent project teams are the least important amongst all.

Respondent's Perceptions of the Importance of Main Factors to Project Success (Ratings and Average Scores) in Construction Sector (private)

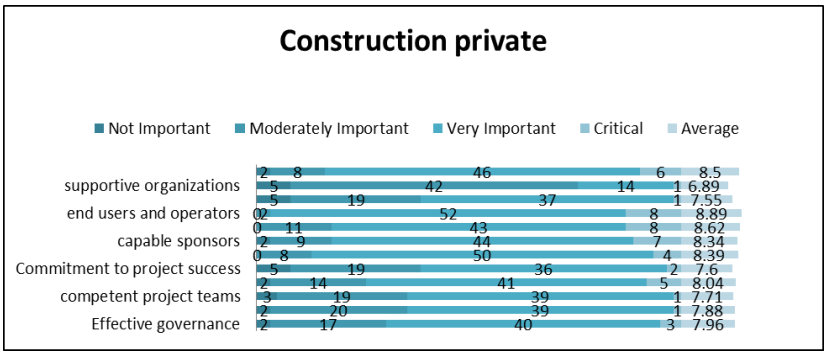

Figure 7: 1-4 = Not Important, 5-7 = Moderately Important, 8-9 = Very Important and 10 = Critical

Figure 7 shows that all the main factors were considered important to project success in the private construction sector. However, there is also variation between the factors. The highest average of 8.89 was recorded for "end-users and operators" and "supportive organization" as the least one with an average score of 6.88. Average scores of the main factors are shown in the Fig 7. Proportion of respondents assigning values to the respective categories are shown in the figure. i.e. critical, very important, moderately important and not important. As it is quite evident from the figure, supportive organizations are again marked moderately important 42 times with 5 five times as not important hence making its score relative low to the other main factors. "End users and operators," on the other hand has been marked critical for a project success in the construction private sector 8 times makes its average rating the highest. However, there is a little variation between the main factors, the factors which are given the highest rating are "end users and operators, secure funding and the appropriate standards. However, the factors that are ranked the least are "Supportive organization, commitment to success and competent project teams".

By comparing the average score of public and private sectors, it is evident that respondents from the private sector tend to rate relatively lower than the public sector. The reason for such difference can be the success perception from one sector to another. Secondly the majority of the respondents from the private sector are of middle age respondents. That may be a reason for such evident difference in rating the same thing.

Respondent's Perceptions of the Importance of Main Factors to Project Success (Ratings and Average Scores) in Construction Sector (Public & Private)

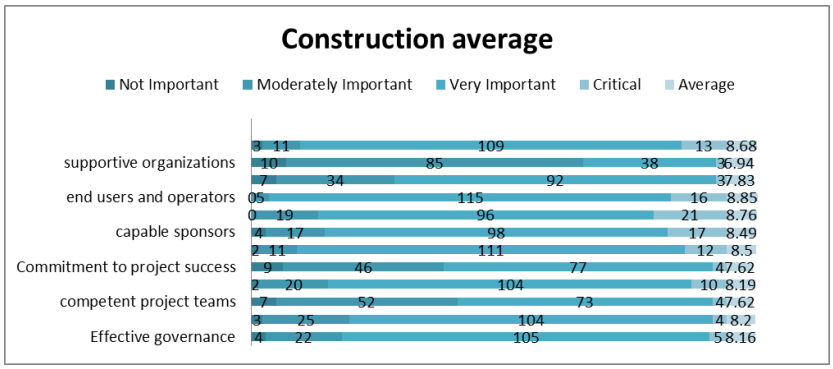

Figure 8: 1-4 = Not Important, 5-7 = Moderately Important, 8-9 = Very Important and 10 = critical

Figure 8 shows the combined average of public as well as private construction sector. Almost all main factors average scores above 8; it shows the perception of respondents regarding the main factors. Majority of the factors are considered "very important". There is also a little variation between the factors. The highest average of 8.84 was recorded for "end-users and operators" and "supportive organization" as the least one with the average score

of 6.94.In the private sector, appropriate standards and secure funding were marked the highest, but the highest cumulative total is "end-users and operators". Average scores of the main factors are shown in the Fig 8. Proportion of respondents assigning values to the respective categories are also shown in the figure. i.e., critical, very important, moderately important and not important. As it is quite evident from the figure, supportive organizations are again marked moderately important 85 times with 10five times as not important hence making its score relative low to the other main factors. "End users and operators," on the other hand has been marked critical for a project success in the construction private sector 15 times makes its average rating the highest. However there is a little variation between the main factors, the factors which are given the highest rating are “end users and operators, secure funding and the appropriate standards. However, the factors that are ranked the least are “Supportive organization, commitment to success and competent project teams”.

Respondent’s Perceptions of the Importance of Subsidiary Factors to Project Success (Average Scores) in the Construction Sector

The average scores for the subsidiary success factors are set out in the next table. The main point is, the scores are positive, with a range between 7 to 8.8. There was relatively little variation in the importance accorded to the subsidiary factors within each ’headline’ factor. Average ratings for these subsidiary factors are shown in the table which below. The most highly rated subsidiary factors concern; The project has sponsors who stay in the role for the life-cycle of the project; where end-users or operators are reluctant to engage, the project team has the skills and techniques to increase and improve the quality of their engagement, End users or operators are able and enabled to take on what the project has produced effectively and efficiently & Quality standards are actively used to drive quality of outputs. These subsidiary factors are ranked above 8.5 shows its importance. At the lower end of the range, The project environment provides sufficient resourcing and access to stakeholders, The project team has the influencing skills to engage with necessary internal and external support and Project leadership, particularly, has and maintains a commitment and has the skills and resources to inspire commitment in others. These factors are below are still above 7. It means that these subsidiary factors are though important but are of relatively least importance. Majority of the subsidiary factors are between 7.5 & 8.5.

Table 1: Average Scores of Respondent’s Perceptions about the Importance of Subsidiary Factors in Construction Sector

Respondent’s Perceptions of the Importance of Subsidiary Factors to Project Success (Average Scores) in the Construction Sector	
“The overall goal of the project is clearly specified and recognized by all stakeholders involved in the project”.	8.2
“Project leadership has a clear vision of what project outcomes should be, maintains continuity of vision, and disseminates this vision to all involved in project delivery”.	7.72
“The project has strong, clearly identified leadership”.	7.7
“The project has clear and regular communications between all parties”.	8.14
“All parties involved in the project are and remain committed to the project’s success”.	7.58
“Project professionals heading up or forming a core team are fully committed”.	8
“There is regular and careful progress (time, scope, cost) monitoring and review throughout the project”.	8.18
“The project has realistic time schedules”.	8.09
“Project leadership, particularly, has and maintains a commitment and has the skills and resources to inspire commitment in others”.	7.3
“The project team engages in positive behaviours which encourage success”.	7.70
“The project team has the influencing skills to engage with necessary internal and external support”.	7.23
“End users or operators are able and enabled to take on what the project has produced effectively and efficiently”.	8.69
“The project has sponsors who have ultimate responsibility and accountability and are effective”.	8.75

Table1 Continue.....

Respondent's Perceptions of the Importance of Subsidiary Factors to Project Success (Average Scores) in the Construction Sector	
"The project has a secure funding base at the point where the decision to start is taken".	8.63
"Pre-project planning is thorough and considered".	8.32
"The project has active risk management and is flexible enough to respond to unforeseen hazards and opportunities".	7.73
"Good practice project management techniques are applied".	8.74
"The project has clear reporting lines".	7.92
"The project environment provides sufficient resourcing and access to stakeholders.	7
End users or operators are engaged in the design and progress of the project".	8.67
"Tight control of budgets is in place to ensure that the value of available funding is maximized".	8.37
"All direct and indirect suppliers are aware of project needs, schedules and quality standards".	8.08
"The project has clarity as to how authority is distributed below the overall leadership level".	7.79
"Other team members are also fully competent in their roles".	7.58
"The project has named and active sponsors".	8.5
"The first, start-off, phase of the project is effective".	8.22
"Overall goals and subsidiary objectives are not in conflict".	7.70
"Where there is any lack of commitment, this is clearly recognized and dealt with".	7.55
"Quality standards are actively used to drive quality of outputs".	8.82
"The environment in which the project operates is project-friendly rather than project-hostile".	7.07
"Where end users or operators are reluctant to engage, the project team has the skills and techniques to increase and improve the quality of their engagement".	8.48
"Any needs for contingency funding are recognized from the start".	8.29
"Post-project review is undertaken to learn lessons for the future".	8.39
"Subsidiary objectives are clearly specified and recognized by all stakeholders who need to be aware of them".	7.7
"Higher and lower tiers of supply chains are co-ordinate".	7.7
"Adherence to other standards is regularly monitored in order to ensure delivery is to best practice levels".	8.68
"The project has sponsors who stay in role for the life-cycle of the project".	8.73

Respondent's Perceptions of the Importance of Main Factors to Project Success (Ratings and Average Scores) in Service Sector (Public)

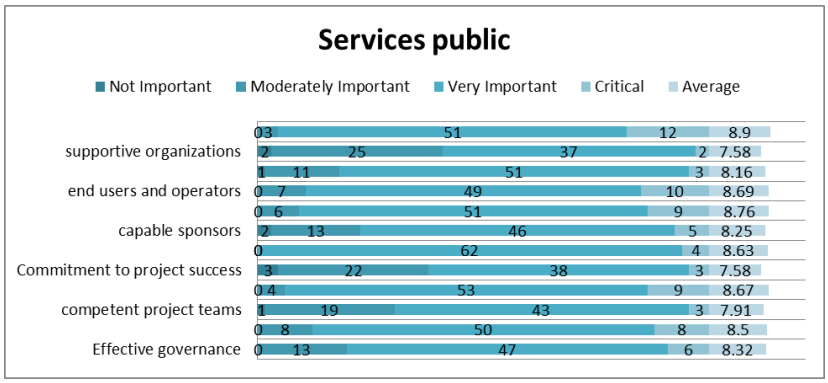

Figure 9: 1-4 = Not Important, 5-7 = Moderately Important, 8-9 = Very Important and 10 = critical

Figure 9 shows that all the main factors were considered important to project success in the public service sector. There is variation between the factors. The highest average of 8.89 was recorded for "appropriate standards", interestingly on contrary "commitment to success & supportive organizations" as the least one with an average

score of 7.5. Average scores of the main factors are shown in the Figure 6. Proportion of respondents assigning values to the respective categories are shown in the figure i.e., critical, very important, moderately important and not important. As it is quite evident from the figure that “commitment to success” has been marked as moderately important 22 times and 3 five times as not important, hence making its score relative low to the other main factors. Similarly supportive organizations as 25 times moderately important and 2 respondents mark it as not important. Appropriate standards on the other hand have been marked critical for a project success in public service sector 12 times makes its relative average rating the highest. However, there is a little variation between the main factors, the factors which are given the highest rating were secure funding, appropriate standards and end-users and operators". Supportive organization & commitment to success are considered the least important amongst all main factors. Proven methods and tools, Effective governance, Project planning and review, Capable sponsors and Goals and objectives all are above the 8 shows the respondent’s perception regarding their importance to project success.

Respondent’s Perceptions of the Importance of Main Factors to Project Success (Ratings and Average Scores) in Service Sector (Private)

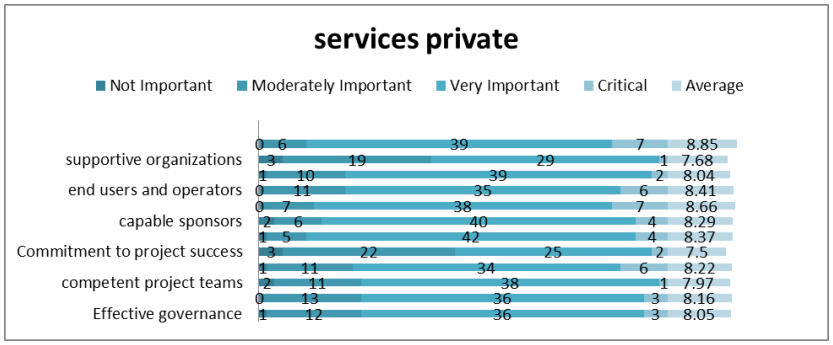

Figure 10: 1-4 = Not Important, 5-7 = Moderately Important, 8-9 = Very Important and 10 = critical

Figure 10 shows that all the main factors were considered important to project success in the private service sector. However, there is also a little variation between the factors. The highest average of 8.85 was recorded for appropriate standards, on a contrary commitment to success as the last one with the average score of 7.5. Average scores of the main factors are shown in the Fig 10. Proportion of respondents assigning values to the respective categories are shown in the figure i.e., critical, very important, moderately important and not important. As it is quite evident from the figure that “commitment to success” has been marked as moderately important 22 times and 3 five times as not important, hence making its score relative low to the other main factors. Appropriate standards on the other hand have been marked critical for a project success in private service sector 7 times makes its relative average rating the highest. However, there is a little variation between the main factors, the factors which are given the highest rating were secure funding, appropriate standards and end-users and operators. Supportive organization & commitment to success are considered the least important among all main factors. Proven methods and tools, effective governance, project planning and review, capable sponsors and Goals and objectives all are above the 8 shows the respondent’s perception regarding their importance.

Respondent's Perceptions of the Importance of Main Factors to Project Success (Ratings and Average Scores) in the Service Sector (Public & Private)

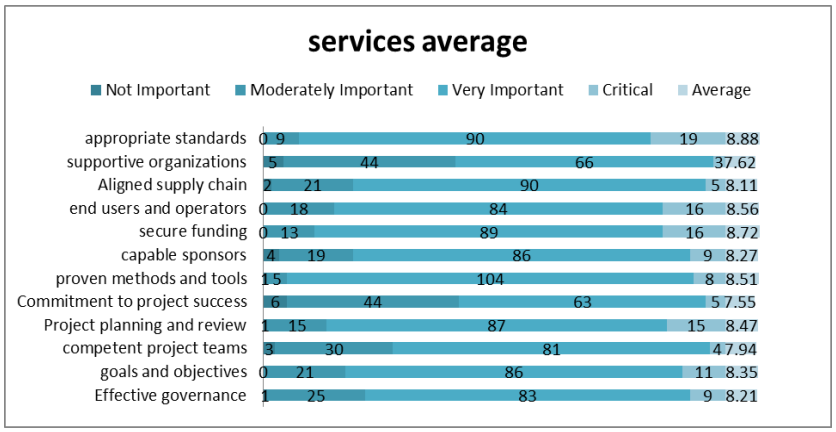

Figure 11: 1-4 = Not Important, 5-7 = Moderately Important, 8-9 = Very Important and 10 = critical

Figure 11 shows the combined average of public as well as private construction sector. Almost all main factors average scores above 8; it shows the perception of respondents regarding the main factors. Majority of the factors are considered "very important". There is also a little variation between the factors. The highest average of 8.88 was recorded for "Appropriate standards" and "Commitment to project success" as the least one with the average scores of 7.5. In the private service sector, appropriate standards and secure funding was marked and the highest. Average scores of the main factors are shown in the Fig 11. Proportion of respondents assigning values to the respective categories are also shown in the figure i.e., critical, very important, moderately important and not important. As it is quite evident from the figure, "Commitment to project success" is again marked moderately important 44 times with 6 five times as not important hence making its score relative lowest to the other main factors. "Appropriate standards" on the other hand has been marked critical for a project success in construction private sector 19 times makes its average rating the highest. However, there is a little variation between the main factors, the factors which are given the highest rating are "end users and operators, secure funding and the appropriate standards". However, the factors that are ranked the least are "Supportive organization & commitment to success".

Respondent's Perceptions of the Importance of Subsidiary Factors to Project Success (Average Scores) in Services Sector

The average scores for the subsidiary success factors are set out in the next table. The main point is, the scores are positive, with a range between 7.5 to 8.5. There was relatively little variation in the importance accorded to the subsidiary factors within each 'headline' factor. Average ratings for these subsidiary factors are shown in the table which below. The most highly rated subsidiary factors concerns are almost similar to that of the construction sector. "The project has sponsors who stay in role for the life-cycle of the project" "Where end users or operators are reluctant to engage, the project team has the skills and techniques to increase and improve the quality of their engagement" & "Quality standards are actively used to drive quality of outputs". These subsidiary factors are ranked above 8.5 shows its importance. At the lower end of the range, "Subsidiary objectives are clearly specified and recognized by all stakeholders who need to be aware of them", "Where there is any lack of commitment, this is clearly recognized and dealt with". These factors are below 7.5 but still above 7. It means that these subsidiary factors are though important but are of relatively least importance. Majority of the subsidiary factors are between 7.5 & 8.5 here as well.

Table 2: Average Scores of Respondent's Perceptions about the Importance of Subsidiary Factors in Services Sector

Respondents' Perceptions of the Importance of Subsidiary Factors to Project Success (Average Scores) in Services Sector	
"The overall goal of the project is clearly specified and recognized by all stakeholders involved in the project".	7.99
"Project leadership has a clear vision of what project outcomes should be, maintains continuity of vision, and disseminates this vision to all involved in project delivery".	8.19
"The project has strong, clearly identified leadership".	7.92
"The project has clear and regular communications between all parties". 8.06 "All parties involved in the project are and remain committed to the project's success".	7.62
"Project professionals heading up or forming a core team are fully committed". 8.19 "There is regular and careful progress (time, scope, cost) monitoring and review throughout the project".	8.16
"The project has realistic time schedules".	8.33
"Project leadership, particularly, has and maintains commitment and has the skills and resources to inspire commitment in others".	7.63
"The project team engages in positive behaviours which encourage success". 8 "The project team has the influencing skills to engage with necessary internal and external support".	7.7
"End users or operators are able and enabled to take on what the project has produced effectively and efficiently".	8.63
"The project has sponsors who have ultimate responsibility and accountability and are effective".	8.17
"The project has a secure funding base at the point where the decision to start is taken".	8.34
"Pre-project planning is thorough and considered".	8.48
"The project has active risk management and is flexible enough to respond to unforeseen hazards and opportunities".	7.9
"Good practice project management techniques are applied".	8.23
"The project has clear reporting lines".	7.84
"The project environment provides sufficient resourcing and access to stakeholders".	7.73
"End users or operators are engaged in the design and progress of the project".	8.38
"Tight control of budgets is in place to ensure that the value of available funding is maximized".	8.24
"All direct and indirect suppliers are aware of project needs, schedules and quality standards".	7.78
"The project has clarity as to how authority is distributed below the overall leadership level".	7.84
"Other team members are also fully competent in their roles".	7.63
"The project has named and active sponsors".	8.3
"The first, start-off, phase of the project is effective".	8.24
"Overall goals and subsidiary objectives are not in conflict".	7.7
"Where there is any lack of commitment, this is clearly recognized and dealt with".	7.33
"Quality standards are actively used to drive quality of outputs".	8.65
"The environment in which the project operates is project-friendly rather than project-hostile".	7.94
"Where end users or operators are reluctant to engage, the project team has the skills and techniques to increase and improve the quality of their engagement".	8.68
"Any needs for contingency funding are recognized from the start".	8.34
"Post-project review is undertaken to learn lessons for the future".	7.9
"Subsidiary objectives are clearly specified and recognized by all stakeholders who need to be aware of them".	7.5
"Higher and lower tiers of supply chains are co-ordinate".	7.6
"Adherence to other standards is regularly monitored in order to ensure delivery is to best practice levels".	8.16
"The project has sponsors who stay in role for the life-cycle of the project".	8.7

STATISTICAL ANALYSIS

RQ2: What is the relationship between main success factors and success measure?

Relationship between Project Main Success Factors And Success Measures Overall Construction Projects

Table 3: Average Scores of Respondent's Perceptions about the Importance of Subsidiary Factors in Services Sector

Delivery to Time	Delivery to Budget	Delivery to Specification	Delivery to Funders Satisfaction	Delivery to Stake Holders Satisfaction	Overall Project Success
.666	.635	.492	.449	.404	.599
.000	.000	.492	.000	.001	.000
EG	CP	EG	PP&R	EG	EG
.462	.388	.669	.255	.570	.658
.000	.001	.000	.036	.000	.000
G&O	SF	G&O	EG	PPR	G&O
.309	.251	.441	.326	.781	.556
.010	.039	.000	.007	.000	.000
CS	CPT	ASC	EUO	EUO	ASC
.351		.471	.287	.287	.458
.003		.000	.017	.000	.000
ASC		AS	ASC	APS	AS
			.403	.554	.309
			.001	.000	.010
			SO	SO	SO
				.333	
				.005	
				CPS	

* Codes assigned; see in appendix table 1

Almost all the headline factors have an association with the success measures except for proven methods and techniques, in the construction sector, any correlation value above 0 to 1 means that there is a positive relationship. Dancey & Reidy (2004) described a correlation coefficient below 0.4 as 'weak', between 0.4 and 0.6 as 'moderate', and above 0.6 as 'strong'. Keeping in the view the thresholds, it is quite evident that majority of the headline factors are moderately correlated. Similarly the other value below shows the significant level of the headline/main factors. If the Sig (2-Tailed) value is less than or equal to .05,it is concluded that there is a statistically significant correlations between your two variables. That means, increases or decreases in one variable do significantly relate to increases or decreases in your second variable.

Almost all the headline factors have a moderate association with the project success factors so we can conclude that the framework has "real world" validity. It is also quite evident that some of the major factors have higher bearings on success measures; these include end-users and operators, effective governance, goals and objectives and capable sponsors. However, there are some factors that have low significance level like aligned supply chain and supportive organizations.

Relationships between Project Success Measures and Headline Success Factors Recent Construction Projects

Table 4: Relationships between Project Success Measures and Headline Success Factors Recent Construction Projects

Delivery to Time	Delivery to Budget	Delivery to Specification	Delivery to Funders Satisfaction	Delivery to Stake Holders Satisfaction	Overall Project Success
0.323	0.408	0.403	0.268	0.433	0.527
EUO	PPR	EG	PPR	PP&R	EG
0.007	0.001	0.001	0.027	.000	.000
0.252	0.405	0.448	0.464	0.553	0.615
AS	CTS	G&O	SO	PMT	GO
0.252	0.001	.000	.000	.000	.000
	0.491	0.476		0.517	0.624
	CS	ASC		SO	ASC
	.000	.000		.000	.000
	0.676	0.577			0.744
	SF	AS			AS
	.000	.000			.000

The table above shows the significant relationship between the headline/main factors and the success measures in recent projects. It is obvious from the table that almost all the factors were associated to project success factors. The only factor that is missing is the competent project teams. While comparing the overall and recent project results, proven methods and tools and commitment to success that was not found to be significant in the overall results are significant here. i.e the correlation coefficient of “proven methods and tools” is .553, that is between 0.4 and 0.6, which means that it is moderately correlated. However “competent project teams” are not found to be significant in recent construction projects. The factors having high bearings are appropriate standards, secure funding & goals and objectives.

Relationship between Main Success Factors and Success Measures Overall Services Projects

Table 5: Relationship between Main Success Factors and Success Measures Overall Services Projects

Delivery to Time	Delivery to Budget	Delivery to Specification	Delivery to Funders Satisfaction	Delivery to Stake Holders Satisfaction	Overall Project Success
0.455	0.574	0.53	0.392	0.361	0.491
EG	EG	EG	EG	CPT	AS
.000	.000	.000	0.002	0.005	.000
0.451	0.302	0.244	0.38	0.403	0.463
CPT	G&O	CPT	CPT	G&O	ASC
.000	0.02	0.63	0.003	0.002	.000
0.41	0.295	0.588	0.348	0.381	0.371
GO	PPR	GO	GO	PPR	CTS
0.001	0.023	.000	0.007	0.003	0.004
0.295	0.449	0.316	0.72	0.269	0.369
PPR	CTS	PP&R	PP&R	SO	PPR
0.023	.000	0.015	.000	0.04	0.004
0.351	0.454	0.373	0.394	.	0.511
CTS	SF	CTS	PMT		G&O

Table5 Continue.....

Delivery to Time	Delivery to Budget	Delivery to Specification	Delivery to Funders Satisfaction	Delivery to Stake Holders Satisfaction	Overall Project Success
0.006	.000	0.004	0.002		.000
0.396	0.328	0.42	0.334		0.53
SF	EU&O	SF	ASC		EG
0.002	0.011	0.001	0.01		.000
0.429	0.398	0.489	0.382		
ASC	AS	AS	SO		
0.001	0.002	.000	0.003		
0.354	0.286				
AS	CS				
0.006	0.02				

All the headline factors have association with the success measures in service sector, any correlation value above 0 to 1 means that there is positive relationship. Dancey and Reidy (2004), described a correlation coefficient below 0.4 as 'weak', between 0.4 and 0.6 as 'moderate', and above 0.6 as 'strong'. Keeping in the view the thresholds, it is quite evident that majority of the headline factors are moderately correlated. Similarly the other value below shows the significant level of the headline/main factors. If the Sig (2-Tailed) value is less than or equal to .05, it is concluded that there is a statistically significant correlations between your two variables. That means, increases or decreases in one variable significantly increase or decrease in your second variable.

Almost all the headline factors have a moderate association with the project success factors so we can conclude that the framework has "real world" validity. It is also quite evident that some of the major factors have higher bearings on success measures; these include effective governance and goals and objectives, similarly some of the

variables have lower values, which include the competent project teams, supportive organizations, and capable sponsors.

Relationship between Main Success Factors and Success Measures Recent Services Projects

Table 6: Relationship between Main Success Factors and Success Measures Recent Services Projects

Delivery to Time	Delivery to Budget	Delivery to Specification	Delivery to Funders Satisfaction	Delivery to Stake Holders Satisfaction	Overall Project Success
0.617	0.337	0.643	0.538	0.357	0.469
EG	EG	EG	EG	EG	EG
.000	0.009	.000	.000	0.006	.000
0.527	0.481	0.454	0.395	0.322	0.354
G0	GO	G&O	G&O	G&O	G&O
.000	.000	.000	0.002	0.013	0.006
0.3	0.269	0.309	0.307	0.343	0.37
CTS	PP&R	PP&R	CPT	PP&R	CPT
0.021	0.039	0.017	0.18	0.008	0.004
0.399	0.666	0.38	0.468	0.655	0.39
PP&R	CTS	CTS	PP&R	CPS	CPS
0.002	.000	0.003	.000	.000	0.002
0.628	0.302	0.286	0.285	0.262	0.302
CPS	PM&T	PM&T	CPS	PM&T	ASC
.000	0.02	0.028	0.003	0.045	0.02

Table6 Continue.....

Delivery to Time	Delivery to Budget	Delivery to Specification	Delivery to Funders Satisfaction	Delivery to Stake Holders Satisfaction	Overall Project Success
0.394	0.375	0.258	0.277	0.451	0.433
AS	CS	CS	PM&T	EU&O	AS
0.002	0.003	0.048	0.034	.000	0.001
	0.548	0.272	0.27		
	SF	SF	ASC		
	.000	0.037	0.039		
	0.293	0.75	0.462		
	EU&O	AS	SO		
	0.024	.000	.000		
	0.333				
	AS				
	0.01				

Table 6 shows the relationship of success factors with success measures. Factors with high bearings are effective governance, competent project teams, commitment to project success and appropriate standards. All the main factors were found to have moderate to strong relationship with the success measures.

RQ3: What is the relation between subsidiary success factors and project success measures?

Relationship between Main Success Factors and Success Measures Overall Services Projects

Table 7: Relationships between Subsidiary Success Factors and Project Success Measures (Construction Sector)

Delivery to Time	Delivery to Budget	Delivery to Specification	Delivery to Funders Satisfaction	Delivery to Stake Holders Satisfaction	Overall Project Success
0.422	0.623	0.415	0.389	0.365	0.425
H1	H37	H1	H7	H2	H1
.000	0.028	.000	0.001	0.002	.000
0.408	0.404	0.356	0.428	0.402	0.293
H7	H7	H3	H8	H5	H11
0.001	0.001	0.003	.000	0.001	0.015
0.415	0.472	0.289	0.299	0.569	0.554
H8	H22	H4	H33	H7	H35
.000	.000	0.017	0.013	0.001	.000
0.346	0.327	0.469	0.256	0.692	0.338
H11	H27	H35	H19	H8	H18
0.004	0.007	.000	0.035	.000	0.005
0.312	0.612	0.379	0.327	0.274	
H13	H25	H18	H26	H10	
0.01	.000	0.001	0.007	0.024	
0.579	0.498	0.436	0.409	0.403	
H18	H13	H22	H16	H11	
.000	.000	.000	0.001	0.001	
0.325	0.538	0.321		0.414	
H22	H14	H23		H12	
0.007	.000	0.007		.000	

Table7 Continue.....

Delivery to Time	Delivery to Budget	Delivery to Specification	Delivery to Funders Satisfaction	Delivery to Stake Holders Satisfaction	Overall Project Success
0.322	0.275	0.305		0.512	
H23	H18	H34		H15	
0.007	0.023	0.012		.000	
0.266	0.289			0.4	
H37	H21			H16	
0.28	0.017			0.001	
0.43				0.322	
H27				H17	
.000				0.008	
0.349				0.398	

The table above shows the association between the project success measures and the subsidiary factors in construction sector. Similarly, any correlation value above 0 to 1 means that there is a positive relationship. Dancey and Reidy (2004), described a correlation coefficient below 0.4 as 'weak', between 0.4 and 0.6 as 'moderate', and

above 0.6 as 'strong'. Keeping in the view the thresholds, it is quite evident that majority of the subsidiary factors are moderately correlated. Similarly the other value below shows the significant level of the subsidiary factors. If the Sig (2-Tailed) value is less than or equal to .05, it is concluded that there is a statistically significant correlations between your two variables. That means, increases or decreases in one variable do significantly relate to increases or decreases in your second variable. Some of the factors that has high bearings are "The project has sponsors who stay in role for the life-cycle of the project", "Pre-project planning is thorough and considered", "The project has clear reporting lines" & "The project has realistic time schedules" the factors that have low bearings are "The project has clear and regular communications between all parties", "Where there is any lack of commitment, this is clearly recognized and dealt with", "The project team engages in positive behaviors which encourage success".

Relationship between Subsidiary Success Factors and Success Measures Services Sector

Table 8: Relationship between Main Success Factors and Success Measures Recent Services Projects

Delivery to Time	Delivery to Budget	Delivery to Specification	Delivery to Funders Satisfaction	Delivery to Stake Holders Satisfaction	Overall Project Success
0.559	0.462	0.502	0.403	0.277	0.423
H4	H36	H4	H4	H4	H4
.000	.000	0	0.002	0.034	0.001
0.493	0.413	0.566	0.437	0.491	0.303
H5	H37	H5	H5	H5	H5
.000	0.001	0	0.001	.000	0.022
0.364	0.287	0.509	0.44	0.285	0.29
H6	H4	H9	H7	H9	H6
0.005	0.028	.000	.000	0.029	0.026
0.484	0.514	0.437	0.54	0.461	0.314
H9	H7	H31	H8	H24	H7
.000	.000	0.001	.000	.000	0.015
0.458	0.334	0.429	0.406	0.393	0.527
H34	H8	H34	H9	H26	H9
.000	0.01	0.001	0.001	0.002	.000
0.495	0.437	0.288	0.421	0.259	0.26

Table8 Continue.....

Delivery to Time	Delivery to Budget	Delivery to Specification	Delivery to Funders Satisfaction	Delivery to Stake Holders Satisfaction	Overall Project Success
H35	H9	H15	H30	H16	H30
.000	0.001	0.027	0.001	0.048	0.047
0.267	0.263	0.419	0.266	0.301	0.316
H24	H31	H28	H33	H28	H33
0.041	0.044	0.001	0.042	0.02	0.015
0.351	0.545	0.515	0.335	0.291	0.588
H25	H32	H3	H34	H3	H34
0.008	.000	.000	0.01	0.006	.000
0.398	0.339	0.532	0.259	0.264	0.518
H10	H33	H29	H35	H19	H36
0.002	0.009	.000	0.048	0.043	.000
0.33	0.464	0.302	0.438	0.288	0.093
H27	H34	H2	H26	H2	H24
0.011	.000	0.02	0.001	0.027	0.483
0.528	0.28	0.414	0.625	0.269	0.381
H28	H35	H23	H15	H15	H11
.000	0.032	0.001	0	0.04	0.003
0.537	0.35	0.489	0.521		0.305
H3	H25	H1	H28		H27
.000	0.008	.000	.000		0.019
0.623	0.461	0.306	0.355		0.533
H29	H28	H11	H3		H28
.000	.000	0.019	0.006		.000
0.302	0.488		0.521		0.443
H18	H17		H29		H3
0.02	.000		.000		.000
0.365	0.351		0.483		0.333
H2	“H18		H19		H29
0.005	0.006		.000		0.01
0.432	0.44		0.546		0.354
H21	H2		H2		H18
0.001	.000		.000		0.006
0.4	0.333		0.314		0.401
H23	H12		H23		H9
0.002	0.01		0.015		0.002
0.415	0.297		0.303		0.335
H23	H22		H1		H22
0.001	0.022		0.02		0.01
0.35	0.658		0.476		0.417
H10	H1		H10		H23
0.009	.000		.000		0.001
	0.583		0.465		0.575
	H13		H11		H1
	.000		.000		.000
	0.529				0.379
	H14				H10
	.000				0.005

This table shows the association between the success measure and the subsidiary factors. A correlation coefficient that is below 0.4 as 'weak', any correlation between 0.4 and 0.6 as 'moderate', and correlations above 0.6 as 'strong'. Keeping in the view the thresholds, it is quite evident that the majority of the headline factors are moderately correlated, few variables are strongly correlated. Similarly the other value below shows the significant level of the headline/main factors. If the Sig (2-Tailed) value is less than or equal to .05, it is concluded that there is a statistically significant correlations between your two variables. That means, increases or decreases in one variable significantly increase or decrease in your second variable. Some factors bearing strong association are "Pre-project planning is thorough and considered", "The project has a secure funding base at the point where the decision to start is taken". "The project has sponsors who have ultimate responsibility and accountability and are effective", "The overall goal of the project is clearly specified and recognized by all stakeholders involved in the project" & "Quality standards are actively used to drive quality of outputs". However there are some factors that bear low values are "Overall goals and subsidiary objectives are not in conflict", "The overall goal of the project is clearly specified and recognized by all stakeholders involved in the project", "The project has strong, clearly identified leadership & Higher and lower tiers of supply chains are co-ordinate".

CONCLUSION

Generally it is concluded that all success factors are important for project success. There is little variation between the factors. However, almost all factors have an average weight age above 7 shows their importance. Data analysis shows that majority of the respondents of this study are from 31 to 50 years of age. This also shows that majority of individuals working in the respective sectors are between 31-50. This constitutes 31.5% of the total population. Since the age percentage is higher in these sectors, hence we can conclude that the respondents from these sectors were mostly experienced. Descriptive analysis further endorses this statement that the majority of respondents have experience durations ranging from 10- 19 years i.e., 35% and 23% of the total population experience ranges from 20-29 years. Since it is concluded that 58% of the total respondents have more than 10 years of experience in projects. It is also concluded that professionals working in these two sectors; construction and services are mostly highly experienced. Regarding recent ongoing projects, Descriptive analysis shows that 42% of the respondents have more than one year of experience in the recent ongoing projects.

Regarding the success measures/benchmarks, it is observed that all benchmarks/success measures are above 8. That means, all the success measures are very important for the successful delivery of the project. There is little variation between success measures. All the success measures factors are marked above 8 shows their importance. However, delivery within the budget has the highest average of 8.62 amongst all success measures. Delivery within the budget is the most important and also much problematic as APM (2014), suggests that 1 out of 6 projects fails on the budget. Hence it is concluded that budget is the most critical project success criteria in Mansehra amongst all, Descriptive analysis of project manager's perception of success measures based on their importance in Mansehra is like, budget, specifications/standards, time, funder's and key stakeholder's satisfaction and overall.

Regarding two sectors and their respective departments (public/private) taken in the study's account. i.e. construction and service sector. It is seen that the highest average of 8.88 is recorded for secure funding in the public construction sector. Secure funding relates to the budget. Hence it also endorses delivery within budget, the most critical measure amongst other measures. This is similar to Murray's (2001) findings that secure funding is considered as a basic foundation of project success. Appropriate standards and End users and operators also were found to be imperative for public sector construction projects. These factors were ranked at 8.83 and 8.82 respectively. It shows that factors; secure funding, appropriate standard and end-users and operators are critical success factors amongst all other factors in the public construction sector at Mansehra. However within same sector, the factors that scored the least were supportive organizations, competent project teams and commitment to success with average scores of 6.98, 7.53 and 7.63.

Supportive organizations as a success factor is considered the least important factors for project success among all other factors. All other factors scored above 8 shows their importance in the public construction projects. The sequence of the remaining factors based on their importance is as follows; capable sponsors, proven methods and tools, goals and objectives, effective governance, project planning and review, and aligned supply chain.

While in the private construction sector, the highest average of 8.89 was recorded for end-users and operators. End users and operators are the key stakeholders of the project. Yang (2014) termed end-users and operators

critical for project success. Project success requires exploring the end-users needs and constraints to the project and communicating with and engaging stakeholders properly and frequently. Although, the average ratings of the private sector are comparatively lower than the public sector, yet appropriate standards are ranked at almost 9, which means critical for project success. Secure funding and appropriate standards are also ranked above 8.5 shows their importance in project success. These factors scored 8.62 and 8.5 respectively. However, Supportive organizations are considered to be of least important for a project, with an average score of 6.89. It is contrary to literature; Taylor (2013) stated that good governance flourishes in supportive cultures culture in an organization which is critical for project accomplishment. Other moderate important factors in the private construction sector are; aligned supply chain and commitment to success with average rating of 7.55 and 7.6. Competent project teams, goals and objectives and effective governance all scored lower than 8 i.e. 7.71, 7.88 and 7.96 respectively, which make them moderately important for project success. Factors above 8 are very important for project success. Other important factors which are ranked above 8 are; proven methods and tools, capable sponsors and project planning and review.

Since the average score of "end-users and operators" is comparatively higher in private construction projects, the overall construction sector shows end-users and operators as the most important factor amongst all other factors included in the framework considering both public and private departments. End users and operators were ranked the highest with an average score of 8.85. Second most important success factor for over all construction sector is secure funding with average rating of 8.76, followed by appropriate standards as third most important factor with average rating of 8.63. However, the factors that scored below 8 and are moderately important to the overall constructions projects are; supportive organizations with average rating slightly below 7. i.e. 6.94. Commitment to project success and competent project teams both are the second least important factors with the same average rating of 7.62. Aligned supply chain also turned out to be moderately important to project success with average rating of 7.83.

Data analysis also suggests that there is variation between departments (public/private) with same sector. Secure funding to project is the most important factor in construction projects in the public sector. However in private sector construction projects, appropriate standards are considered to be the most important factor. The variation among departments is little however, there are considerable variations among factors like aligned supply chain, goals and objectives and effective governance are highly important for public sector construction projects while are moderate importance in private sector projects.

Project planning and review is highly important for both departments; however its weight age in public sector is considerable higher than that of public which is 8.32 and 8.04 respectively. Similarly, there are also variations among departments within the services sector as well like competent project teams; aligned supply chain are of moderate importance in public sector projects while they are highly important in private sector projects. End users and operators in both departments are highly important. However, there is a noticeable variation between their average ratings. i.e. 8.85 for public sector and 8.41 for private sector projects.

Regarding subsidiary factors of individual headline factors in construction sector projects, results show that all the subsidiary factors are above 7. The highest average of 8.82 was recorded for "Quality standards are actively used to drive quality of outputs". The highly important subsidiary factors along with their average rating are;

- The project has a secure funding base at the point where the decision to start is taken. (8.63)
- End users or operators are engaged in the design and progress of the project.(8.67)
- Adherence to other standards is regularly monitored in order to ensure delivery is to best practice levels. (8.68)
- End users or operators are able and enabled to take on what the project has produced effectively and efficiently. (8.69)
- The project has sponsors who stay in role for the life - cycle of the project. (8.73)
- Good practice project management techniques are applied efficiently. (8.74)
- The project has sponsors who have ultimate responsibility and accountability and are effective. (8.75)

The least important subsidiary factors along with average rating are;

- The project environment provides sufficient resourcing and access to stakeholders. (7.00)
- The environment in which the project operates is project-friendly rather than project-hostile. (7.07)
- The project team has the influencing skills to engage with necessary internal and external support. (7.23)

- Project leadership, particularly, has and maintains a commitment and has the skills and resources to inspire commitment in others. (7.30).

Regarding subsidiary factors of headline factors in the services sector, data analysis shows that subsidiary factors of the imperative headline factors also scored higher. Overall subsidiary factors scored above 7.

Subsidiary factors with the highest average rating for services sector are;

- The project has sponsors who stay in role for the life-cycle of the project. (8.70)
- Where end-users or operators are reluctant to engage, the project team has the skills and techniques to increase and improve the quality of their engagement. (8.68)
- End users or operators are able and enabled to take on what the project has produced effectively and efficiently. (8.63)
- Quality standards are actively used to drive quality of outputs. (8.65) However, the least important subsidiary factors are;
- Where there is any lack of commitment, this is clearly recognized and dealt with. (7.33)
- Subsidiary objectives are clearly specified and recognized by all stakeholders who need to be aware of them. (7.50)
- Higher and lower tiers of supply chains are co-ordinate. (7.60)

Moreover, the statistical analysis suggests that the main factors in the framework have positive relation with the success measures. Factors have moderate to strong relationship with success measures. Main factors were analyzed separately for recent and overall projects. Statistical analysis shows that there are variations among success factors based on project managers' perception of recent and over all projects.For the overall construction sector, the factors that have strong relation with the success measures are effective governance, goals and objectives and end-users and operators. These factors were found to have strongly correlated to success measures in overall construction projects. However, project managers' perception of recent construction projects, appropriate standards, aligned supply chain, goals and objectives, and secure funding. There is the difference among success factors in terms of their significance and correlation in recent and overall construction projects. All the factors have moderate to stronger correlation to success factors in recent and overall construction projects. While in the services sector, there are also variations among success factors and success measures. In overall services sector, project planning and review had the strongest relation with the success measure. However in recent services projects, effective governance, competent project teams and appropriate standards were found to have strong relation with the success measure. It is evident that all the success measures have positive relation with the success measures. Some factors have moderate relation while some factors have strong relation with the success measures but overall all factors have positive relation with the success measures. It is also concluded that all the main success factors have positive relation to the success measures. However, there are variations among success factors based on the project manager's perception of recent and overall projects.

Regarding subsidiary factors, some of the subsidiary factors were found to be related to project success measures in construction sector and some factor in service sectors but overall all the factors were found to have positive association with the project success measures. Tables suggest that although all the subsidiary factors have a positive association with the success measure but it is evident that the subsidiary factors don't have such a strong relationship to the 'success measures' as the 'headline' factors. Though correlation of subsidiary factors with the success measures are weak, moderate or strong but it is evident that the correlation of subsidiary factors with success measures is relatively low.

These findings are imperative for practitioners and project managers and provide project managers with a set of factors based on their importance. Factors that have been identified are critical and need to be considered while planning a project. This research concludes the factors based on their importance for public-private construction and service sector. The sequence of factors in construction sector is as; end-users and operators secure funding, appropriate standards, proven methods and tools, capable sponsors, goals and objectives, project planning and review, effective governance, aligned supply chain, competent project teams, commitment to project success and supportive organization. While in service sector the sequences of factors based on their importance is as; appropriate standards, secure funding, end users and operators, proven methods and tools, project planning and review, goals and objectives, effective governance, aligned supply chain, competent project teams, supportive organizations and commitment to project success.

This study also suggests that while planning a project, the major emphasis needs to be on the critical factors. Almost all the factors are rated above 7, which make the factors important for the project's success. The project manager should consider the most important factors first and give the factors their desired importance while planning or doing project.

Variations among respondent's perception regarding recent and overall projects is very little; there is no substantial difference between respondent's perception for recent and overall projects. However, there are variations in correlations of factors with success measures. The data suggests that older project professionals with more project experience and in project leader roles were more likely to see their most recent projects more successful than were their younger, more junior counterparts. It is also evident from the results that project managers in public sector projects are more experienced and therefore rate success factors considerably higher than the project managers in private sector projects with comparatively minimal experience in projects.

DISCUSSION AND FUTURE RESEARCH RECOMMENDATIONS

This study provides novel insights regarding the critical success factors of project in Mansehra. Since there is lack of consensus among project managers regarding success factors in projects. There is also a lack of consensus among success factors in same individual sectors as well (Frefer et al., 2018). This research attempts to identify factors for the construction and services sector in Mansehra based on their respective departments (public/private). Project managers' perceptions from respective sector and department are taken in account to answer research questions regarding success measures, main factors and subsidiary factors. Factors included in the framework generally seem important to project success. However, this study aims to identify factors in the context of locality as well as identifying factors based on their importance in Mansehra.

Regarding the project manager's perception of success measures, it is clear from the data analysis that "delivery within budget" is the most important success measure among all. In developing countries like Pakistan, there have always been issues related to budget allocation that hinders project performance. APM (2014) suggests that 1 out of 6 projects fails on the measure of delivery within budget. In projects everything is related to everything else. Inadequate estimations of budget are major cause of project delays which in turn affects the second most success measure i.e., time. This is convenient to project management literature, Morris (2013) considered successful management of budgets and fund controls as critical factors in project management. (Baker et al, 1983; Murray, 2001) also considered adequate funding as critical success factor which is the major reason of project delays.

Regarding project manager's perception of main and subsidiary success factors, there is variation among in project managers' perception regarding success factors. Such factors like secure funding, appropriate standards, end-users, and satisfactions have been top priorities for project managers. This is according to the general literature; like Patanakul et al. (2010) argued that the key stake holders and end-users of the project determine the project success or failure. Morris (2013) considered successful management of budgets and fund controls as recognized factor in project management. Similarly, quality standards are critical in gaining a competitive edge over others and making project successful. (Powel, 1993; Samsona and Terziovskib, 1999) termed total quality management as sustainable source of competitive edge and has become one of the important aspects of businesses across the globe.

However still, the importance of factors within the same factors varies. i.e public and private departments. This backs Boyne's (2002) findings that public and private sectors have different aspects towards success factors. Frefer (2018) also stated that success factor vary from sector to sector and even in the same sector. However, Bozeman and Ponomariov (2009) indicated different factors in the same sector are due to differences in the locality of research. In this study, the variation among factors within the same sector is quiet evident. Competent project teams, capable sponsors, aligned supply chain, supportive organizations in services sectors shows considerable variations. Similarly in construction sector, goals and objective, project planning and review, capable sponsors and aligned supply chains show considerable variation between public and private sector.

Surprisingly the factors with the least importance in the framework are somewhat common in both sectors. i.e. construction and sector. Commitment to project success is the least important factor amongst all other factors in the services sector. This is contrary to project management literature. The project team's dedication and commitment directly relates to the work standards of the team. Schatteman et al. (2008) said that quality of the team work has a direct impact on the project success. However, such factors are considered moderately important in Mansehra. It is because being a developing country the moral disparities are still prevalent. The moral standards

regarding honesty, integrity, and self less commitment are minimal. Developed countries have a greater degree of moral values ingrained in their cultures. However, underdeveloped and developing countries still face huge shortfalls in moral values in their cultures. However in the construction sector, supportive organizations are the least important factors amongst all. This is contrary to general literature. According to Morrison et al. (2006) supportive organization is critical for project success. Supportive organizations are considered least important because supportive organization is dependent on other factors like good governance and competent project leaders. Taylor (2013) linked governance with supportive organizations because good governance flourishes supportive cultures. Wang (2009) stated supportive organizations depend on employees' embracing the organization's goals and values as their own. Jiang (2014) also stated that high levels of support will enhance employees' emotional commitment to the organization. Regarding project manager's perception of subsidiary factors. It is evident that the subsidiary factors of particular imperative main factors are also considered important and subsidiary factors of least important main factors also were also considered least important.

Regarding statistical analysis, Pearson's correlation test showed the correlation between success measures and success factors. All the factors are found to have a significant relationship to the success measures. Factors have weak, moderate and strong relationship with success measures. Main factors were analyzed separately for recent and over all projects. There are also variations insignificance and correlation among success factors in recent and overall projects within the same sector. For the construction sector, the factors that have strong relation with the success measures are effective governance. This is in accordance with literature; Remington (2005), good governance is one of the critical success factors and considered to align the role of governing bodies and the organization. Similarly, Wortmann (2009) stated that good governance has become a substance of one desirable value since last decade as it has made it possible to identify the areas meriting attention. Other important factors that were found to have a strong association with success measures are secure funding and appropriate standards. According to literature, Murray (2001) identified 'adequate funding for project as a critical success factor. The security and sufficient project funding are project success factors. Regarding quality standards, Pant & Baroudi, (2008) argues that quality is one of the pervasive parts of businesses across the globe. However the factors, "appropriate standards, effective governance, secure funding and project planning and review" were found to have strong association with the success measures in service sector projects.

Research that has been undertaken for this thesis has highlighted a number of topics on which further research would be beneficial. Several areas where information is lacking were highlighted in this study. Still, some of them need to be addressed. E.g. reasons for the differences between public and private individual sectors, it is observed in the analysis that the there is a difference inexperienced and fresh project professionals' pattern rating individual factors.

Further study is recommended to know about the reason for such difference among project professionals. Due to limited time granted for research, the author was not able to highlight them. It is recommended for further studies to highlight and elaborate the effects of factors on success measures. The scope of this research determines critical success factors of the project in Mansehra. Such studies need to be done in other localities and other sectors should be included in studies as well. Alternatives methodologies should be adapted to investigate the project success factors. It is observed that project managers in the public sector rank the success factors higher than project managers in the private sector. Further research needs to investigate the reasons for these variations in the public and private sectors. It is recommended for professional professionals to give the desired importance to the success factors rather than putting in disproportionate efforts that causes projects substantial loss in terms of time, energy, and resources. Such things need to be considered to ensure effective and efficient project delivery.

CONTRIBUTION OF THE STUDY

This study shows relationship between project success measures and project success factors, besides that the important factors for particular sector is identified and clarifies, how important a factor is for their respective sector. i.e. construction and service sectors. Such studies in Mansehra have not been investigated in the past writings, and this is the first study in Mansehra to rank factors and determine the factors based on their importance. There is a lack of literature on the comparison of private and public in one individual sector. This study shows the comparison of private and public service sector and as well as public and private construction sector. This study gives a set of factors based on their importance for respective sectors. Separate set of success factors for private and public

sectors have been given to address the respective division of the sector. Furthermore, 37 contributory factors have been investigated in this study that was rarely investigated before in Mansehra.The subsidiary factors had moderate to strong relation with the success measure.This study also investigated the project professional's perception about their recent projects as well as overall and provided a separate set of critical factors based on their importance for public and private construction and service sector. This study also shows the relationship of success factors and overall as well as recent projects. This examination will add to the hypothesis and will assist future analysts with having a further point by point field of past information and confirmations. These discoveries give backing to the construction and service sector in the setting of Mansehra and will be useful to project management experts working in Mansehra and somewhere else.

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