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Examining the Impact of Planning on Sustainability of Productive Sector Projects in AJK: The Mediating Role of Stakeholder Engagement & the Moderating Role of Monitoring & Evaluation Practices

by

Attique Ur Rehman

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"This work is dedicated to
my respectable & loving Parents"

CERTIFICATE OF APPROVAL

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Abstract

This research examines how project planning can affect the sustainability of the productive sector projects in Azad Jammu and Kashmir (AJK), and in particular, the mediating effect of stakeholder engagement, and the moderating effect of monitoring and evaluation (M&E) practices. This study addresses the issues that, increasing the lack of sustainability and the impact of development projects within the public sector in AJK, and the dire necessity to develop evidence-based planning frameworks. A quantitative research design was adopted in a questionnaire form that was administered to 310 participants who were members of various relevant government departments and other institutions working on development projects valued throughout AJK. Data analysis was conducted based on a dual approach: The analysis of the structural and measurement models (reliability, convergent and discriminant validity, path coefficients and R^2 values) was performed using Smart PLS-4, whereas descriptive statistics, and communalities test were performed using SPSS. The findings validate that project planning offers a strong positive influence on project sustainability. It was identified that stakeholder involvement mediated this relationship in the importance of the inclusion of stakeholders in decision making and local ownership. The moderating effect of M&E practices was, however, not statistically supported, indicating the need to improve insitutional integration and operational frameworks within the development sector in AJK. The study provides a contribution to the theoretical knowledge base on sustainable project management and provides practical recommendations to the planners, policymakers, and donor agencies in order to improve project outcomes. These findings substantiate the importance of participatory planning and efficient institutional mechanisms to attain the goals of sustainable development of public sector projects.

Keywords: Project Planning, Project Sustainability, Stakeholder Engagement, Monitoring and Evaluation, Public Sector, AJK

Contents

List of Figures

List of Tables

Abbreviations

ADP	Annual Development Plan
AJK	Azad Jammu and Kashmir
Govt.	Government
LSD	Least Significance Difference
M&E	Monitoring and Evaluation
MZD	Muzaffarabad
NGO	Non-Governmental Organization
P&DD	Planning and Development Department
PP	Project Planning
PS	Project Sustainability
SPSS	Statistical Package for the Social Sciences
TBL	Triple Bottom Line

Chapter 1

Introduction

The research study's introduction segment combines background information with gap identification, followed by problem statement, research questions, objectives, hypothesis, research significance, and theoretical basis with variable definitions.

1.1 Background

The productive sector is one that is crucial in the development of economic and social growth, especially in developing areas such as the Azad Jammu & Kashmir (AJK). Project strategy implementation in this sector is a critical success factor for achieving sustainable development goals since all work to not only achieve the immediate goals of projects but also positive, sustainable impacts on the environment, economy, and society.

Very few of these projects have considered sustainable development; hence, once the project gets to the completion phase, many of the projects do not achieve the intended sustainable outcomes due to poor planning, lack of effective stakeholder engagement, and monitoring policies. This research study intends to fill these gaps by examining the moderating role of Monitoring and Evaluation (M&E), mediating role of Stakeholder Engagement in the link among project planning, and the sustainability of productive sector projects in AJK.

1.1.1 Project Planning in the Context of the Productive Sector

It is universally acknowledged that successful project planning takes a significant role when it comes to the fundamental blueprint of the project to contain the specific goals and milestones, budget and cash flow plans, risk management reports, and ways of addressing the various stakeholders (Islam, 2025; Kerzner, 2022). In the productive sector, consisting of agriculture, industries, commerce, and minerals, several issues are present in the formulation of project plans in terms of consideration of availability of resources, market condition, environmental, and socio-economic condition of the region (Poltorak et al., 2024). The significance of project planning has been demonstrated in a lot of research studies that indicate linkage between streamlined planning processes, increased project outcomes, and increased degrees of sustainability (Orieno et al., 2024). The productive sector in AJK is the most crucial factor in its economy, and if the right planning is done on huge projects, then it has the potential to change the economic status of AJK in terms of generating people's livelihoods, employment opportunities, and efficient resource development.

The proper planning includes early incorporation of sustainability indicators and expectations of stakeholders hence enhancing resilience and sustainability of development projects in the long run (Huzooree and Yadav, 2025). In addition, project planning entails a path to an effective implementation of individual projects in the form of setting clear objectives, period, budget, risk mitigation measures, performance measures. It has been argued that structured planning frameworks in projects have a higher success rate in ensuring the project remain on track in the long run (Attah et al., 2024).

In projects in the productive sectors, complex systems have to be dealt with, numerous stakeholders including government have to be managed, and in many cases, there is a large amount of financial investments at risk to which improper planning may result in cost increases, project delays, and not meeting the developmental objectives (Ukeyima, 2024). Also, participatory planning methods that involve the stakeholders in establishing the problems, objectives, and intervening measures are

being adopted. The processes make a project more valid and facilitate a better execution of tasks. Therefore, planning is not anymore an internal managerial activity but a wider strategic measure that mediates technical goals to community goals and an environmental custodian.

However, the main problem is that many projects in the region have poorly defined or prepared plans without paying attention to the important aspects of sustainability (Skouloudis et al., 2023). Project planning in the AJK productive sector should encompass sustainability strategy from the outset, mainly due to geographic, environmental, and social conditions that are bestowed on this region. It has been posited that the projects that is well planned should be multi-dimensional or multi-pronged in that the short term aims of the project must be synchronized with long term sustainable aims, the resources should be utilized optimally in terms of productivity, and stakeholders must be engaged to be involved in the process of planning (Mishra, 2024). This alignment is critical, especially in AJK, because development projects have limitations such as inadequate funding, environmental-changes impact, and political systems.

1.1.2 Productive Sector Projects in AJK: A Critical Overview

The Annual Development Programme (ADP) in AJK comprises a wide portfolio of productive sector schemes that span from agricultural improvement to industries, commerce, and minerals. These are intended to increase economic activities, enhance productivity, execute social works, and uplift the socio-economic standards of the population. Dependence on natural resources, as well as the favorable geographic location of the region, make it critical to focus on the sustainability and future development of productive sector projects.

However, some studies suggest that there is a lack of a planning framework for meeting sustainable productive sector projects in AJK due to limited public and private stakeholders' involvement and poor assessment of environmental consequences (Hussain, 2001). Most of the projects fail to achieve their intended outcomes or impacts as intended or cannot sustain the benefits over long periods due to

failure to initiate the project, manage the resources and adopt them by the local community (Kerzner, 2025).

Project management and sustainability have shifted towards broader social and environmental aspects to encompass sustainability in additional social and environmental considerations, which were implemented through the concept of the Triple Bottom Line (TBL) (Nogueira et al., 2025). This shift of paradigm makes the planners and implementers regard the project success in terms of how it would benefit in social equity, environmental protection and economic viability. When referring to the situation in the developing countries, where national development schemes tend to finance projects in the productive sector, sustainability is not merely a question of technical condition but a governing priority (Ahtesham, 2024).

The focus of projects of the productive sector is often centered towards enhancing local economies, growing employment, enhancing livelihoods, and enhancing value chains. Unless such projects are well planned as regards sustainability, they can end up being mere short-term interventions that have minimal long-term relevance. An example is that an agricultural project can be able to increase yields in the short-term, but unable to sustain soil health and market connections in the long term. Industrial projects can similarly stimulate economic activity and cause environmental damage in case environmental protection is not regulated (Adanma and Ogunbiyi, 2024).

These challenges demonstrate the need for complex, efficient project planning mechanisms to ensure that the socio-economic and environmental landscape of the region is considered. In a recent study conducted by (Turner, 2020), the authors substantiate the significance of the planned project approach to the improvement of regions and communities, as development projects are shaped by diverse factors of extrinsic context that refer to political, natural/physical environments, and socio-cultural conditions in the context of developing areas. A second framework on project management is flexible planning, as it helps the project manager to absorb developing changes, thus a major technique in ensuring the sustainability of the project in a dynamic environment (Ahmed, 2024).

1.1.3 Characterizing Project Sustainability for the Productive Sector in AJK

Sustainability is another key consideration in project management due to the efforts to attain consistent value enhancement beyond project life cycles. Project sustainability refers to the capacity of a given project to carry on making societal, economic, as well as environmental gains following the termination of the stipulated project period (Zidane, 2025). Project sustainability is the ability of a project to continue yielding societal, economic, and environmental benefits after the completion of the fixed project duration. Since development projects in AJK focus on natural resource use, achieving sustainability is not only an aim but a prerequisite for the prosperity of the region. Literature confirms that sustainability issues should be incorporated into the earliest stage of productive sector project development. The evidence indicates that when sustainability is included in the plan at the initial stage, it is much simple to gain the popularity of the local community, receive financing and avoid problems such as excessive consumption of assets and pollution (Tamang, 2025). The evidence indicates that when sustainability is included in the scheme at the initial stage, it will be more manageable to attract the support of a local community, find the financing, and avoid such problems as excessive use of resources and pollution (Tamang, 2025). Specifically, initiatives that revolve around sustainable agriculture, energy and communities served provide more self-sustaining and long-lasting outcomes (Ejedegba, 2024).

In underdeveloped nations, sustainability encompasses economic-related and social sectors, such as provision of employment to individuals, support in development of skills, and growth of educated professionals within their part of the country (Hariram et al., 2023). Hence, there is a need to integrate approaches to take care of these factors into project planning, so that projects are pro-focal points for positive impacts on communities and the economy. When sustainability is not factored into the planning stage, projects become economically unprofitable, environmentally degrading, or socially sensitive, with negative consequences taking the longest time (Kealy, 2024).

1.1.4 Deficiencies and Barriers in the Implementation of Sustainability in the Productive Sector Projects of AJK

On part of the developmental projects in AJK, especially in the productive sector, many interrelated factors make it difficult to ensure that such projects are sustainable. Such challenges can hinder the impact of projects, reducing the chances of realizing sustainable benefits that benefit the local economy as well as the environment. Some of the main issues include accessibility of resources, environmental concerns, socio-political issues, as well as low engagement of stakeholders.

One of the biggest challenges for sustainable development in AJK therefore, remains the absence of sufficient financial and technical capital. Most of the projects lack funding, and this limits their scope and also limits the opportunity to employ quality technical professionals. These financial constraints lead to the inability of projects to effectively mitigate sustainability issues, which in turn influences the capacity and potential of the projects. If necessary funding is not available, then it becomes challenging to apply complex and innovative strategies that may improve work sustainability (Kealy, 2024). As such, projects can fail to deliver their objectives; for this reason, projects are unlikely to attain their desired goals and may end up as ventures with short-term successes rather than sustainable improvements.

Another issue has to do with the environmental sensitivity of AJK as a region. The area also has a rich, but sensitive, bio-physical/cultural production landscape, which makes it vulnerable to disasters like landslides, floods, and earthquakes. Such risks occur externally with respect to the environment and can affect projects if they are not included in the contingency plan. As highlighted in AJK, where the number of natural disasters hits regions recurrently, it becomes mandatory to incorporate assessment of risk and climate into the planning of projects (Rehman et al., 2022). Failure to address these aspects could result in projects that are relatively frail to sustain environmental forces, bearing a higher probability of project lack of sustainability.

The socio-political factor for AJK also has an important bearing on the sustainability of projects that are set in the region. Stability in the political environment is relative since the politics of countries in that region are evolving, creating volatility in the environment and consequently policy disruptions. This instability affects the planning and implementation processes of development projects, among others, since a change in government brings new orientations and, at times, leads to the abrupt cessation of project funding. These disruptions can lead to time wastage, wrong allocation of resources, and sometimes the quashing of already ongoing projects (Abuamria et al., 2024). In such a context, for projects to remain sustainable, there is a need for more emphasis on developmental planning that is dynamic to accommodate fluctuating political circumstances in the development process towards the attainment of the sustainable development goals.

The last of the challenges that can be considered critical for completing projects in AJK is the ability to manage stakeholders properly. Community, government, and private sectors must be involved so that people feel the project is important, and they benefit from and support rather than resist it. However, one common problem is that processes related to consultation and participation occur at the beginning of any given project. Failure to involve relevant stakeholders is a common cause for resistance, misunderstanding, and limited popular support of the reflective project (Freeman and Menghwar, 2024). Such absence of participation can make the projects and their implementation questionable, and, consequently, make the success of a project more difficult to achieve. Stakeholder engagement should be clearly communicated, ensuring stakeholders are involved in the process, and trust is developed with them.

To address these challenges effectively requires a holistic and flexible approach, which considers sustainability as a core standard in the processes of the project life cycle. This means taking sustainability aspects in the plan and design stages, through the implementation and evaluation phases.

Thus, projects will be equipped with ways to deal with the problem that attends to financial and technical considerations, external risk and pollution, socio-political change, and concern with the stakeholders. This is particularly an important fact considering the development projects of various segments of the productive sector

in AJK, where such coherent and centrally driven effort is necessary to create a positive impact that is sustainable in the long run.

1.1.5 Monitoring and Evaluation as a Moderator of Sustainability

Monitoring and Evaluation are commonly accepted as one of the pivotal strategies for improving project performance and achieving sustainability. M&E is the process of collecting, analyzing, and utilizing information in the course of monitoring a project, evaluating its effect, and informing its decision-making process (Mutune and Gatobu, 2024). Wherever necessary, AJK's productive sector projects, M&E practices serve as a moderating variable that can enhance or weaken the relationship between the project planning and sustainability. It has been suggested that well defined and relevant M&E systems enable projects to pre-anticipate likely risk and hazard, provide greater flexibility, and meet stakeholder needs (Pourrahimian et al.).

In addition Monitoring and Evaluation (M&E) role has widened and now encompasses a combination of strategic learning and adaptive management. Sound M&E enables evidence-based decision -making process, course correction, and result-based accountability (Habtamu, 2024). M&E systems provide the feedback loop in sustainable project management where planning inter-relates with performance to enable sustainability indicators to be evaluated by project teams to fill the gaps and ultimately enhance improvement (Kamau et al., 2024).

This aspect of project management is especially relevant in the AJK setting, as the workings of different projects can be generally characterized by uncertainty and resource constraints. This is because the M&E system offers project managers real-time information to facilitate modifications that will improve sustainability results within projects (Tengan and Aigbavboa, 2021).

Integration of the former studies in examining the influence of M&E in mediating the planning-sustainability is achieved with the outcome of research showing that projects with well-organized mechanisms of monitoring were likely to achieve sustainability in their goals and the advantages generated by such goals (Matolo,

2024). In AJK, the enhancement of M & E practices may offset most of the causes of Project-Sustainability-Deficiencies, such as ineffective resource utilization, inefficiency, and lack of stakeholder participation.

1.1.6 Mediating Role of Stakeholder Engagement

Through stakeholder engagement, projects establish links between their strategic design and sustainability by confirming that project targets fulfill community interests together with legal demands and upcoming development needs (Silvius and Schipper, 2019). Active involvement of stakeholders who include government agencies, together with local communities and private sector partners, leads to sustainable project results (Aaltonen et al., 2024). The participation of stakeholders fosters transparency, enhances resource-efficiency, and minimizes risks, contributing to economic, environmental, and social sustainability.

Project implementation receives greater strength through stakeholder engagement using a proper strategy that allows effective communication and conflict resolution, and collaborative decision-making (Onusi, 2024). Project success research shows that high stakeholder involvement leads to decreased project disruptions while improving external change adaptability (Zhang et al., 2025). The strategy of stakeholder engagement protects infrastructure and productive sector projects operating across complex socio-political conditions of developing regions such as AJK by ensuring community-driven development.

The Mediating role of stakeholders-engagement proves crucial to sustainability projects because it maintains a balance between economic and environmental, and social elements (Banori, 2025). Participation of stakeholders leads to the creation of sustainable policies and enables the development of tracking systems and aids in reducing risks caused by negligence or resistance (Iandolo et al., 2024). The practice of stakeholder engagement allows projects to use local knowledge and expertise, resulting in the adoption of innovative solutions that match local conditions (Blak Bernat et al., 2023).

The other important element that determines the outcome of the project is stakeholder engagement. The involvement of the concerned stakeholders such as the beneficiaries, governmental officials, and the nongovernmental organizations will

increase the transparency of the project, make the project correspond to the local needs, and develop a sense of ownership (Zeleke, 2025). Participatory planning and decision-making processes are becoming increasingly dependent as a best practice that can enhance project sustainability, especially in the form of decentralized jurisdiction and politically vulnerable territories (Sebunya and Gichuki, 2024).

Stakeholder engagement acts as a mediator between project planning and sustainability, according to the study hypothesis. The involvement of stakeholders through collaboration and accountability, together with community awareness, creates better long-term sustainability results for structured planning initiatives. The future research needs to develop stakeholder engagement models that match the specific socio-economic conditions and environmental factors found in productive sector projects in AJK.

1.2 Gap Analysis

Due to the increasing emphasis placed on sustainability in development projects, project management practices have become the subject of extensive research, especially with respect to public-sector projects. As the literature relates to project management, there has been a growing attention towards project planning as one of the critical success factors in different industries. However, one of the vital areas that is still lacking sufficient research investigation is the link between intense project planning and the sustainability of productive sector projects, especially in regions that may experience diverse challenges, for instance, the AJK. Most of the existing literature is focused on the outcomes of planning from a short-term perspective, such as the effectiveness of the project in terms of compliance with budget and time limits, while the question of planning effects on the project's sustainability and further development is left beyond the focus area (Kerzner, 2025). In the case of productive sectors, including agriculture, industries, commerce, and minerals, the gaps regarding the topic indicate the lack of information about how the practical applications of strategic planning can lead to the achievement of long-term objectives. This issue is closely related when socio-economic and environmental conditions in the regions vary significantly, and the application of standardized solutions may not be suitable (Ika et al., 2024). One significant

limitation that has been observed in the literature is the tension of performing structured formal project planning while planning for the contingent and unforeseen. The work by (Zwikael and Gilchrist, 2025) also reveals that as much as formal planning enhances control and predictability, it comes at the cost of flexibility, an important parameter for handling risks and developing sustainability solutions. This problem is even more acute in areas such as AJK because the projects have to be implemented under constantly changing socio-political environments and other risks. Previous research has not sufficiently explained and adequately explored how many planning approaches can be adapted more specifically to the needs of productive sector interventions, many of which must evolve in order to sustain their activities over the long-term.

Another topic that has received a lot of attention, but frequently in fragmented form, is Monitoring and Evaluation, or M&E. People involved in project management recognize that M&E allows for regular course changes based on the insights it provides at each step (Jacinta et al., 2024). However, there is limited research on how M&E could regulate the impact of planning on achieving sustainability. The potential of M&E to enhance planning's impact on sustainability in productive sector projects is still understudied, indicating that future research should look at how closer integration of M&E with planning phases can improve results. Research shows an important knowledge deficit in the field because stakeholder engagement serves as a vital linking mechanism between project planning and sustainability. Research by (Siddiqui et al., 2024) identifies stakeholder participation as essential to decision-making, yet project sustainability related to productive sector projects has an insufficient connection to stakeholder engagement. Existing research fails to explore the complete process through which stakeholder engagement creates economic and social, and environmental sustainability, especially within constrained resource areas (Saka-Helmhout et al., 2024). Without properly taking into consideration the unique requirements and problems of projects in the productive sector, current research typically generalizes project management insights across sectors. For instance, planning procedures like procurement and scheduling are emphasized as being essential to project success in the construction sector (Atela, 2024). However, the dynamics in other productive sectors could suggest different

strategies, especially in emerging areas like AJK, where project success is greatly influenced by local cultural, economic, and environmental considerations. The lack of specificity in the literature emphasizes the need for sector-focused research that looks at how planning processes could be adapted for various circumstances. As such, recent research has suggested the approach of "counterproductive planning," that is, when excessive-planning limits creativity or flexibility in the case of less risky projects (Zwikael and Gilchrist, 2025). This knowledge is important for productive sector projects in areas such as AJK, where intensive planning is not required, and situation analysis makes it possible to know the level of planning so as to be effective. It is very important to seek the right combination of enough and excessive-planning, in the context of enhancing sustainability without constraining project implementation. This aspect is still quite less explored, which signifies the necessity for researches in the area that look at how different risk levels of the project will determine the planning of the project.

The focus on integrating sustainability into project management has developed, but there are still significant gaps exist in our understanding of how sustainability affects long-term outcomes. As noted in a research study by (Cirino and Wanjiku, 2022) sustainability aspects are gaining momentum but traditional project management approaches leave much to be desired in terms of depth in discussing the issue of sustainability. For this reason, sustainability in projects is more applied reactively rather than proactively, underlining a need to move for project managers to strategize the adoption of sustainability from even the very early planning stages (Silvius et al., 2017).

This means that while sustainability is recognized, it is still not very integrated into planning frameworks that guide productive sector projects, especially in demanding environments such as AJK. In summary, the reviewed literature reveals areas that require consideration to enhance understanding of whether and how planning project activities influence factors related to sustainability in productive sector projects. The research gap lies in the need for studies that move beyond the typical metrics of the success of a project toward how extensive planning creates long-term benefits. In addition, the potential of M&E as a moderating factor and Stakeholder Engagement as a mediating factor that can enhance the impact of

planning on sustainability must be further investigated, particularly within the AJK context. Implementation practices for project management made-to-order to specific productive sector characteristics, with a balance between formal planning and flexibility, will also be key. Addressing these gaps will provide important insight into how sustainable project outcomes can be achieved in regions facing such complex challenges.

1.3 Problem Statement

The aspect of inefficient planning leads to numerous project failures in Pakistan alongside other developing nations (Khan et al., 2019). The quality and structure of planning initiatives determine when projects begin and end, how funding is distributed, and how many resources are assigned, thus affecting project sustainability (Slaeat, 2024). This inadequate planning in the short term leads to lack of long term consequences of success/achievements in the projects, since they would not be able to convert them into sustainable gains on the development front, particularly in the key sectors such as infrastructure, agriculture and energy sectors(Bhattacharya et al., 2015). Even though a growing emphasis on sustainability within project management, the productive sector projects often struggle to achieve long-term sustainable outcomes, particularly in the developing regions like Azad Jammu and Kashmir (AJK). The effective project-planning for a project is universally recognized as a critical factor in ensuring project success, yet many planning frameworks focus primarily on short-term performance indicators such as cost, schedule, and quality-rather than sustainable impacts (Kerzner, 2023).

This limited focus excludes the different facets of productive-sector projects that link social, economic, and environmental sustainability. In more specific details, the available body of academic literature does not have a lot to say about the interdependency between, extensive project planning and sustainable development in the long-term within the areas with the socio-economic and environmental characteristics (Borowski and Patuk, 2021). The gap becomes especially apparent in AJK's productive sector, where conventional project management practices may inadequately address the complexities necessary for fostering long-term sustainability. There is a recognition that M&E promotes the long-term success of projects, but how it helps to moderate

the connection between project planning and sustainability is yet to be fully examined. It has been noted in several studies that M&E offers opportunities to adjust plans during the project work, but its capital is limited in sustainability-focused projects as of now (Montano et al., 2024).

The achievement of sustainable, productive sector projects faces significant difficulties because of insufficient stakeholder engagement practices. Project outcomes depend heavily on stakeholders such as government agencies and local communities, and private sector entities because they provide essential feedback and maximize resource use and sustain long-term commitment according to (Martínez-Peláez et al., 2023). Projects in developing regions suffer from insufficient stakeholder inclusion or poor systematic project planning, which creates stakeholder resistance and operational inefficiencies and creates unsustainable results (Wojewnik-Filipkowska et al., 2021). Project success becomes limited due to ineffective stakeholder participation, which leads to implementation delays and reduced sustainability outcomes (Di Maddaloni and Davis, 2017). Stakeholder engagement serves as a critical element to analyze how it affects the sustainability relationship between project planning stages, so projects work toward inclusive, adaptable results that align with development goals. In places like AJK, where there are both resource issues/constraints, and social-political problems exist, it is important to understand about the impact of stakeholder-engagement, monitoring, and evaluation have on planning and sustainability. This research work sets out to cover these gaps by examining the impact of project planning on sustainability in AJK's main productive sector projects, especially, how M&E and Stakeholder Engagement play a part. This way, the study aims to help create improved project management methods, which deal specifically with the region's problems.

1.4 Research Questions

The study aims to answer these questions:-

Q1. Does Project Planning impact the sustainability of productive sector projects in Azad Jammu and Kashmir (AJK)?

Q2. Does Stakeholder Engagement mediate the relationship between project planning and project sustainability?

Q3. Do Monitoring and Evaluation (M&E) practices moderate the relationship between project planning and project sustainability?

1.5 Research Objectives

This research aims to achieve these goals:

1. To examine the impact of project planning on the sustainability of productive sector projects in AJK.
2. To investigate the mediating role of stakeholder engagement in the relationship between project planning and project sustainability.
3. To investigate the moderating role of Monitoring and Evaluation (M&E) practices in the relationship between project planning and sustainability.

1.6 Hypotheses

H1: Higher levels of project planning positively impact the sustainability of productive sector projects in Azad Jammu and Kashmir (AJK).

H2: Stakeholder engagement mediates the relationship between project planning and project sustainability in AJK.

H3: Monitoring and Evaluation (M&E) practices moderate the relationship between project planning and the sustainability of productive sector projects in AJK.

1.7 Research Significance

The main benefit of this study is that it fills key holes in project management, mainly within AJK's productive sector. Though sustainability is now a priority in the project management, many projects in the developing countries are still unable to be sustainable, mostly because of both social-economic and environmental aspects (Silvius, 2017). This study aims to offer new insights by exploring how robust

project planning can promote sustainability in AJK, and how these strategies may be tailored to suit the particular situations of these productive sector projects. Another important aspect of this research is that it addresses how monitoring and evaluation (M&E) practices influence sustainability performance, as well as identifying the role played by the stakeholder collaboration. The research provides substantial value to the sustainable project management discipline through its evaluation of Stakeholder Engagement as a mediation factor between Project Planning and Project Sustainability. A wide research literature supports Project Planning as essential for achieving project success together with sustainability (Orieno et al., 2024), yet the specific methods by which planning leads to sustainable delivery lack sufficient investigation. Stakeholder engagement stands as a vital connection that helps reveal project goals to stakeholders and builds their involvement and collective responsibility to validate that objectives match stakeholder demands (Bahadorestani et al., 2020). The engagement of stakeholders is crucial to developing regions since without achieving the engagement, the regions face time delays and undesired performance inefficiencies together with low sustainability impact (Ebekozien et al., 2024). Monitoring & Evaluating (M&E) is widely acknowledged as a means to strengthen project accountability, and learning. However, its ability to improve the overall effectiveness of project planning, especially in achieving long-term sustainability, has not been sufficiently explored (Montano, 2024). Tracking performance through Monitoring & Evaluation (M&E) Practices serves as a vital moderation tool for sustainability because it gives ongoing feedback and helps with performance tracking and adaptive decision-making (Muniu, 2017). Literature about the interactive relationship between Stakeholder Engagement and M&E practices is insufficient in project management research. The research explores how Stakeholder Engagement enhances Project Planning effects on Sustainability through M&E practices that enable adaptive decision-making for project interventions under changing environmental conditions.

This research investigates how M&E could be utilized to influence the planning process by incorporating feedback mechanisms, mitigating the challenges arising from the unpredictable nature of development projects in AJK. The findings have considerable significance for stakeholders, project managers, and lawmakers who

engage in developing the productive sector projects in AJK, as they offer methods that could enhance project outcomes and contribute to the lasting benefits.

Furthermore, the research data will guide policymakers and project managers, and development organizations so they can create projects that focus on planning and monitoring while incorporating stakeholder views throughout project stages. The findings are also expected to help bridge the gap between generic project management models and the distinct needs of AJK's productive sector, where traditional approaches may not fully account for the region's economic, social, and environmental intricacies. Thus, by identifying the facets of project planning that are most influential in relation to sustainability in this case, the study will advance the project management standards and promote more sustainable development in areas similar to the case regions. This work is not only useful for AJK but also potentially useful to other developing areas with similar circumstances to improve the efficiency of effective project planning for sustainable development.

1.8 Theoretical Foundation

This research applied the Triple Bottom Line (TBL) Theory as an organized structure to evaluate sustainability within productive sector projects. The TBL theory remains crucial for understanding project planning effects on sustainability because sustainable development growth focuses on Azad Jammu and Kashmir (AJK) and beyond. The TBL framework consists of economic and environmental sustainability along with social sustainability, which expands success evaluation beyond financial metrics. The research adopts TBL theory to study the effects of planned approaches on sustainability results and the way M&E practices, and effective stakeholder engagement influence this relationship.

The Triple Bottom Line (TBL) Theory supports Project Sustainability since it focuses on environmental, economic, and social aspects, which validates the need for sustainable planning to reach long-term achievement. The research objective aims to understand how project planning affects sustainability because of this theory.

1.8.1 Triple Bottom Line Theory (TBL)

This study is anchored on the Triple Bottom Line (TBL) theory, which is a guiding principle in project management focused on achieving the sustainable outcomes by integrating environmental, economic, and social factors (Elkington and Rowlands, 1999). TBL approach replaces the usual performance indicators of project-success metrics with the sustainability and plays a central role in guiding project management strategies and the decisions.

TBL theories guide effectiveness in project management by demonstrating that sustainable practices should be addressed at the outset to produce long-term benefits and minimize unwanted impacts. By implementing TBL techniques within the project planning enhances the sustainability, stakeholder satisfaction, and compliance with global sustainability standards (Goh et al., 2020). Applying the TBL framework ensures balancing of the developmental requirements and sustainability imperatives in AJK's productive sector investments, owing to its precarious environmental situation and socio-economic issues.

The Theory of TBL mirrors aspects of the Monitoring and Evaluation (M&E), as M&E allows organizations to monitor project performance with the sustainability indicators. As (Blak Bernat et al., 2023) point out this, TBL helps to ensure projects are open and managed responsibly, making them flexible in both economic, and social ways to obtain the sustainable results. (Elkington and Rowlands, 1999) brought up the Triple Bottom Line framework, which puts greater emphasis on the sustainability while planning, and carrying out any project. TBL theory highlights in project management that, by adding sustainability to the initial planning phase, projects can last longer, and affect the environment in a better and positive way. The researcher points out that, by incorporating TBL in project planning helps the project to become more robust, meet the needs of the relevant stakeholders, and contribute to the sustainability on a global scale (Jamali, 2006). The achievement of TBL Theory sustainability objectives depends significantly on continuous stakeholder involvement during project phases. Project planning hinges on Stakeholder Engagement, which connects sustainability initiatives to planned operations as it secures proper consideration of economic and environmental, and social elements

in all decision-making systems (Silvius and Schipper, 2020). Projects that involve active stakeholder participation gain better transparency measures alongside inclusive practices, which minimize risks and produce sustainable outcomes according to (Di Maddaloni and Davis, 2024). The success of implementing sustainable project management through TBL Theory heavily depends on stakeholder participation and involvement. Most sustainability initiatives fail to move beyond theory because essential stakeholders refuse to engage actively (Motalebi et al., 2025). This study defines stakeholder engagement as an intermediary force that enhances the sustainability results of project planning activities, which support TBL principles.

Project planning achieves better adaptability to actual field challenges by adding stakeholder perspectives and strengthening all sustainability dimensions found in TBL. For achievements in the productive sector in Azad Jammu and Kashmir (AJK), where both environmental and socio-economic challenges are found, TBL theory helps to ensure balance for both, the developmental needs of the area and sustainability objectives.

1.9 Definitions of Variables

1.9.1 Independent Variable Project Planning

In the project planning the methodology, goals, resources, timelines and evaluation of potential risks are all carefully organized for completing the project objectives. This develop a foundation for project management, guiding teams on group work, how to use resources efficiently, and recognizing potential threats leading to certain issues (Kerzner, 2022). In most cases, the focus of project planning is mainly on scope, time and cost. However, the current project management has shifted to incorporate the sustainability aspect during planning to ensure it captures the multifaceted aspects of the environment, society, and economy. In productive sector projects, planning is a critical project activity given its role in integrating the project with sustainability requirements. Moreover, it incorporate the approach of how to reduce wastage of resources, improve operand with the stakeholders, and manage environmental threats in the attainment of project goals and objectives (Martens and Carvalho, 2017). For instance, planning in productive sectors in AJK requires

consideration of the region's socio-economic and physical environment constraints including; an immature infrastructural base, political instability, and vulnerability to natural disasters. Integrating sustainability issues in the planning of projects would help project managers ensure that the end deliverables are sustainable and sustainable with the needs of the community and other stakeholders. Project planning is therefore a competitive strategy and at the same time a framework that can help to deliver sustainable projects in the complex project environment.

1.9.2 Sustainability of Productive Sector Projects (Dependent Variable)

Sustainability is defined as the delivery of long-term value through financial, social, and environmental returns. As for the productivity sector projects, sustainability plays an important role in utilizing the opportunities provided by the development projects within the framework of the creation of stable development prospects. This entails not only the achievement of timely goals for satisfying the stakeholder's requirements but also sustainable management by reducing environmental impacts, enhancing business sustainability, and supporting the social well-being of future generations (Silvius et al., 2017)

Hence, the sustainability of projects is more important in AJK, where the productive sector has a big role in economic growth. Sectors of agriculture, industries, commerce, minerals and many other sectors consequently require extensive inputs from the local ecosystems. Lack of consideration of integration of sustainable development management ends up in deriving quick gains, destruction of the natural environment, or social disturbances. Hence, sustainability involves strategic intervention to meet stakeholder needs, and control for risks while incorporating adaptive practices into the project life cycle. Consequently, the planned goals of productive sector projects are sufficiently met and valuable contributions to local communities as well as a resource base are developed and promoted.

1.9.2.1 Project Sustainability as a Second-Order Variable

In this present project, project sustainability is considered as a 2nd order, latent construct, which has three reflective first-order dimensions: economic sustainability,

environmental sustainability, and social sustainability. This multilateral vision is in line with the well-recognized Triple Bottom Line (TBL) theory by (Elkington and Rowlands, 1999) which visualizes sustainability as the synergies of economic, environmental and social performance. Instead of looking at sustainability as one-dimensional linear result, this model gives us a broader, more detailed picture on how projects must always be relevant to longer-term development objectives along various dimensions.

The second-order of project sustainability modeling is well established in the current literature of the project management. It is more theoretically advanced and methodologically flexible to measure complex and multifaceted phenomena by using a structural equation modeling (SEM). The second-order constructs should be used when interested in describing higher-level concepts comprising of several interrelated dimensions, especially in measurement of construct such as sustainability (Liaqat et al., 2024). This modeling strategy diminishes the complexity in the measurement and maintains the richness of the theory, which makes this modeling strategy best suited to PLS-SEM-based empirical studies.

The second order structure was used because of two reasons. To begin with, sustainability is by nature multidimensional and thus cannot be properly measured using a unidimensional construct. According to TBL framework, any sustainability evaluation should encompass all three dimensions, with economic resilience, environmental stewardship, and social inclusiveness having to be incorporated (Elkington and Rowlands, 1999) . Second, methodologically, second-order constructs can be specified with greater parsimony based on the desire to model general sustainability outcomes with due consideration to factor diversity (Sarstedt et al., 2024).

1.9.2.2 The Second Order Variable Dimensions

a) Economic Sustainability

This dimension is the capability of a project to deliver and maintain economic value in the long term. It consists of financial efficiency, resource optimization, and contribution to the local economic development (Challoumis). Economic sustainability in the development of projects in the public sector means that the investment does not lose its value once the project has been completed especially

in places such as AJK where sustainability is a major issue of concern in the longer term.

b) Environmental Sustainability

Environmental sustainability focuses on reducing adverse environmental effect during the entire project cycle. It entails sustainable resource consumption, environmental protection, and meeting environmental standards and environmental conservation (Awewomom et al., 2024). Environmental consideration must be a factor in the development of productive sector projects so that development has not only no adverse effect on the ecological balance but also on the natural resource base.

c) Social Sustainability

Social sustainability is concerned with the ability of the project to increase social cohesiveness, inclusiveness and equity as well as community empowerment. It involves involvements of stakeholders, consideration of the local cultures, and provision of fair benefits to the marginalized population (Ahmad and Islam, 2024). Social sustainability of the projects implies robust stakeholder involvement and long-term beneficial social effect, especially when it concerns community-based development projects in AJK.

A few studies in recent times affirm the application of the second order of constructs in modeling sustainability. As one can see, (Mustafi et al., 2024) showed that the second-order structure can be applicable to measurement of the project sustainability and proved its multidimensionality with empirical evidence. In a similar way, (Ali et al., 2024) incorporated second-order constructs to measure infrastructure megaproject performance through sustainability. The second-order approach did not only increase the explanatory power of the model but also conformed to common interpretations as far as development conditions are concerned.

Furthermore, (Senapati and Panda, 2024) offer solid methodological guidance on the use of second-order constructs in SEM, informing that there is no issue with using such models when they are theory- and data-driven, especially, in reflective-formative or reflective-reflective structures.

To determine sustainability of productive sector projects in Azad Jammu and Kashmir (AJK), a well-developed model that captures multidimensional nature of development outcomes is needed within the context of this study. Second-order project sustainability model will allow this study to study the impacts of planning and stakeholder involvement beyond a single narrow outcome, but on an entire set of interdependent outcomes that influence long-term success of a project. The strategy offers a more theoretical consistency, the measurement precision, and policy interest to policymakers and project designers. Finally, the modeling of project sustainability as second-order variable demonstrates the current best practices in sustainability research and project management. Theoretically it is supported by the theory of Triple Bottom Line (TBL): methodologically by the PLS-SEM literature. This study provides a nourishing criteria of analyzing the sustainability of the public development projects in a complex region such as AJK through capturing the economic, environmental, and social perspectives of it in a holistic approach.

1.9.3 Monitoring and Evaluation (M&E) Practices (Moderating Variable)

Monitoring and Evaluation (M&E) enable a project to assess the progress of change and assess performance against predetermined goals. These practices offer important feedback mechanisms that let the project managers adjust strategies, resolve issues, and enhance project outcomes in the long run. Measures can include surveys and analysis, consultations with the stakeholders, and reporting frequently during the project life-cycle.

In this context, M&E is a moderating variable that realizes the potential of project planning by ensuring accountability and flexibility to treat project plans as workable blueprints rather than documents that seldom get implemented or followed. For instance, in productive sector projects in AJK, M&E can achieve detailed differentiation between performances of the evoked plan and actual results to address problems such as resource misappropriation or environmental degradation. Furthermore, M&E contributes towards the buy-in of the stakeholders by establishing documentation of some achievement and or commitment to sustaining the gains. There is evidence that earlier M&E can set a project on a stronger track

for sustainability, especially in socio-economically and environmentally complex environments.

1.9.4 Stakeholder Engagement (Mediating Variable)

The practice of stakeholder engagement actively connects organizations and groups as well as individuals who affect project work so their insights directly influence project success (Freeman and Phillips, 2002) Project management experiences enhanced long-term sustainability when stakeholders receive active participation because it creates better implementation outcomes and enhanced collaboration coupled with transparent shared decision-making (Bahadorestani et al., 2020).

Project sustainability benefits from stakeholder engagement because this process builds the connection between project planning stages and project sustainability goals. Active participation of government agencies together with local communities and private sector representatives and NGOs throughout planning and execution stages increases the chances that projects will support sustainability goals in economy and social structure and environmental outcomes (Nonet et al., 2022). The involvement of dedicated stakeholders enables greater access to important information while delivering effective risk management systems and long-term dedication that enhances sustainability results (Mitchell et al., 2022).

Stakeholder engagement serves as a key element for productive sector projects in AJK because it ensures successful implementation of development activities that both communities accept and execute effectively and yield enduring results. As a mediator this process enhances structured planning impacts on sustainability while emphasizing the need for participatory governance to create successful project results.

Chapter 2

Literature Review

2.1 Project Planning and Sustainability

Effective project management relies on project planning as it creates a systematic approach to connect project goals with extended purposeful achievements. According to (Kerzner, 2022), planning serves as the critical starting point for determining resource distribution as well as defining timelines and risk evaluation processes. Current planning models sacrifice sustainability to prioritize the delivery of near-term benefits such as cost and time efficiencies. The author (Silvius et al., 2017) explained that, by incorporating sustainability considerations in every phase of project development would help to close the gap identified between traditional planning and sustainability goals. Integrating this approach leads to enduring benefits as well as addressing possible adverse consequences.

Project planning has been broadly considered as a key success factor of project implementation and sustainability. Recent research has pointed out that planning is indeed not the initial stage as an activity that aims to prepare, but an ongoing process which determines the degree to which the project goals relate to the needs of stakeholders and the available resources, as well as the methods of risk reduction (Kerzner, 2025). The comprehensive project planning enhances a high predictability rate, better coordination between project teams and facilitation to meet the strategic objectives (Gudala and Veridic Solutions, 2018).

Further, in the realms of development project, particularly in low- and middle-income nations, project planning has been observed to have a direct impact on the

level to which the dimensions of sustainability are met forthwith (Yu et al., 2018). Planning leads to the earlier inclusion of sustainability indicators, and the tracking of the performance is simpler during the whole life lifespan of the project (Orieno et al., 2024).

Comprehensive planning is crucial for AJK due to the vulnerability of its productive sector to various environmental challenges. Integrating sustainability into the planning process increases a project's resilience to risks originating from the environment, including major catastrophic events. By integrating environmental evaluations with adaptive plans, project managers can ensure their projects are in accordance with local standards and obey sustainability principles (Martens and Carvalho, 2017). According to (Grunwald et al., 2024), strategic planning that incorporates environmental sustainability develops successful risk management and fosters the long-lasting partnerships among the stakeholders.

The effective use of planning enhances an organization's ability to make better decisions. Adopting a deliberate planning strategy enables project leaders to foresee potential problems and gains so sustainable practices can continuously be incorporated into every aspect of the project, according to (Hwang and Ng, 2013). Projects in AJK repeatedly delay because of factors such as societal and economic issues. Hence, it offers a valuable approach applicable in many situations. Those, who strategically plan ahead are able to foresee difficulties before they arise and therefore prepare preventive measures, which increase sustainability throughout the productive sector projects.

A better integration of sustainability is achieved when collaborative efforts between various disciplines occur during the planning process as suggested by (Hwang and Ng, 2013). Working together as a team results in the development of innovative approaches that seamlessly unite economic, social and environmental aspects with the planning process. This method of planning is essential for AJK due to the presence of many distinct stakeholders who can influence the project's outcomes.

Using Building Information Modeling (BIM) along with advanced technology has made planning processes more accurate and sustainable (Ghaffarianhoseini et al., 2017). Project managers optimize plans and secure sustainable outcomes through

the application of such innovative technologies by enabling scenario simulation. The Project managers in AJ&K can use these methods and tools, since they tackle the shortages found in traditional planning methods.

Improving sustainability within the planning sector is helped by frameworks like Triple Bottom Line (TBL). Since TBL models address environmentalism, social welfare and the economy, they are suitable for productive sector projects in developing regions (Chow et al., 2021). Those who use Triple Bottom Line in project planning keep sustainability at the forefront throughout the whole project.

2.1.1 Environmental Sustainability in Productive Sector Projects

Environmental sustainability works to save natural resources and limits ecological harm which is very important in AJK's sensitive locations. Projects that put environmental risk assessment in their planning models show better results when facing ecological disturbances, according to (Hwang and Ng, 2013). The researchers claim that using climate adaptation strategies in infrastructure development is exactly in line with what AJK needs.

An environmental sustainability in project management is the incorporation of environmental factors in project planning, project implementation and project closure. The dimension focuses on minimization of environmental degradation, preservation of natural resources, and the observation of environmental codes over the project life (Nwaogbe et al., 2025). The recent literature shows that environmental sustainability practices embedded in the project progress are likely to lead to enhanced long-term performance of the project (Tennakoon et al., 2024), especially in industries where natural resources and the environmental implications have an increased importance. As an example, the environmental risk assessment and the sustainable design approach are being implemented by renewable energy, water management, and infrastructure projects as part of their norm of operation (Shahnazi, 2025).

Further, no longer is environmental sustainability regarded as a peripheral issue but a main strategic focus within projects that are funded by the government

and donors. The (Jaiswal et al., 2025) state that green measures environmental considerations like adequacy of resources, minimization of waste, and preserving biodiversity are increasingly being used as the new indicators of project performance. Additionally, development projects are ensuring the integration of digital tools such as GIS, and remote sensing to improve the use of data in making decisions about the environment under monitoring.

Environmental sustainability needs to be incorporated into project objectives since the planning stage according to (Silvius and Schipper, 2019). By planning ahead and continuously monitoring the environment, they try to stop serious long-term effects on nature as stated in their findings. An approach is needed in AJK so that the economics and ecology of the productive sector both progress and protect nature.

In a study by (Sánchez, 2015), points out that resource use should be optimized in environmental sustainability methods. When resources are well handled by project managers during planning, it leads to improved protection of the environment and lower waste levels. The system provides great value here because the scarce resources in AJK must be managed precisely for ongoing projects to succeed.

The use of green technology and environmentally friendly materials enhances the sustainability of a project during planning (Ikram et al., 2021). Imposing these strategies cuts down the project's climate footprint and signals developers' concern for the environment in AJK.

A review of global projects shows how following green principles helps projects be managed with more success. In South Asia, projects succeed by using green energy to lessen our use of fossil fuels and support sustainable development (Rasul, 2016). The accepted practices give useful guidelines to AJK because the region has a lot of untapped renewable energy potential. It has been found that combining reforestation with infrastructure building can help lower the negative effects on nature (Reyer et al., 2009). Precise steps for AJK could bring back natural lands and enhance the ecological condition in the region.

Using concepts from circular economy such as waste prevention through design changes and the use of resources for a longer period, helps promote sustainability

(Suárez-Eiroa et al., 2019) The principles help the productive sectors in AJK as they can be put into practice as plans are being made.

2.1.2 Economic Sustainability in Productive Sector Projects

Through efficient resource deployment, the idea of economic sustainability helps projects finish with profits. As explained by (Roseland, 2000), businesses should think beyond profits, since they must handle their daily expenses and also bring long-term benefits to the local area. Efficient planning of projects is important for the resilience of AJK's economy, mainly where resources are limited in the production sector.

Adaptive planning helps organizations manage uncertainty in the economy according to (Kerzner, 2022). Flexible planning enables managers to react well to changes in the market and the economy. Ongoing challenges in socio-political conditions in AJK make regular changes to project finances and resources, so this approach is very relevant.

The concept of project sustainability is now more of a multidimensional concept and this has always been operationalized using the Triple Bottom Line (TBL) concept where project sustainability can be adopted at the economic, environmental and the social levels (Elkington and Rowlands, 1999; Gallardo-Vázquez, 2025). The empirical-based research has justified the utilization of sustainability as a second-order project environment construct. As an example, (Ali Banihashemi and Khalilzadeh, 2023) used this framework in large infrastructure projects and observed that all the dimensions play different roles in terms of project sustainability.

Economic sustainability deals not only with efficiency in the use of resources and financial soundness, but also environmental sustainability is concerned with ecological safety and compliance with regulations. The focus of social sustainability is inclusion, fairness, and satisfaction of the stakeholders in the community (Wang and Ke, 2024) claims that a second-order view of sustainability assists policymakers in balancing project irrelevant trade-offs among the competing dimensions of sustainability and ensuring that project objectives support national agendas related to sustainable development. A study by (Sabini and Alderman, 2021) claims that a second-order view of sustainability assists policymakers in balancing project

irrelevant trade-offs among the competing dimensions of sustainability and ensuring that project objectives support national agendas related to sustainable development.

In the paper titled 'Prospects and Challenges of Community Development' (Mathur et al., 2008) it is explained that engaging stakeholders from the beginning leads to economic benefits by supporting and shaping local development plans. Achieving regional economic growth objectives with projects leads to results that lower the possibility of financial dangers. Emerging economies need micro-financing to make sure local projects are prosperous and self-sufficient (Gambetta et al., 2019). AJK might make use of these models to promote projects in the productive sector, helping to boost entrepreneurship that leads to improved local outcomes.

Using waste-to-resource programs as part of circular economy practices opens up economic sustainability options (Velenturf et al., 2018). Applying these practices within AJK will lead to greater use of resources which will also help the company earn money. By doing economic assessments at the planning phase, research suggests that lasting benefits may be found for local economies (Blakely and Leigh, 2013). Economic sustainability is promoted and supported from the beginning to the end of every project by using assessments in AJK's productive sectors.

2.1.3 Social Sustainability in Productive Sector Projects

Social sustainability in project management means ensuring resources and benefits are distributed evenly among all members and stakeholders join in the process. When several interests are at stake, (Bahadorestani et al., 2020), argues that working with stakeholders is important to ensure projects help the community. Involving stakeholders from the start, as (Lalam, 2018) explains, helps foster community pride in the project and makes it more likely to be approved.

Social sustainability is central in AJK because its productive sector projects often seek to close socio-economic divides. According to a study by (Aarseth et al., 2017), social equity planning ensures that planning helps communities that are vulnerable and encourages planning methods that promote equality. Adapting project steps to current social changes, as suggested by (Silvius and Schipper, 2020), ensures project goals are still relevant to the community. When stakeholder communication is effective, it helps create trust and encourages people to collaborate,

says (Limani et al., 2024). Because AJK's culture and politics play a big role in project outcomes, including all stakeholders in the planning is necessary to make sure plans are sustainable.

Social sustainability is concerned with the role of the projects in social equity, empowerment of the community, inclusiveness, and human growth in the long-term. It represents the ability of a project to promote well-being, equitable allocation of resources and cultural and social sensitivity (Bencekri and Lee, 2025). In the recent studies, social inclusion and participatory decision-making are being given immense importance as key components of social sustainability. As argued by (Baporikar, 2024), development and infrastructure projects that deliberately involve communities, in particular, marginalized communities, are likely to enjoy the support of the masses and reap long-term gains. In addition, the trust of the stakeholders, the local jobs, the gender equality, the availability of services have been increasingly adopted to index the social sustainability of the initiatives in the governmental projects.

Conflict sensitivity and cultural fit are also a part of social sustainability especially in diverse and politically complicated regions such as AJK. Project activities that do not recognize the social nature of the communities concerned can face social opposition and will eventually fail. New methods, including social impact assessment and participatory rural appraisal, (PRA) approaches, are assisting planners to evaluate prospective social risks and opportunities prior to the implementation of a project (Thampi et al., 2024).

In their study, (Hwang and Ng, 2013) argue that including educational activities in plans supports the growth of community skills. Project implementation includes various programs that help local people participate as stakeholders from the start of development through to its finish. When this approach is used in AJK, more attention will be given to marginalized people which will strengthen community efforts.

H1: *Higher levels of project planning positively impact the sustainability of productive sector projects in Azad Jammu and Kashmir (AJK).*

2.2 Mediating Role of Stakeholder Engagement

The sustainability of projects relies on stakeholder engagements since it combines the elements of inclusivity and transparency to foster effective decision-making (Tumpa and Naeni, 2025). Stakeholder involvement during all project life stages leads to better community reception together with sustained support and enhanced sustainability performance according to (Baho, 2024). The coordination between project planning and sustainability happens through stakeholder engagement which enables stakeholder interests to be recognized and upholds project accountability.

Research demonstrates that excellent stakeholder interaction management produces sustainable projects by better connecting with community requirements along with environmental needs (Banori, 2025). Early stakeholder involvement during planning helps teams discover potential hazards and maximizes resources and improves project adjustability (Eyieyien et al., 2024). In the unique socio-political environment of AJK stakeholder participation stands essential because it helps resolve implementation barriers and maintains sustainable development.

Over the last few years, stakeholder involvement has attracted a lot of interest as one of the principal mechanisms to increase the success and sustainability of projects. In the article by (Lansing et al., 2023) the practices that lead to meaningful engagement enhance trust, create less conflict and heighten community ownership in development activities. Stakeholder involvement brings local knowledge and local insights that facilitate a better and more significant project output.

As per the recent studies, one should not disregard the fact that stakeholder engagement is highly associated with social sustainability since it encourages transparency, inclusiveness, and responsiveness (Alshukri et al., 2024). Effective utilization of stakeholders also enhances monitoring of projects with government and donor-financed projects in addition to increasing the legitimacy of the projects (Kamau et al., 2024). More so, the methods of participating engagement demonstrated by flexibility and resilience of the project within uncertain environments.

Multiple studies shows that as a mediator stakeholder engagement helps build trust alongside conflict resolution practices. Stakeholder engagement contributes

to reduced opposition and improved project legitimacy and extended project goal commitment according to (Busco et al., 2024). Projects that incorporate a sense of value and hearing for stakeholders achieve success outcomes which bring lasting economic and environmental alongside social advantages (Di Maddaloni and Davis, 2024).

Through stakeholder involvement communities gain access to local expertise which supports sustainability by stimulating innovation processes and promoting collaborative decision processes (Alshukri et al., 2024). Through early project strategy development stakeholders can insert sustainability principles which enable exceptional outcomes assessment for perpetual enhancement. Development initiatives in AJK need robust stakeholder partnership because they handle urgent ecological together with economic issues.

The research findings demonstrate that stakeholder engagement acts as a mediator linking project planning with project sustainability levels. Organizations achieve better planning effectiveness through effective stakeholder management because it drives collaboration and risk reduction and implements sustainability decisions through all project stages. Additional research needs to develop stakeholder engagement systems suitable for addressing specific economic and environmental problems of productive sector projects operating in AJK. Project sustainability depends heavily on stakeholder engagement because it delivers inclusion alongside transparent procedures and effective choices (Mubasher et al., 2024). Stakeholder participation enhances project sustainability because it leads to better community reception and sustained backing (Singh, 2024). External feedback processes together with conflict resolution methods and stakeholder participation produce successful planning outcomes that generate improved sustainability performance (Senaratne et al., 2024). Productive sector projects in AJK receive substantial benefits when stakeholders participate actively at both planning phases and implementation stages.

H1: *Stakeholder engagement mediates the relationship between project planning and project sustainability in AJK.*

2.3 Moderating Role of Monitoring and Evaluation (M&E) Practices

Using Monitoring and Evaluation (M&E) in projects helps them adapt to any shifts in their situation. In the study (Jacinta et al., 2024) explain how M&E techniques make it easier for project managers to identify issues which leads to better results. Since there are many unpredictable issues in AJK that can jeopardize projects, M&E acts as a tool to ensure that sustainability goals are met.

Proper Monitoring and Evaluation (M&E) practices are fundamental aspects of productive project management as well as sustainable development services. M&E gives guidance on how to check the project performance, the project risks, and any corrective measures that are supposed to be done during the project lifecycle. It will enable the stakeholders of a project to monitor what is going on and increase the level of transparency as well as synchronizing implementation practices to meet the objectives of its strategies (Murunga and Njoroge, 2024). M&E is not a post-implementation exercise that can be used or a single system allowing real-time learning, making evidence-based decisions and improvements, and continuous improvement to work (Mahmoud Saleh and Karia, 2024). The latest literature underlines that properly designed M&E systems have positive implications on sustainability results due to the systematization of monitoring the economic, environmental, social objectives. The (Kotschy et al., 2025) explains that, the planning and implementation period of a project also requires M&E to enable the project to be able to accommodate a contextual change, control uncertainties and ensure accountability. In developing economies, M&E is being seen more as an important tool of governance to enhance resource effectiveness, stakeholder credibility and ultimately transformational impact (Muhammed and Abokyi, 2025).

Besides, emerging technology like digital dashboards, data collection apps that can be accessed using mobile devices, and data analytics systems are changing the traditional M&E system into more interactive and responsive processes. Tool enhancements enhance the reliability rates of monitoring pieces of information and

promote just-in-time identification of problems and adoptive management styles, especially in huge publicly funded projects (McCall, 2024). On the theoretical front M&E acts as a moderator in project management, since it strengthens or undermines the impact of planning on sustainability depending on the degree to which the M&E systems are institutionalized. The effectiveness of the M&E systems in the project chances of achieving the sustainability results of planning activities it undertakes heavily rely on the incorporation of the stakeholder feedback loops into the evaluation process (Otundo Richard, 2024a).

According to (Kerzner, 2022), using M&E from the initial planning phase helps projects the most. With connected M&E strategies, it is possible to watch project activity in real time and ensure that sustainability targets are always prioritized. Monitoring and evaluating is important as (Aarseth et al., 2017) point out, because it allows stakeholders to be accountable and get more work done together in a project.

Monitoring and Evaluation (M&E) systems are very critical governance instruments, which assist project stakeholders to monitor project progress and risks as well as to arrive at evidence-based decisions. According to the recent literature publications, there is an increasing importance of M&E to enhance transparency of projects, accountabilities, and contribution towards adaptive learning (Mahmoud Saleh and Karia, 2024). Where there is incorporation of M&E in the planning and implementation process, it becomes more responsive and permits the correction of course.

Despite the perception that M&E is a control mechanism, it is a strategic process that is becoming relevant in realization of sustainability outcomes. M&E allows staying on track by being aware of the momentary feedback and ensuring that project work is adjusted to the long-term goals (Otundo Richard, 2024b). But the quality of M&E systems is influenced by the amount of institutional capacity and the inclusion of stakeholders, and quality of collected data (Bibohere et al., 2024).

Quantitative and qualitative data on project performance which comes from M&E systems, helps people in charge make sounder decisions (Silvius et al., 2017). Since environmental conditions make it tough to carry out projects in AJK, the use

of M&E helps identify ways to use resources most effectively and to maintain the sustainability of the project. In their work (Muthee et al., 2025) state that technologies enhance how Monitoring and Evaluation is done. When advanced analytics systems are used along with real-time reporting on data, performance can be tracked more properly, helping the project meet its objectives.

Recent experiences in South Africa point out that with the right monitoring and evaluation, projects can improve a lot in places with limited resources (Ogunbayo et al., 2024). The same approach in AJK would lead to better performance in monitoring and evaluation (M&E) practices.

H1: *Monitoring and Evaluation (M&E) practices positively moderate the relationship between project planning and the sustainability of productive sector projects in AJK.*

2.4 Research Framework

The research framework properly organized acts as the essential basis for understanding that how variables in this study relate to one another. The developed research framework assesses, how project planning affects productive sector projects sustainability in Azad Jammu and Kashmir (AJK), by understanding the moderating role of Monitoring and Evaluation (M&E) practices, and mediating role of Stakeholder Engagement. The research study establishes Project Planning to serve as the independent variable alongside Project Sustainability as the dependent variable yet Stakeholder Engagement as a mediating variable and M&E Practices stand as the variable that moderates their relationship.

The three fundamental sustainability dimensions that make up Project Sustainability consist of Environmental Sustainability, Economic Sustainability, and Social Sustainability. The dimensions of project sustainability receive positive contributions from effective planning practices because of better resource management and environmental protection along with extensive socio-economic advantages. The research structure demonstrates how systematic and detailed planning processes improve sustainability results according to principles of sustainability-driven project management.

The study adopts Stakeholder Engagement as a mediating factor to enhance the relationship between Project Planning and Project Sustainability. Well-organized planning sets the course yet failure to involve stakeholders actively diminishes sustainability achievements in projects. The inclusion of key actors like government agencies with private sector organizations and local communities through stakeholder engagement brings their interests into decision-making processes thereby creating better project outcomes as well as reduced risk exposure and improved project sustainability (Onusi, 2024).

The stakeholder engagement role serves as a mediator enhancing project sustainability by promoting participatory approaches to develop social environmental and economic dimensions (Chen et al., 2025). Through increasing transparency, collaboration, and accountability, it helps bridge the gap between planning and sustainable development. The research framework establishes an expectation that Stakeholder Engagement operates as a vital mechanism to transform successful project plans into enduring sustainable results which reinforce elements of Triple Bottom Line (TBL) Theory. The framework introduces Monitoring and Evaluation (M&E) Practices as an essential moderation variable because they enhance the connection between project planning and sustainability results. The proper implementation of M&E results in an ongoing evaluation process together with stakeholder involvement and operational adaptability which enhances sustainability results. Organizations achieve better accountability and sustainability measurement capabilities by implementing M&E processes during project life cycles which also leads to improved planning approach adaptation.

The figure (2.1)illustrates how project planning factors connect with project sustainability and M&E practices within the research framework. The research framework shows the proposed relationship between Project Planning and Project Sustainability while M&E Practices serve as the moderating variable through these links. The documented framework serves as a systematic foundation for conducting hypothesis tests and empirical studies which will help to deliver important findings about sustainable project management practice in AJK's productive sector.

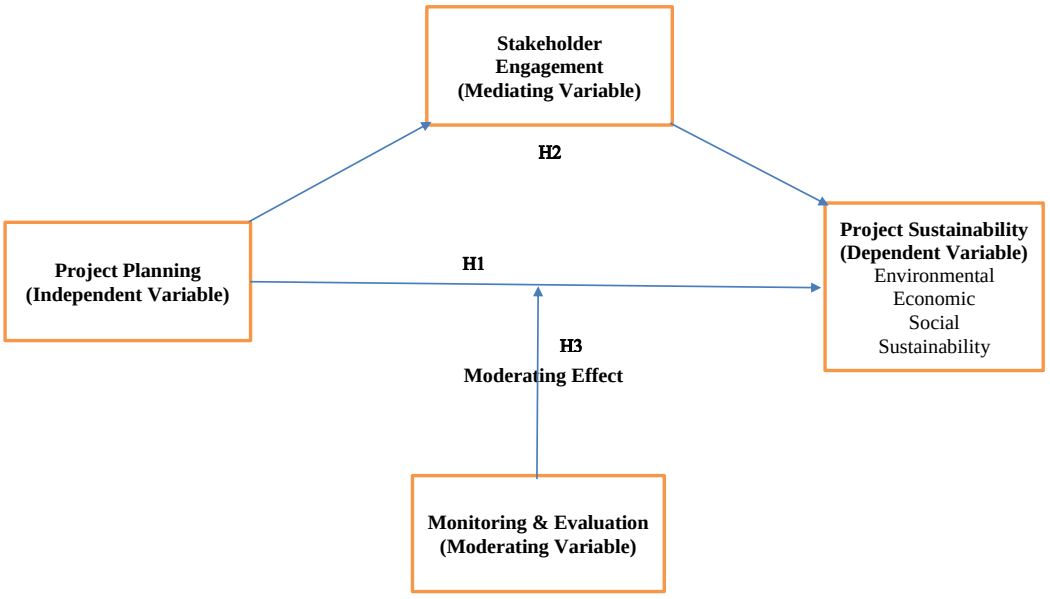

FIGURE 2.1: Conceptual Model

The research contains various hypotheses that illustrate the connections between project planning approaches, sustainability dimensions stakeholder engagement and M&E practices.

H1: Higher levels of project planning positively impact the sustainability of productive sector projects in AJK.

(Relationship between Project Planning and overall Project Sustainability)

H2: Stakeholder-Engagement mediates the relationship between the project planning and project sustainability in AJK.

(Stakeholder Engagement mediates the impact of Project Planning on Project Sustainability)

H3: Monitoring and Evaluation (M&E) practices positively moderate the relationship between project planning, and the sustainability of productive sector projects in AJK.

(M&E Practices moderating the impact of Project Planning on Project Sustainability)

Such hypotheses serve as a systematic framework for investigating theoretical relationships throughout the study to verify how Project Planning, Stakeholder Engagement and M&E practices drive sustainability results.

Chapter 3

Research Methodology

3.1 Introduction

The current chapter presents the research methodology used to examine the effect of planning on the sustainability of productive sector projects in AJK, taking into consideration the moderating effect of monitoring and evaluation practices and the mediating effect of engagement by the stakeholders. This chapter aims to explain the step-by-step procedure that occurred in gathering, analyzing, and interpreting the data to ensure the reliability, validity, and relevance of the research findings. It introduces the research design, the population and sampling procedures, data collection tools, and the procedures used to analyze the data statistically.

3.2 Research Design

3.2.1 Quantitative Research

This research study relies on quantitative research by obtaining data in numerical form and using statistical tools (Pregoner, 2024). Because it is objective, precise, and replicable, this method helps in studying relationships among different variables. Pre-structured survey questionnaires will be used to get input from 310 project team members, such as managers, planners, and M&E experts of the productive sector in AJK. With research data, researchers are able to find out how project planning, and stakeholder involvement as mediators impact the project's sustainability, and how M&E helps to moderate the relationship between them.

3.2.2 Research Philosophy

The research uses positivist philosophy as its foundation to obtain conclusions through objective measurement of observable data (Ali, 2024). Reality exists independently from how people perceive things, according to positivist thought, which scientists can study by conducting a systematic collection and analysis of data. The quantitative approach in the study matches the positivist research philosophy because it supports hypothesis evaluation and generable results analysis. The use of positivism ensures reliable measurements while validating the study about project planning effects on sustainability in AJK's productive sector projects using stakeholder engagement as a mediator, and M&E practices as moderating factors.

3.2.3 Research Approach

The study uses the hypothetical-deductive approach for its examination, where researchers develop hypotheses from existing theories to test those using empirical data analysis, according to (Kosimov, 2025). Scientific research commonly adopts this approach to study cause-and-effect relationships in particular. The study looks at project planning and sustainability by following the hypothetical-deductive approach to test their relation, since it looks at sustainability influenced by the moderating role of M&E practices and the mediating role of stakeholder engagement.

3.3 Time Horizon

The research uses a cross-sectional survey, asking respondents at one point, since this is a recognized approach for finding links and patterns among variables in the study. Following the view of (Hunziker and Blankenagel, 2024), the cross-sectional approach efficiently explores people's current attitudes and behaviors, as it does not need a long-term collection of data. Within this study, it helps review the existing ways project planning happens in AJK's productive sector projects and their links to sustainability. It also makes it possible to explore how planning, stakeholder involvement, monitoring and evaluation, and sustainability relate by

considering employees' experiences and perceptions together in the current setting. It allows an early and detailed study of the interactions among these factors and their effects on regional project sustainability.

3.4 Unit of Analysis

In this study, the respondents are individual experts who are engaged in organizing, carrying out, and observing productive sector projects in Azad Jammu and Kashmir (AJK). There are project managers, planning officers, and monitoring and evaluation (M&E) experts, and each person plays an important role in taking a project from planning to completion. Their tasks involve strategic planning, allocating resources, organizing stakeholders, supervising results, and guaranteeing that plans are sustainable in the long run.

The study aims to get helpful, practical details about the effects of project planning on the sustainability of projects in the productive sector by studying the opinions of these specialists. Considering their accounts adds a solid understanding of why certain processes are important for project completion. Also, the study examines how monitoring and evaluation activities support or hinder sustainability, as viewed by people managing such tasks.

In addition, the research points out that the active participation, engagement, and collaboration of stakeholders generally play a big role in project outcomes. The study works to see how effective stakeholder engagement links planning and sustainability goals and in what ways this affects the project results. By taking this approach, we can understand how all three elements, planning, stakeholder participation, and M&E practices, support AJK in achieving sustainable development in its productive sectors.

3.5 Population

The population covered in this study entails 310 professionals who are actively engaged in the planning, implementation, and evaluation of projects across the productive sectors within Azad Jammu and Kashmir (AJK). Among this group are the ones responsible for the development and delivery of different projects, such as

project managers, planning officers, monitoring and evaluation (M&E) specialists, etc.

The survey sought to engage individuals from different organizations, such as the government, non-governmental organizations (NGOs), and the private sector, all of whom are engaged in development work. This group of experts is very important to the research because of their practical knowledge in the field, which shall aid them in providing well-reasoned views on various elements such as planning processes, the engagement of stakeholders, and monitoring & evaluation practices.

This cross-section of professionals is a guarantee that the data logically encapsulates the realities and complexities of development work in AJK, thus bolstering the relevance and usefulness of the study in sizing up the factors that are decisive for the sustainability of projects in the area.

3.6 Sample Size

For this study, to determine the appropriate sample size, G*Power 3.1.9.7, a statistical tool for power analysis is used (Fig. 3.1). The G*Power software enables researchers to determine necessary sample sizes for different statistical tests in order to achieve appropriate power for detecting substantial research effects (Faul et al., 2009).

The analysis was based on linear multiple regression, considering five predictors in the model. To ensure the reliable results, the parameters included an effect size (f^2) of 0.15, a significance level (α) of 0.05, and a statistical power of 0.95. Based on these inputs, the recommended sample size is 129 respondents, with a critical F-value of 2.444.

This makes sure that the study has sufficient power to detect meaningful relationships between project planning, sustainability, mediating role of stakeholder engagement, and the moderating role of monitoring and evaluation practices.

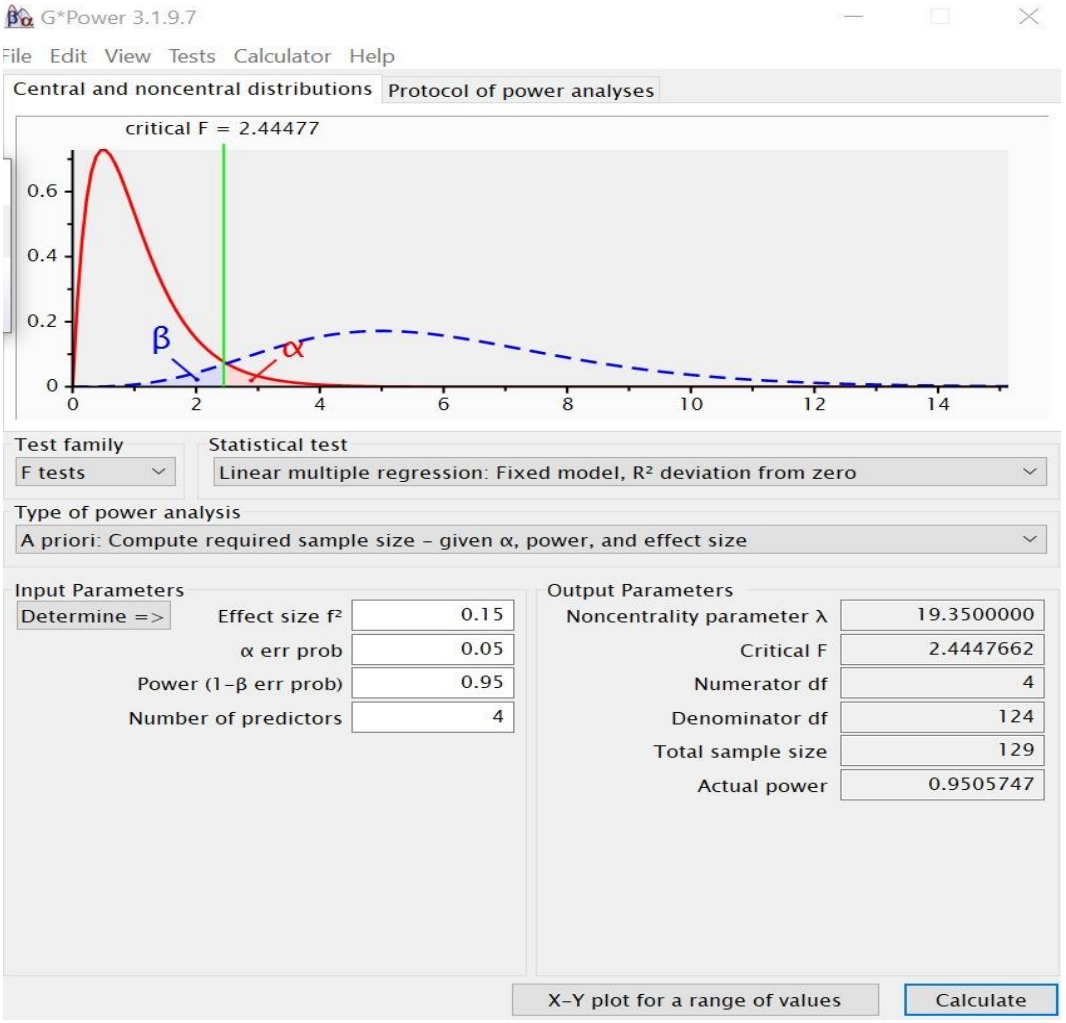

FIGURE 3.1: G* Power

3.7 Sampling Technique

The sampling technique used in this study is convenience sampling, which is a non-probability sampling technique, and involves the selection of participants, who are easily accessible and willing to participate (Etikan et al., 2016). This strategy is not only suitable but also inexpensive given the resource constraints and the fact that the study is based on the fieldwork nature, restricted to Azad Jammu and Kashmir (AJK). The decision to involve only such respondents as project managers, planning officers, and monitoring and evaluation professionals was against the backdrop of the convenience of reaching out to them due to their engagement in different productive sector projects across the region. Convenience sampling method allows the researcher to quickly and easily get the very information they need without

the kinds of logistical constraints and financial pressures that probability sampling methods typically have. Despite the absence of statistical generalization inherent in the random sample, it creates the space for inviting the direct witnesses to the event, turning the data richer and its context more marketable for the research. The decision of this methodological choice resonates with the study that was to understand the very actual practice of project planning, stakeholder involvement, and monitoring, and how it will be perceived to be the factors that can affect the sustainability of the projects in the region.

3.8 Sample Characteristics

This research study was carried out using a sample of 310 respondents in Azad Jammu and Kashmir (AJK), representing different departments of the government and development organizations and institutions working on projects in the productive sectors. The key professionals involved included planning officers, project managers, monitoring and evaluation (M&E) professionals, etc., which provided a balanced outlook on the project implementation and sustainability. The demographic profile was evaluated through the help of four important variables: gender, age, qualification, and working experience. Such a rich, diversified composition not only makes the findings more valid but also enables a greater insight into how respondents with varied professional backgrounds conceive the aspects of project planning, stakeholder engagement, M&E practices, and sustainability outcomes. The demographic characteristics are given in detail as follows.

3.8.1 Gender

The gender study of the respondents indicated a high percentage of males who participated (84.8%), and female respondents represented 15.2% of the total respondents (Table 3.1). The fact that female professionals are included as a part of the sample increases the diversity and representativeness of the research, however. It is essential to understand the gender profile since it can affect views and participation in project planning, stakeholder inclusion, and sustainability measures.

TABLE 3.1: Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	263	84.8%	84.8%	84.8%
Female	47	15.2%	15.2%	100.0%
Total	310	100.0%	100.0%	

3.8.2 Age

The respondent age distribution shows that the population has been adequately represented in different age brackets that depict a combination of early career, mid-level, and senior professionals working on productive sector projects in Azad Jammu and Kashmir (AJK) (Table 3.2). Most participants were in the age bracket 26-33 (32.9%), the number 18-25 (24.8%), and the age bracket 34-41 (23.5%). Respondents who were in the older age group were fewer, with only 11.6 percent in the age group of 42-49 years and 7.1 percent aged 50 or over. This variation in the age groups implies that the professionals who hold project-related positions in AJK are at various stages of the profession, which can alter their experiences and their ways of perceiving the issues bearing on project planning, stakeholder engagement practices, and sustainability practices.

TABLE 3.2: Age of Respondents

Age Group	Frequency	Percent	Valid Percent	Cumulative Percent
18–25	77	24.8%	24.8%	24.8%
26–33	102	32.9%	32.9%	57.7%
34–41	73	23.5%	23.5%	81.2%
42–49	36	11.6%	11.6%	92.8%
50 & Above	22	7.1%	7.1%	100.0%
Total	310	100.0%	100.0%	

3.8.3 Working Experience

The proportion of the respondents according to their professional experience indicates a rich combination of early-career, mid-career, and senior professionals who work on the projects of the productive sectors within Azad Jammu and Kashmir (AJK). The highest proportion of respondents (30.6%) belonged to the five-year or less working experience category, and 28.4 percent had an experience of between 6 and 13 years. Around 18.1 percent of the respondents had 14 to 21 years of experience, 14.2 percent had 22 to 29 years, and 8.7 percent of the respondents had 30 years or above experience (Table 3.3). Such a distribution provides coverage among differing career levels, which is crucial in having extensive information on practices of planning, stakeholder participation, and perceptions of sustainability in development projects. The quality and reliability of the data collected are enhanced by the presence of professionals who have had some experience in the field, like planning officers, project managers, and M&E specialists.

TABLE 3.3: Working Experience of Respondents

Experience	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
5 & Less	95	30.6%	30.6%	30.6%
6–13	88	28.4%	28.4%	59.0%
14–21	56	18.1%	18.1%	77.1%
22–29	44	14.2%	14.2%	91.3%
30 & Above	27	8.7%	8.7%	100.0%
Total	310	100.0%	100.0%	

3.8.4 Qualification

Respondents seem to be well educated and professionally competent, as the assessment of their educational qualification shows; therefore, the sample is appropriate to provide credible research findings that could be used to understand project planning, stakeholder engagement, and sustainability practices (Table 3.4. Most of the participants were Bachelor's Degree level holders (36.8%), closely followed by

those with a Master's Degree (31.6%), and MS/MPhil (19.4%). Fewer of them had attained Intermediate education (8.1%), and some of the respondents were also PhD holders (4.2%). This blend of education and experience is a representation of the technical and academic heterogeneity in the field of public sector and development organizations in Azad Jammu and Kashmir (AJK), especially of the planning officers, the project managers, and the monitoring and evaluation professionals. The academic qualification is high, which further makes the responses credible and ensures that a lot of depth is obtained in the data gathered by this study.

TABLE 3.4: Educational Qualification of Respondents

Qualification	Frequency	Percent	Valid Percent	Cumulative Percent
Intermediate	25	8.1%	8.1%	8.1%
Bachelor	114	36.8%	36.8%	44.9%
Masters	98	31.6%	31.6%	76.5%
MS/MPhil	60	19.4%	19.4%	95.9%
PhD	13	4.2%	4.2%	100.1%
Total	310	100.0%	100.0%	

3.9 Measurement Instruments

Through adopting items from established research scales, the study employs structured survey questionnaires as its main data-gathering tool. The research instrument contains five-point Likert scales running from 1 = Strongly Disagree to 5 = Strongly Agree to measure every construct.

3.9.1 Project Planning (Independent Variable)

The study employed ten project planning 10-items from the work by (Mohsin, 2021), based on the study "Impact of Project Planning on Project Success".

3.9.2 Project Sustainability (Dependent Variable)

The research relies on a 22-item questionnaire based on (Albloushi et al., 2023) study for Sustainable Development.

3.9.3 Stakeholder Engagement (Mediating Variable)

Stakeholder Engagement will be measured by using a 10-item questionnaire referenced by (Mitchell et al., 1997) (Olander and Landin, 2005).

3.9.4 Monitoring and Evaluation (Moderating Variable)

Monitoring & Evaluation will be measured using a 10-item questionnaire referenced by (Kissi et al., 2019).

3.10 Data Analysis Techniques

To statistically examine the intercorrelations among the most salient variables-i.e., project planning, project sustainability, stakeholder engagement, and monitoring and evaluation (M&E) practices, a blend of robust statistical techniques was utilized. SPSS (Version 27) and Smart PLS (Version 4) software were utilized for data analysis, both of which are widely used in empirical research because of their ability to handle complex modeling and inferential testing. SPSS was primarily utilized for data screening, descriptive analysis, reliability test, and communalities test, while Smart PLS-4 facilitated measurement model and structural model testing. This blended method allowed detailed and accurate testing of hypothesized relationships, which strengthened the credibility and generalizability of study findings in productive sector projects of AJK.

3.11 Scales Summary

3.11.1 Reliability Analysis (Overall Scale)

To check how consistent the different measured items are, reliability analysis (Table 3.5) was carried out for all four categories included in the study (Planning, Sustainability, Stakeholder Engagement, and Monitoring & Evaluation Practices).

The most frequent way to evaluate reliability is through Cronbach's Alpha, and it is generally thought that a value greater than 0.70 is suitable, while values more than 0.90 indicate very reliable results (Taber, 2018). Cronbach's Alpha on the total set of 49 items came out to be .948. All the constructs showed good consistency within the data. Because the items are closely linked and well related to their supposed constructs, we can say they measure these concepts effectively. The results came from 310 valid answers that did not include any blank cases. The scores for the item lay between 3.919 and 4.035. Because the standard deviation is not large, the results are quite similar for the majority of participants. The results prove that the dataset is suitable for conducting regression, testing mediation, and testing for moderation, etc.

TABLE 3.5: Reliability Statistics for All Items

Cronbach's Alpha	**Standardized Alpha**	**Number of Items**
.948	.948	49

3.11.2 Reliability Analysis for each Variable

Reliability analysis was performed to check the consistency of the measurement items for every construct included in this study (Table 3.6). This study choose the Cronbach's alpha (α) to check the reliability, as a value of 0.70 or more was seen as acceptable for research according to (Hair et al., 2019). The study was carried out for all the major constructs, including Project Planning, Project Sustainability, Stakeholder Engagement, and Monitoring and Evaluation.

TABLE 3.6: Reliability Statistics for each Variable

Variables	**Number of Items**	**Cronbach's Alpha**
Project Planning	10	0.896
Project Sustainability	22	0.912
Stakeholder Engagement	7	0.826
Monitoring & Evaluation Practices	10	0.904

3.11.2.1 Project Planning

There were 10 items in the scale for measuring Project Planning (PP1 to PP10). As presented in the table, the analysis looked at the reliability.

The outcomes indicate that the items in the project planning measure are consistent within themselves. Since the Cronbach's alpha is 0.896, greater than the minimum of 0.70, we conclude that the items are able to measure the same thing. It is backed by the existing literature that good planning and organization are key to a project's success and being unified (Kerzner, 2022).

3.11.2.2 Project Sustainability (DV)

Sustainability of the project was assessed using a group of 22 items called Project Sustainability (Environmental, Economic & Social Sustainability) items (PS1 to PS22). The obtained alpha value of 0.912 demonstrates that the questions fit well together. As sustainability has different aspects (environmental, social, and economic), it is vital to have a reliable approach so that everything is measured consistently. This finding confirms that employing various items helps to depict the overall idea of sustainability in the productive sector.

3.11.2.3 Stakeholder Engagement (Mediator)

The Stakeholder Engagement construct is made up of 7 items (SE1 to SE7). Having a Cronbach's alpha of 0.826, the scale reflects a good level of internal consistency. Therefore, we can depend on the items given to measure stakeholder identification, communication, and involvement. It proves that successful projects require meaningful participation from all sides (Hjort and De Souza Nazareth Giorgi, 2024).

3.11.2.4 Monitoring and Evaluation (Moderator)

Monitoring and Evaluation was the last construct among the three, and it was measured using 10 items (M1 through M5, and E1 through E5). The internal consistency is very high because the alpha coefficient is 0.904, proving that the items in this area are reliable. Because Monitoring and Evaluation play a moderating part in this study's analysis of the link between planning and sustainability, it is quite

important to emphasize this point. According to the literature, following specified M&E practices supports effective learning and responding to new situations in projects (Matimba, 2023).

Chapter 4

Data Analysis and Results

This chapter provides the empirical results that were found during the quantitative research completed to test the research hypotheses and to reach the identified objectives. The data involving 310 respondents was analyzed in Smart PLS-4 in terms of determining the relationship that exists between project planning, stakeholder engagement, monitoring and evaluation practices, and project sustainability among productive sector projects in AJK. The chapter starts with Descriptive Statistics, and then Communalities test, by using SPSS. Furthermore, in the current study, Smart PLS-4 was also utilized to examine the structural model and evaluate the measurement model using different tests, i.e., reliability of construct, convergent validity, discriminant validity, outer loading, multicollinearity (VIF), path coefficient, and R^2 values. This method has been used to test both direct and indirect effects of the relationships among study variables. The findings of the research are systematically represented and are described with respect to each research aim to demonstrate some statistical evidence in order to accept or reject the stated hypotheses.

4.1 Descriptive Statistics

Descriptive statistics will be an essential method of presenting the fundamental characteristics of the data obtained on each construct participating in the research. The study investigated four important variables, including Project Planning, Project Sustainability, Stakeholder Engagement, and Monitoring & Evaluation Practices, based on the responses given by a total of 310 respondents. Each of the variables

was assessed using a five-point Likert scale with the values of 1 (strongly disagree) to 5 (strongly agree).

Table 4.1 shows that, in Project Planning, the observed mean score is M=3.9987 and the standard deviation SD=0.40346. This implies that the majority of the respondents were in agreement with the statements that pertained to planning practices in their projects. The standard deviation value is rather low, and this fact means that there is a high rate of consistency in responses of the participants, and it can be interpreted that planning processes are viewed as being systematically applied and popular among the projects of the productive sectors in AJK.

Project Sustainability was close behind with a mean of 3.9804 and a standard deviation of 0.34787. Such a high mean indicates an overall positive attitude towards sustainability measures in projects. The SD value of less than 0.35 indicates that there was not much variation in the opinion of the respondents on the prevalence of environmentally, economically, and socially responsible practices. It means that the principles of sustainability are relatively incorporated into the researched projects.

Stakeholder Engagement demonstrated a rather high standard deviation (SD = 0.44189) and a mean of 3.9829. Despite the fact that the mean value indicates that stakeholder engagement practices have been rated positively, the larger standard deviation indicates that there is a wider variation in the responses. This can represent a variety of organizational styles of identifying, engaging, and communicating with stakeholders based on project type or sector. Monitoring & Evaluation Practices had the lowest average score out of the four constructs (M = 3.9610) and the standard deviation of 0.43001. This slightly lower mean indicates that respondents are not in agreement relatively as to the strength of the monitoring and evaluation systems, but the agreement is still high. The standard deviation is an indication that, though quite a number of projects might implement M&E systems, the way they work and the consistency of the systems might differ between organizations. In general, the descriptive statistics indicate that the respondents believe that all four constructs exist at quite high degrees in their project settings. The narrow distribution of mean scores around the figure of 4 indicates good concurrence with the positive practices measured. Moreover, standard deviations are small (all below

0.45), which also proves the moderate to high consistency of responses. These results confirm the robustness of the data and support the need to proceed with the inferential statistics process, such as the regression, mediation, and moderation analyses, to investigate more profound relationships between the variables.

TABLE 4.1: Descriptive Statistics of Study Variables

Variables	N	Min Size	Max Size	Mean	Std. Deviate
Project Planning	310	2.80	5.00	3.9987	.40346
Project Sustainability	310	2.91	4.91	3.9804	.34787
Stakeholder Engagement	310	2.86	4.77	3.9829	.44189
Monitoring & Evaluation	310	2.60	4.90	3.9610	.43001

4.2 Communalities - Key Variables

Communalities analysis was done through Principal Component Analysis (PCA) to examine the extent of variance of each variable that is explained by the extracted components (Table 4.2). The results indicate very high extraction values of all four constructs: Project Planning (0.951), Project Sustainability (0.960), Stakeholder Engagement (0.943), and Monitoring & Evaluation Practices (0.998). All of these values are higher than the generally agreed-upon value of 0.50, which implies that there is a great shared variance between each of these variables and the rest of the model and that the components extracted explain a high percentage of the variance. This once again justifies the suitability of these constructs in the proposed conceptual framework and establishes the internal consistency of the data structure.

TABLE 4.2: Communalities - Key Variables

Variable	Initial	Extraction
Project Planning	1.000	0.951
Project Sustainability	1.000	0.960
Stakeholder Engagement	1.000	0.943
Monitoring & Evaluation	1.000	0.998

4.3 Smart PLS 4 Analysis

A statistical analysis of the study on the usage of Smart PLS-4 was used in the validation of the measurement and structural models. Data analysis encompassed essential measurements like construct reliability and convergent validity (Cronbach's Alpha, Composite Reliability, AVE), outer-loadings, discriminant validity (Fornell-Larcker Criterion), multicollinearity (VIF), R^2 values, and path coefficient analysis to observe the hypothesis. These tests were performed following the existing PLS-SEM recommendations that are suggested by (Hair et al., 2021).

4.3.1 Construct Reliability and Convergent Validity

Smart PLS 4 was employed to investigate Cronbach's Alpha, Composite reliability (CR), and Average variance extracted (AVE), to determine the construct reliability and validity.

The findings indicate (Table 4.3), that the Cronbach Alpha values of all the constructs, namely Project Planning, Monitoring & Evaluation, Stakeholder Engagement, and the three Project Sustainability dimensions (economic, environmental, and social), are within an acceptable range of 0.70 and therefore provide evidence that the measures have adequate reliability.

In the same way, the values of Composite Reliability (rho-A & rho-C) are all larger than 0.845, which denotes considerable internal consistency and reliability of the items measuring the construct (Purnama et al., 2024).

As it pertains to convergent validity, all constructs had an AVE higher than the advised value of 0.50, which indicates that each construct explains over half of the variance in the indicators (Cheung et al., 2024). These findings confirm that the indicators employed in the present study are reliable and representative of their corresponding latent variables, which gives a firm base to the analysis of a structural model.

TABLE 4.3: Construct Reliability & Convergent Validity

Constructs	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Economic Sustainability	0.812	0.865	0.867	0.525
Environmental Sustainability	0.872	0.890	0.891	0.520
Monitoring & Evaluation	0.904	0.910	0.920	0.536
Project Planning	0.896	0.897	0.914	0.517
Social Sustainability	0.850	0.880	0.885	0.510
Stakeholder Engagement	0.826	0.845	0.880	0.513

4.4 Outer Loadings

Outer loadings were calculated to use the reliability of indicators that indicate how well an observed indicator of a latent construct (Table 4.4). In their work (Hair et al., 2021) establish that outer loadings have to be higher than 0.708 in order to be ideal. Nonetheless, if items have loadings between 0.60 and 0.70, they are still acceptable to use in exploratory research, especially when composite reliability (CR) and AVE scores are good (Hair et al., 2017). In this research, the majority of the loads across all the constructs, such as Project Planning, Monitoring & Evaluation, Stakeholder Engagement, and the Sustainability aspect (Economic, Environmental, Social) lie above or close to the acceptable range, meaning that most of the items contribute well to the constructs in question. Some of the items under the Environmental Sustainability and Social Sustainability constructs, including ENS7 (0.557), ENS8 (0.556), and SS2 (0.626), are slightly below their desired threshold. But since items had conceptual relevance and since measurement properties such as overall construct reliability (CR $>$ 0.85) and AVE ($>$ 0.50) were acceptable, these items were retained. It is methodologically appropriate to retain such items where their elimination could not produce a major difference in the quality of the model (Sarstedt et al., 2021). The construct, Project Sustainability, assumed to be a second-order reflective construct, was extraordinarily high-loading its dimensions (ProSus1 = 0.967, ProSus2 = 0.951, ProSus3 = 0.938), and indicating a high reflective measurement.

Table 4.4: Outer Loadings

Variables	Items	OL	OL	OL	OL	OL	OL	OL	OL
Monitoring &Evaluation	**E1**			0.780					
	E2			0.730					
	E3			0.725					
	E4			0.700					
	E5			0.715					
Economic Sustainability	**ECS1**	0.609							
	ECS2	0.677							
	ECS3	0.683							
	ECS4	0.719							
	ECS5	0.676							
Environmental Sustainability	**ENS1**		0.650						

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Variables	Items	OL	OL	OL	OL	OL	OL	OL	OL
	ENS10		0.637						
	ENS2		0.641						
	ENS3		0.624						
	ENS4		0.664						
	ENS5		0.603						
	ENS6		0.604						
	ENS7		0.557						
	ENS8		0.556						
	ENS9		0.629						
Monitoring &Evaluation	**M1**			0.712					
	M2			0.698					
	M3			0.764					

Continued on next page

Variables	Items	OL	OL	OL	OL	OL	OL	OL	OL
	M4			0.728					
	M5			0.763					
Project Planning	**PP1**				0.726				
	PP10				0.705				
	PP2				0.677				
	PP3				0.727				
	PP4				0.727				
	PP5				0.720				
	PP6				0.747				
	PP7				0.754				
	PP8				0.681				
	PP9				0.720				

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Variables	Items	OL	OL	OL	OL	OL	OL	OL	OL
Project Sustainability	**ProSus**					1.000			
	ProSus		0.967						
	ProSus						0.951		
	ProSus	0.938							
Stakeholder Engagement	**SE1**							0.690	
	SE2							0.687	
	SE3							0.667	
	SE4							0.720	
	SE5							0.737	
	SE6							0.653	
	SE7							0.736	
Social Sustainability	**SS1**						0.657		

Continued on next page

Variables	Items	OL	OL	OL	OL	OL	OL	OL	OL
	SS2						0.626		
	SS3						0.659		
	SS4						0.696		
	SS5						0.609		
	SS6						0.708		
	SS7						0.657		
	Monitoring & Evaluation x Project Planning								1.000

4.4.1 Discriminant Validity (Fornell-Larcker Criterion)

Fornell-Larcker criterion was used to evaluate discriminant validity of the reflective measure model. By this method, the indicators of the discriminant validity occur when root square of the Average Variance Extracted (AVE) of each construct is higher than their correlations with any other construct in the model (Fornell and Larcker, 1981; Hair et al., 2021).

Table (4.5) contains the results of the Fornell-Larcker criterion, and it is clear that all the diagonal entries (square roots of AVEs) are

bigger than the off-diagonal inter-construct correlations. It means that every construct is largely associated with more variance with its indicators as compared to other constructs and thus, a confirmation of discriminant validity is accepted.

There was a sufficient discriminant validity of the six constructs. As an example, the square root of AVE of the Economic Sustainability is 0.724 and is more than any other construct, including the greatest correlation with Project Planning (0.658). On the same note, Environmental Sustainability (AVE = 0.721) had lesser correlations to any of the other constructs with the highest being with Project Planning (0.679).

The trend can be observed in all constructs, such as Monitoring & Evaluation (0.732), Project Planning (0.719), Social Sustainability (0.714), and Stakeholder Engagement (0.716). The process of stakeholder identification and communication is usually integrated into the planning process (Zwikael and Huemann, 2023). Since Project Sustainability is taken as a second-order reflective scale with dimensional constructs Economic, Environmental, and Social Sustainability, the Fornell-Larcker criterion was used at the first order, (Hair et al., 2021; Hou et al., 2024).

As the first-order constructs had the discriminant validity test, then Project Sustainability as higher-order construct also has reasonable discriminant validity, by the rule of implication.

The findings indicate that both constructs are conceptually and empirically unique, which means that there is a robust basis to continue with the analysis of the structural model (Henseler et al., 2015).

TABLE 4.5: Discriminant Validity (Fornell-Larcker Criterion)

S#.	Constructs	1	2	3	4	5	6
1	**Economic Sustainability**	0.724					
2	**Environmental Sustainability**	0.612	0.721				
3	**Monitoring & Evaluation**	0.245	0.198	0.732			
4	**Project Planning**	0.658	0.679	0.201	0.719		
5	**Social Sustainability**	0.605	0.627	0.194	0.662	0.714	
6	**Stakeholder Engagement**	0.635	0.648	0.165	0.695	0.676	0.716

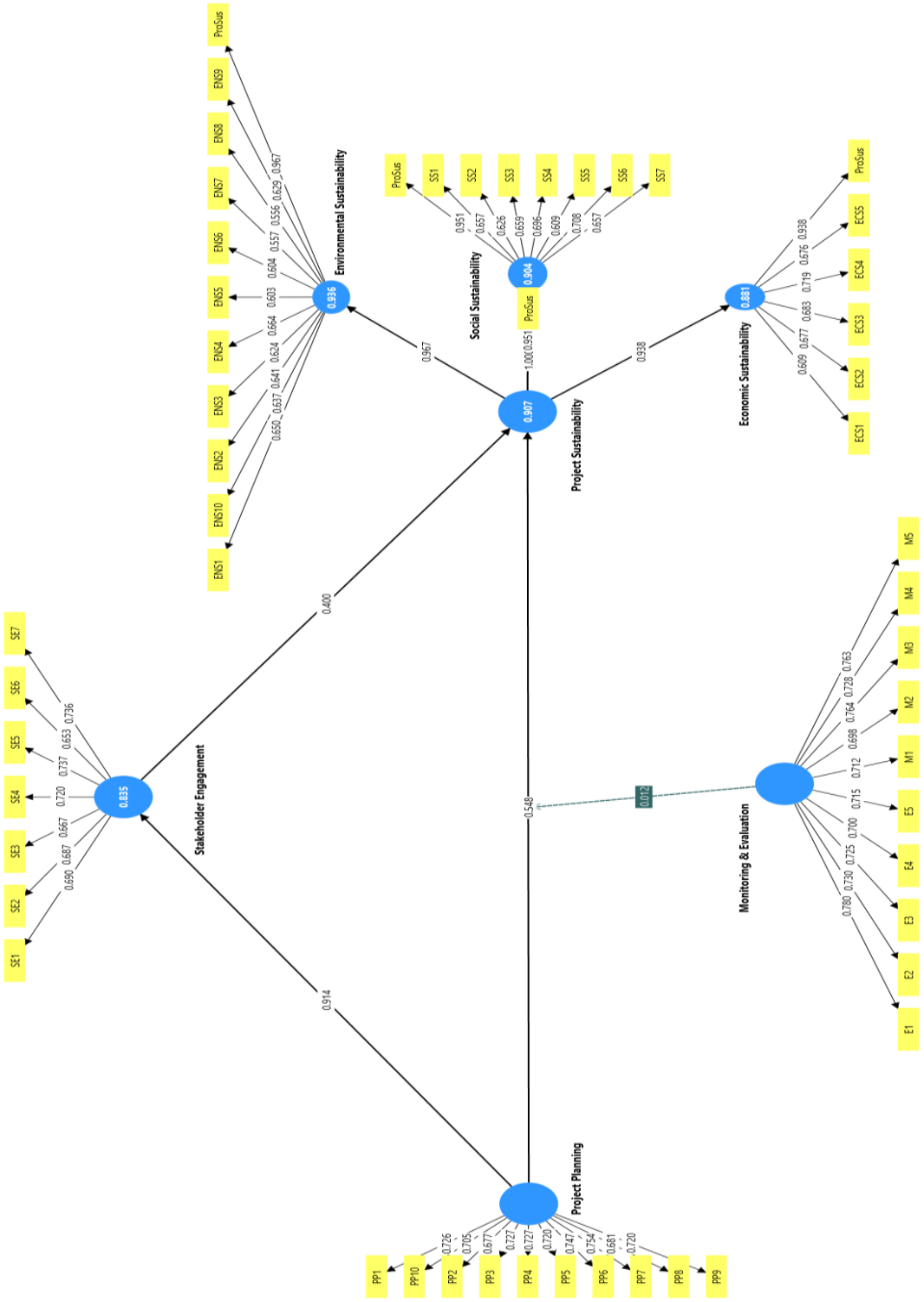

FIGURE 4.1: Measurement Model Analysis

4.5 Structural Model Assessment (PLS-SEM)

The Structural Equation Modeling (SEM) is a sophisticated Multivariate method that is adopted to explore multifactorial ties between latent variables and observed

variables. Smart PLS-4 was utilized in this research to implement SEM to assess the direct, mediating, and moderating effects between project planning, stakeholder engagement, monitoring and evaluation practice, and project sustainability. Such a method allows one to study statistically and theoretically both models: measurement and structural.

Once the reliability and validity of the measurement model have been established, the second stage in Partial Least Squares Structural Equation Modeling (PLS-SEM) is to evaluate the structural model. In this assessment, the study aims to test the hypothesis relationships between latent constructs and to estimate the research hypotheses of the study using path coefficient, significance (p-values), t-statistics, and the coefficient of determination (R^2) (Hair et al., 2021). Also, through some important path coefficients, effect sizes (f^2), and multicollinearity diagnostics (VIF), the structural model provides information on the predictive power and explanatory relevance of the model. This will be necessary in order to assess whether the theoretical model has been corroborated by the empirical evidence in the present study.

4.5.1 Coefficient of Determination (R^2) – Structural Model Assessment

The value of the coefficient of determination (R^2) indicates the amount of variance in the dependent (endogenous) construct that is explained by its predictors in the structural model. Within the framework of PLS-SEM, R^2 of greater than 0.75 are substantial, 0.50 and 0.25 are moderate, and weak, respectively (Hair et al., 2021). The adjusted R^2 reflects the number of predictors in the model and gives a more conservative measure, particularly when the number of predictors is more than two.

The coefficients of determination in the present research indicate a high explanatory power (Table 4.6). An example is Environmental Sustainability ($R^2 = 0.936$), Economic Sustainability ($R^2 = 0.881$), and Project Sustainability ($R^2 = 0.907$), which are all well-explained by their predictors. Similarly, there is strong explanatory power of Social Sustainability ($R^2 = 0.904$) and Stakeholder Engagement ($R^2 =$

0.835). The results validate that the structural model is effective in describing the variance in the major outcome measures of the study.

TABLE 4.6: Coefficient of Determination (R^2) - Structural Model Assessment

Constructs	R-square	R-square adjusted
Economic Sustainability	0.881	0.880
Environmental Sustainability	0.936	0.935
Project Sustainability	0.907	0.906
Social Sustainability	0.904	0.904

4.5.2 Multicollinearity Assessment (VIF)

The values of the Variance Inflation Factor (VIF) were checked in Smart PLS-4 to determine the existence of multicollinearity between the predictor constructs (Table 4.7). In their research work (Hair et al., 2021) recommend that the values of VIF must not exceed 5.0, so that multicollinearity does not affect path coefficients and inflate standard errors. The indicators have VIF values that range between 1.000 and 4.350 in this study, which means that there is no serious multicollinearity problem. Although some of the indicators ProSus attain relatively higher (e.g., 4.006 and 4.350), it is still less than the critical point of 5.0, which indicates an acceptable range of collinearity. These findings prove that the predictors in the structural model do not differ significantly in terms of variance and that the estimation of the structural model does not have a negative impact due to multicollinearity (Hair and Alamer, 2022).

TABLE 4.7: Variance Inflation Factor (VIF) Values for Multicollinearity Assessment

Indicator	VIF	Indicator	VIF
E1	2.032	M1	1.699
E2	1.93	M2	1.713
E3	1.764	M3	1.959

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Indicator	VIF	Indicator	VIF
E4	1.695	M4	1.742
E5	1.676	M5	2.119
ECS1	1.427	PP1	1.797
ECS2	1.533	PP2	1.62
ECS3	1.571	PP3	1.758
ECS4	1.736	PP4	1.833
ECS5	1.541	PP5	1.766
ENS1	1.683	PP6	1.91
ENS2	1.704	PP7	1.903
ENS3	1.574	PP8	1.628
ENS4	1.877	PP9	1.785
ENS5	1.5	PP10	1.699
ENS6	1.664	SE1	1.475
ENS7	1.505	SE2	1.465
ENS8	1.505	SE3	1.408
ENS9	1.597	SE4	1.565
ENS10	1.634	SE5	1.61
SS1	1.647	SE6	1.395
SS2	1.505	SE7	1.578
SS3	1.625	ProSus (Item 1)	4.006
SS4	1.728	ProSus (Item 2)	1.0
SS5	1.578	ProSus (Item 3)	2.9
SS6	1.676	ProSus (Item 4)	4.35
SS7	1.563	Monitoring & Evaluation × Planning	1.0

4.5.3 Path Coefficient Analysis & Hypothesis Testing

This part gives the findings of the structural model test conducted through Smart PLs 4. The path coefficients were determined using a 5000-subsample bootstrapping procedure (Table 4.8).

The significance of the hypothesized relationships is determined by the size and statistical significance of the β coefficients, t-values, p-values, as well as confidence

intervals (Hair et al., 2021). When p-value < 0.05, t-value > 1.96, and the confidence interval (LLCI to ULCI) does not include zero, the relationship will be considered statistically significant.

4.5.3.1 Direct Effects

The findings indicate that there is a significant positive impact of Project Planning on Project Sustainability ($\beta = 0.548$, t = 13.213, p < 0.001, LLCI = 0.468, ULCI = 0.631), which supports the claim that a well-structured planning has a positive impact on the sustainability.

Project Planning, on the other hand, portrays a very significant positive impact on Stakeholder Engagement ($\beta = 0.914$, t = 101.185, p < 0.001), meaning that stakeholder engagement is closely connected with adequate planning processes (Table 4.8).

Furthermore, Stakeholder Engagement also plays a key role in Project Sustainability ($\beta = 0.400$, t = 9.673, p < 0.001), which confirms its mediating effects. The relation between Monitoring and Evaluation and the Project Sustainability also reflects a considerable direct positive effect ($\beta = 0.217$, t = 10.339, p < 0.001), confirming it is independent and significant in improving the long-term project performance.

4.5.3.2 Mediation Analysis

The Stakeholder Engagement mediated the relationship between Project Planning and Project Sustainability through the indirect path Project Planning →Stakeholder Engagement → Project Sustainability. The remarkable direct correlations (Table 4.8), particularly between Project Planning and the Stakeholder Engagement ($\beta = 0.914$) and the stakeholder engagement and the project sustainability ($\beta = 0.400$), all concur with the mediation hypothesis.

These effects are very strong and important, thus confirming that Stakeholder Engagement mediates the association between planning and sustainability. The findings correspond with those presented in the previous literature that stated that participatory planning and inclusive involvement of stakeholders can contribute to delivering sustainable development results (Silvius et al., 2017; Jepsen and Eskerod, 2013). It corresponds to previously conducted research on the idea that

the participation of stakeholders is an effective project planning measure (Aaltonen and Kujala, 2016).

4.5.3.3 Moderation Analysis

M&E is usually a system-based process that increases sustainability based on feedback loops and performance monitoring and not actual relational impact (Siahaan et al., 2025). M&E has its part in ensuring sustainability because of learning, accountability, and adaptive management (Kotschy et al., 2025). To test the role of Monitoring and Evaluation (M&E) as the potential moderator of the relations between Project Planning and Project Sustainability, the interaction term (M&E x Project Planning) was added to the structural model and tested according to the bootstrapping procedure (Table 4.8).

The statistical output shows a conclusion that the (interaction) effect is not significant (β = 0.012, t = 0.632, p = 0.527, LLCI = -0.025, ULCI = 0.050). The p-value is greater than 0.05, and the confidence interval covering zero indicates no support for a moderating effect of M&E on the relationship between project planning and sustainability.

This result means that, within the framework of this study, Monitoring and Evaluation does not affect the strength and direction of the effect that project planning has on the outcomes of sustainability. Even though M&E has independent contributions to sustainability, its ability to strengthen or undermine the planning and sustainability connection seems to be weak. This finding is similar to what is noted in a previous study by (Ika, 2012), which states that in numerous development contexts, M&E systems are commonly underused, and have poor strategic planning, which enables them to operate as dynamic moderators. M&E in such instances could be more administrative in that they are intended to be compliance and reporting, and not allowing real-time adjustments or actual decision making that would enhance the impacts of the planning.

4.5.3.4 Impact on Dimensions of Sustainability

Project Sustainability as well demonstrates a very strong and statistically significant effect on all three dimensions of sustainability (Table 4.8), Economic Sustainability ($\beta = 0.938$, t = 177.068, p < 0.001), Environmental Sustainability ($\beta = 0.967$, t = 301.004, p < 0.001), and Social Sustainability ($\beta = 0.951$, t = 216.419, p < 0.001).

These findings underline that sustainable projects are beneficial and appropriately effective in terms of economic, environmental, and social spheres-concurring with the triple bottom line approach (Elkington and Rowlands, 1999).

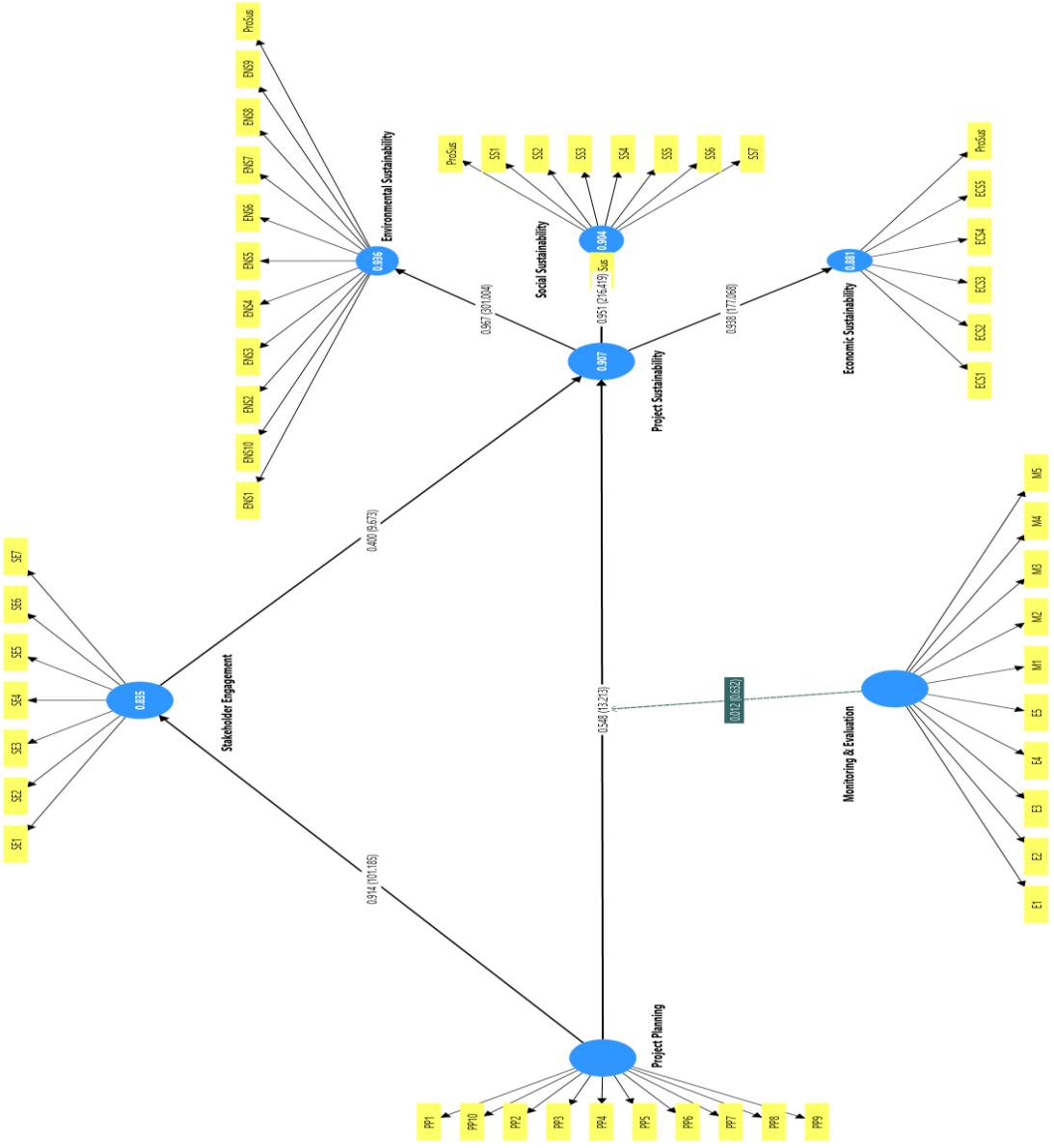

FIGURE 4.2: Structural Model Analysis

TABLE 4.8: Path Coefficient Analysis & Hypothesis Testing

H	Path	β	M	STDEV	t-Value	p-Value	LLCI (2.5%)	ULCI (97.5%)	Remarks
H1	Project Planning → Project Sustainability	0.548	0.546	0.042	13.213	0.0	0.468	0.631	Supported
H2	Project Planning → Stakeholder Engagement	0.914	0.914	0.009	101.185	0.0	0.893	0.929	Supported
H2	Stakeholder Engagement → Project Sustainability	0.400	0.399	0.041	9.673	0.0	0.321	0.481	Supported
H3	Monitoring & Evaluation × Project Planning → Project Sustainability	0.012	0.012	0.019	0.632	0.527	-0.025	0.05	Not Supported
2^{nd} Order Construct	Project Sustainability → Economic Sustainability	0.938	0.939	0.005	177.068	0.000	0.927	0.948	Dimension of Sustainability
2^{nd} Order Construct	Project Sustainability → Environmental Sustainability	0.967	0.967	0.003	301.004	0.000	0.96	0.973	Dimension of Sustainability
2^{nd} Order Construct	Project Sustainability → Social Sustainability	0.951	0.951	0.004	216.419	0.000	0.941	0.959	Dimension of Sustainability

4.6 Hypothesis Testing Summary

TABLE 4.9: Hypothesis Result Summary

Hypothesis	**Statement**	**Result**
H1	Higher levels of project planning positively impact the sustainability of productive sector projects in Azad Jammu and Kashmir (AJK).	Supported
H2	Stakeholder engagement mediates the relationship between project planning and project sustainability in AJK.	Supported
H3	Monitoring and Evaluation (M&E) practices moderate the relationship between project planning and the sustainability of productive sector projects in AJK.	Not Supported

Chapter 5

Discussion and Conclusion

Introduction

In this chapter, the findings of the research are discussed comprehensively with reference to the mentioned objectives and hypotheses. This chapter aims to explain the findings of statistical tests, put them into context, and compare them to existing theories and literature. The chapter also gives a description of the theoretical and practical implications of the study, the limitations of the study, future research directions, and concludes with the core findings of the study.

In the given research, the dual-methodology was applied with the help of SPSS and Smart PLS-4 so that the analysis conducted is rigorous and profound. The descriptive statistics, and communalities test were performed in SPSS. On the other hand, the structural equation modeling framework/tool, Smart PLS-4, was used to assess the measurement model (the reliability, as well as convergent & discriminant validity, outer loadings & multicollinearity) and structural model (path coefficients and R^2 values). The integrated use of both instruments provided the possibility of a more critical and multidimensional analysis of the interconnections between Project Planning, Stakeholder Engagement, Monitoring & Evaluation, and Project Sustainability, when it came to productive sector projects in AJK.

An analysis of the study is organized around its hypotheses, beginning with direct relationships and leading to mediation and moderation effects. All hypotheses will be interpreted with the help of the structural model outputs delivered by

Smart PLS-4, although the information obtained with SPSS is referenced where appropriate to support the results.

5.1 Hypothesis Discussions

5.1.1 H1: Project Planning and Sustainability

Hypothesis 1: that higher levels of project planning positively impact the sustainability of productive sector projects in Azad Jammu and Kashmir (AJK). The Smart PLS-4 structural model analysis presented a positive significant relationship between Project Planning and Project Sustainability (beta = 0.548, t = 13.213, p < 0.000). The 95 percent confidence interval [LLCI = 0.468, ULCI = 0.631] has no values below zero, which proves once more the significance of this effect. The results are consistent with the findings of earlier studies (Ika, 2012; Silvius et al., 2017), which argue that effective planning will affect the long-term sustainability and success of the projects. A successful project planning provides well-organized schedules, feasible resource allocation, and substantial risk management that helps in guaranteeing sustainability under complicated and multi-stakeholder situations such as those found in AJK.

The results of analysis indicated that there was strong positive correlation between project planning and project sustainability, which validated H1. The result is in line with the existing research that underlines the importance of structured and participatory planning in facilitating sustainability outcomes (Sebunya and Gichuki, 2024). However, this finding is consistent with the Triple Bottom Line (TBL) theory of sustainable development, which implies that sustainable praxis is realized when economic, environment, and social aspects that influence the project design and the project-decision-making process are adequately integrated (Elkington and Rowlands, 1999). The presence of proper planning practices can lead project teams to incorporate sustainability into their planning at an early stage, thus supporting the long term creation of value within all three dimensions of a TBL framework. These results enhance the fact that project planning is an operational facilitator of TBL in project management in the public sector.

These observations imply that project planning serves as a fundamental step in achieving sustainable results throughout productive sector projects in the state of AJK. The findings reinforces the evidence on this relationship further and highlights the importance of proper and extensive planning, which should be progressive in government-led development endeavors.

5.1.2 H2: Mediating Role of Stakeholder Engagement

The second hypothesis Stakeholder engagement mediates the relationship between project planning and project sustainability in AJK.

The Smart PLS-4 results showed that Project Planning was an important predictor of Stakeholder Engagement ($\beta = 0.914$, t = 101.185, $p < 0.001$), and Stakeholder Engagement predicted Project Sustainability ($\beta = 0.400$, t = 9.673, $p < 0.001$). Also, Project Planning still displayed a strong direct impact on Project Sustainability ($\beta = 0.548$, t = 13.213, $p < 0.001$) that mediated the relationship. The confidence limits of the mediation effect did not contain zero in all the paths that indicated the significance of the mediation effect.

The results of the study are in line with the findings of (Bourne and Walker, 2006), who asserts that stakeholder engagement is crucial in ensuring the success of the project sustainability results. The involvement of the stakeholders, especially in the project of public sector projects, will lead to good decision making, enhanced accountability, and a collective vision of achieving sustainability objectives.

The mediation model further shows that stakeholder engagement mediate links between project planning and sustainability, that is, the effects of planning on sustainability is both direct and indirect through stakeholder engagement. The result confirms the studies in literature that argue that the engagement of stakeholders increases the effectiveness of the sustainable practices by bringing on board the various views and opinions, eliminating resistance and enhancing project alignment with the local needs (Mohamed, 2025). In the TBL model, stakeholder involvement directly addresses social sustainability in the sense that it reinforces the major principles of inclusiveness, equity and transparency, as highlighted by (Elkington and Rowlands, 1999). In addition to this, the mediating role underlines better planned project, projects are more sustainable when the stakeholders are actively

engaged in them and this emphasizes the essence of participatory governance in development projects.

5.1.3 Moderating Role of Monitoring & Evaluation Practices

The third hypothesis, Monitoring and Evaluation (M&E) practices moderate the relationship between project planning and the sustainability of productive sector projects in AJK.

The interaction term in (Smart PLS-4) between Project Planning and M&E i.e., Project Planning x M&E → (Project Sustainability), provided an insignificant path coefficient (β =0.012, t = 0.632, p = 0.527), and the 95 percent confidence interval of that coefficient is (LLCI = -0.025, ULCI = 0.050), which also includes zero. This is a clear indicator that the moderating influence of the M&E practices is non-significant statistically. This implies that within the context of AJK, M&E is not as important a moderator as much as makes the relation between planning and sustainability stronger or weaker.

This observation is not rare among public sector studies in developing countries. According to researchers such as (Briceno-Rosas et al., 2020; Morkel and Ramasobama, 2017), M&E structures are commonly available, but the structures are not always used, due to institutional limitations, capacity problems, or the lack of their integration in planning strategies. In developing countries or other such environments, M&E systems are typically used to be more accountable or report on a given initiative, and somewhat less to give strategic feedback and learning, hence limiting their moderating impacts on implementation outcomes.

The statistical result indicated that M&E practices moderator effect was not significant and therefore, this was not in support of H3. Nevertheless, this observation gives a significant reflection on the importance of Monitoring and Evaluation in development situations such as AJK. Although M&E might not figure much in increasing the relationship between planning and sustainability in this model, its separate importance can still be considered strategic.

This realization implies that M&E practices may now act as parallel processes, rather than being fully incorporated in planning activities. This disconnection in no way diminishes the value of M&E and puts the emphasis on how to build more robust institutional integration, how to implement sound feedback mechanisms, and how to build capacity. Various researchers (Kengera and Mromba, 2023; Odongo, 2015) have stated that M&E effectiveness varies significantly and is likely to be affected by the maturity of the organization and participatory culture. Thus, the outcome will provide constructive input to the literature towards suggesting the limitation and untapped potentiality of M&E in improving project sustainability. It motivates policy-makers, as well as project leaders, in AJK to reconsider the ways in which M&E systems might better be prospectively configured to their planning initiatives in order to optimize sustainable effect. Overall, despite the fact that Hypothesis 3 did not prove statistical value, findings offer useful information that can be utilized in future reforms of project governance and implementation practices in line with TBL framework. Accordingly, the non-significant moderation effect in this study can indicate the discrepancy between M&E policy and practice in the development of the public sector in AJK. In this regard, the findings propose that in as much as M&E can be independently contributive to sustainability, there is a lack of positioning M&E as a dynamic contributor to the effectiveness of planning in such a context.

5.2 Confirmation of Hypothesis

Table 5.1: Confirmation of Hypothesis

Hypothesis	Statement	Result
H1	Higher levels of project planning positively impact the sustainability of productive sector projects in Azad Jammu and Kashmir (AJK).	**Supported**
H2	Stakeholder engagement mediates the relationship between project planning and project sustainability in AJK.	**Supported**
H3	: Monitoring and Evaluation (M&E) practices moderate the relationship between project planning and the sustainability of productive sector projects in AJK.	**Not Supported**

Concluded

5.3 Implications

The results of this study have significant implications in theory as well as practice in the area of project management, particularly in the context of project management in the field of development projects in Azad Jammu and Kashmir (AJK). In validating the positive relationship between project planning and project sustainability, in addition to stakeholder engagement mediating the relationship between project planning and project sustainability, this study adds to the existing body of knowledge that attributes the quality of planning and participatory governance to long-term outcomes of project sustainability. The findings support the strategic relevance of taking an integrated approach to planning, engaging stakeholders in project development, and supporting mechanisms at the institutional level.

The implications of the study are not limited to academia; it can help guide governmental policies, planning of projects, and donor agencies on where and how they would deploy their efforts in projects to enhance the sustainability of the projects.

5.3.1 Theoretical Implications

The research has a number of theoretical contributions to the areas of project management and sustainable development. First, it adds to the knowledge regarding how project planning is more than just a technical basis; it is also a strategic tool that can affect project sustainability. Although existing studies e.g., (Ika, 2012; Silvius et al., 2017) have placed their focus on the influence of planning, the present study contributes to the existing evidence by providing empirical data in the context of a developing region, demonstrating that proper planning is an essential factor that can significantly define successful sustainable results within the framework of the government arena.

Second, the research enhances the level of stakeholder theory by showing its mediating role, which is subsequently supported by empirical data. Confirmation of this mediation introduces much-desired shades to the theoretical debate and implies that stakeholders are not only outside participants but also active participants who determine the course, legitimacy, and influence of a project. This understanding is based on the original

theory of (Freeman, 2010) on stakeholders and further supports the depth of relevance of the theory in the context of the project assessment on sustainability.

Third, the overall contribution of the research to contemporary ongoing academic discussion on the role and effectiveness of the Monitoring and Evaluation (M&E) practices in improving project outputs is also a positive contribution. Though Hypothesis 3, which examines the moderating effect of M&E, was not proven to be statistically significant, the overall result does not take the role of M&E as a sustainer of the development project. Rather, they are an indication of the realities of practice and systemic limitations within the context of Azad Jammu and Kashmir, with M&E systems perhaps present at the institutional level, but not quite integrated, dynamically and strategically, into project planning or implementation processes.

Importantly, the fact that the statistically significant direct correlation between M&E and project sustainability was found in Smart PLS-4 proves once again that M&E continues to play a positive role in project sustainability. This is an indication that, with better institutional capacity, through better alignment to planning stages and with improved operational frameworks, M&E could have a more enabling role to play. The study aims theoretically to move beyond the assumptions that M&E is inherently effective, and focus instead on how it can be designed, integrated, and put to use in localities precisely to increase how effective it becomes. Ultimately, the moderating role was not observed, yet the research identifies a key field in further investigations and enhancement, and this research piece provides valuable advice to policymakers and practitioners striving to reinforce governing processes in AJK.

In general, the current study helps to build theory in project management regarding the public sector by underlining context-sensitive and integrated characteristics of sustainable development. It also encourages researchers to understand planning not as something in itself but as a part of a complex adaptive system.

5.3.2 Practical Implications

From a practical perspective, the findings provide a number of implementable insights to the project managers, governmental agencies, and donor agencies dealing with project planning and execution in the region of AJK. This close positive correlation of project planning with sustainability gives an indication of the necessity of a rigorous

evidence-based planning arrangement that is integrated, dynamic, and contains long-term horizons. The planning tools provided to project teams must enhance not only technical and financial feasibility but also incorporate long-term environmental and social concerns. To enhance this, institutions should invest in capacity-building programmes of planners, especially in the departments in the public sector, so as to instill in them planning values that are based on sustainability.

Second, the mediating role of stakeholder engagement was confirmed, which means sustainability is not possible with top-down planning only. The project planners and managers should institutionalize inclusive participation mechanisms, which means that the development outcomes are not to actually happen through a passive engagement of the community members, civil society, and local institutions, but through inclusive efforts of the institutions as well as co-producers of the development initiatives. This has the capacity of enhancing legitimacy, transparency, and the flexibility of the projects with respect to contextual challenges.

Also, the results indicate that there should be capacity building in the M&E practices. M&E was found not to moderate sustainability in this study, but that does not prohibit the fact that M&E has a significant direct effect on sustainability, implying that when properly resourced and linked to strategic objectives, even M&E can help produce outcomes. The public sector organizations should thus go beyond compliance-based M&E to learning- based frameworks that constantly feed back into the planning and implementation processes. The institutions in the public sector ought to implement real-time monitoring dashboards, seek the involvement of third-party reviews, and establish learning loops, which will facilitate the adaptive management of projects. This is to make planning a dynamic process that is responsive to the realities on the ground.

Lastly, this study encourages policymakers to treat planning and stakeholder engagement not as a one-time procedural step but as continuous, strategic processes. The Practical reforms, such as; digital project management platforms, integrated stakeholder-communication tools, and participatory budgeting, can be introduced to embed these practices in the governance structure. These policy-level shifts can drastically improve the effectiveness and the sustainability of development investments in any developing area.

5.4 Limitations and Future Research Directions

5.4.1 Limitations

In spite of the robustness of the design, and although the study forms a great source of insights, there are a number of limitations that need to be recognized. First, the research employed a cross-sectional survey, which gives only perceptions at that moment because it captures them at a given time. This design limits the possibility of making causal relations of the relationships between planning, the involvement of stakeholders, monitoring and evaluation practices, and sustainability. Future database research, including longitudinal research, may offer more details about the development of those relationships as projects make their way through the project life cycle. Despite the fact that relationships were determined to be significant, a longer-term study may provide a more dynamic picture of how planning and sustainability change over a period of time.

Secondly, only self-reported data was used in the study, and the data was obtained through the use of structured questionnaires to project professionals, e.g., planners, managers, and M&E officers. Even though these respondents are highly knowledgeable and professionals working on the relevant projects, such a method might have added common method bias or social desirability bias. The subject of the study may have exaggerated the results on the quality or sustainability of the planning performance under their own or the organization's pressure. Though Cronbach's alpha and factor analysis helped to define the reliability and validity of the instrument, Reliability could be enhanced with the incorporation of multi-source data or triangulation, which involves interviews and reviews of documents.

Third, this study was geographically limited to AJK. This is good to give a unique contextual picture, but this narrows the generalizability of the research results to other areas. A greater understanding of patterns would be provided by the comparative studies on the province or even the country level. Therefore, one should be careful with applying the findings to other provinces or countries unless they are presented with further contextual validations.

Lastly, even though the study had monitoring and evaluation as a moderator, the fact that the moderating effect was not significant could have been a result of the operationalization of this construct or due to the low familiarity of the respondents with M&E practices, particularly at the implementation level. As a matter of fact, M&E encompasses several elements, including feedback mechanisms, data use, involvement of stakeholders in the assessment, and learning loops, which can operate in different ways. It is recommended that the research focus on these components in the future.

5.4.2 Future Research Directions

The results of this research open up a number of possibilities in future research. To begin with, because of the narrow scope used in the present study, which dealt with projects in the productive sector in AJK only, future research ought to be multidimensional and multi-sectoral. A comparison with a similar relationship in other provinces or other spheres, including health, education, or infrastructure, might allow us to derive more patterns and improve the robustness of the generalized results. Future research would also be based on the limitations and findings of the current study by including longitudinal designs to establish changes occurring over time. The evolution of project planning and encounters with stakeholders in the project life cycle can give more dynamic answers. This would also facilitate stronger means to test causal relationships using this approach.

Also, it would be necessary in the future to break the Monitoring and Evaluation construct into its sub-dimensions. Focusing on other dimensions, including real-time data utilization, participatory review, and incorporation of feedback, may shed further light on the role M&E practices can play towards ensuring sustainability. Interventions that enhance the quality of M&E could also be tested using some experimental or quasi-experimental designs. The results indicate an existing lapse in meaningful incorporation between M&E and planning activities. The next potential researchers can also place more effort in identifying the organizational, technological, or capacity-related barriers that impede such integration. It could also be well worthwhile to combine quantitative analysis with qualitative case studies in mixed-method approaches.

The research involved a conceptual analysis of formal planning and M&E frameworks, but in the future, the potential extent to which informal practices, organizational culture, and leadership contribute to the sustainable outcomes of a project can be considered. These more tender aspects can supplement official machinery and provide a better perspective in an integrated manner.

Lastly, there is also the need to examine the involvement of digital technologies in regard to planning, stakeholder interactions, and M&E. As the use of digital platforms grows, one can study in the future the ways in which such tools as GIS, project dashboards, and mobile-based feedback systems can be used in the process of project governance and sustainability. The impact of digital technologies and project management software tools on such relationships as the ones in the current study should also be addressed in future research. As more of the processes carried out in the public sector become digitized, any insight into the importance of technology in improving planning, stakeholder engagement, and M&E may have great implications for sustainable development.

5.5 Conclusion

This study aimed to investigate how project planning can influence the sustainability of productive sector projects in Azad Jammu and Kashmir (AJK), along with investigating the mediating and moderating effects of stakeholder engagement and monitoring and evaluation (M&E) practices, respectively. Through careful incorporation of a strong methodological procedure that used both standard statistical analysis via SPSS and contemporary structural equation modeling by means of Smart PLS-4, the research provides in-depth information regarding the manner in which the planning process yields sustainable development results within the realms of the public sector.

The results are very supportive of the hypothesis proposing that a well-structured and comprehensive project planning contributes greatly to the sustainability of development projects. This was corroborated consistently in both methods of analysis. Moreover, the role of stakeholder engagement as the mediator of this relationship was identified, emphasizing the need to apply participatory and inclusive planning models that allow the entry of local voices into the various stages

of the project. This reaffirms the notion that the achievement of sustainability is not solely through planning, but the processes should be socially inclusive and institutionally responsive.

Although the moderating role of M&E practices was not found as evident in the hypotheses, the significant direct impact of M&E on sustainability implies that its role, though not an interactive one, is still a vital one. The finding highlights the deficiencies in the M&E systems on their side of implementation and emphasizes strengthening of the institutions and enhanced incorporation of monitoring and evaluation into planning and project decision-making processes. Further studies are also promoted with the purpose of critically addressing contexts in which M&E can become a strategic driver and instead of a procedural formality.

Generally, the study will be a substantive contribution to theory and practice. Theoretically, it contributes to the literature on sustainable project management as it can verify the main role of planning and participatory governance in the development of the public sector. In practice, it will provide practical recommendations to project managers, policymakers, and donor agencies who are tasked with the responsibility of enhancing project results in resource-scarce and institutionally complicated settings like AJK.

The findings also provide an institutional reform roadmap, where the government agencies and donors are urged to help in prioritizing capacity building in planning and stakeholder education/awareness in their project design and implementation guidelines. These practices can be embedded into the government projects, and thus, long-term sustainability could be more confidently established. The ultimate contribution of this research is on the bridging of the gap between the project design and the results of sustainable development; its results provide a model that can be reshaped and used in any similar context throughout the world.

Finally, this research work proves that project management entails more than adherence to procedures, and sustainable development outcomes cannot be achieved through planning only, but it involves a holistic and inclusive approach of comprehensive planning, inclusive decision making, and adaptive learning. These factors/integrated approach are instrumental/contributory in ensuring planning

becomes sustainable. The dynamics explored in this study must continue to be explored further with both qualitative and quantitative focus to develop more detailed, context-based, sustainable models of public sector development. The insights from this study are expected to guide the practitioners, policy-makers, and researchers in reconsidering project strategies/approaches that prioritize both participation and adaptability along the robust planning.

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Appendix

CAPITAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

ISLAMABAD

Department of Management Sciences

Respectable Respondent,

As a master's degree candidate in project management at Islamabad's Capital University of Science & Technology, I want to write my thesis on the following topic: **"Examining the Impact of Planning on Sustainability of Productive Sector Projects in AJK: The Mediating Role of Stakeholder Engagement and The Moderating Role of Monitoring and Evaluation Practices"**

For this purpose, I have drafted a survey. I assure that we will protect the confidentiality of your identify as the responder. You are free to speak your mind on the reality you encounter on the ground. The survey should take no more than ten to fifteen minutes of your time, and we promise to utilize the data we collect for only academic purposes.

For more queries, please email attique786aur@gmail.com. I really appreciate your time for filling up this questionnaire.

Thanks, in anticipation for your help and support,

Sincerely,

Regards,

Attique Ur Rehman

Demographics

Please select the appropriate option.

1. Gender:

A. Male B. Female

2. Age:

1. 18-25 2. 26-33 3. 34-41 4. 42-49 5. 50 or above

3. Qualification:

1. Intermediate 2. Bachelor 3. Master 4. MS/M.Phil. 5. PhD

4. Experience:

1. 5 and less 2. 6-13 3. 14-21 4. 22-29 5. 30 or above

For following set of questions. Please read the statement and tick mark the box of your choice against each statement. To indicate the extent to which you agree or disagree with the statement.

1. **Strongly Disagree**
2. **Disagree**
3. **Neutral**
4. **Agree**
5. **Strongly Agree**

Please mention your level of agreement on the following statements about **Project Planning** on five-point Likert scale

① Strongly Disagree, ② Disagree, ③ Neutral, ④ Agree ⑤ Strongly Agree

Project Planning

Sr No:	**Statements**	**1**	**2**	**3**	**4**	**5**
PP1	When my team decides on what we will try to accomplish in the short term, we kept in mind our long-term objectives.					
PP2	My team revised our goals to determine if they need revising.					
PP3	My Team broke complex, difficult projects down into smaller manageable tasks.					
PP4	My team set short-term goals for what we wanted to accomplish in a few days or weeks.					
PP5	My team set deadlines for ourselves when we set out to accomplish a task.					
PP6	My team looked for ways to increase the efficiency with which we performed our activities.					
PP7	My team finished top priority tasks before going on to less important ones.					
PP8	My team reviewed our daily activities to see where we were wasting time.					
PP9	During the day, we evaluated how well we were following the schedule we have set down for ourselves.					
PP10	We set priorities to determine the order in which we will perform tasks each day.					

Please mention your level of agreement on the following statements about **Project Sustainability** on five-point Likert scale

① Strongly Disagree, ② Disagree, ③ Neutral, ④ Agree ⑤ Strongly Agree

Project Sustainability (Environmental Sustainability)

Sr No:	**Statements**	**1**	**2**	**3**	**4**	**5**
PS1	Our firm reduced energy consumption.					
PS2	Our firm reduced wastes and emissions from operations.					
PS3	Our firm reduced impact on animal species and natural habitats.					
PS4	Our firm reduced the environmental impacts of its products/service.					
PS5	Our firm reduced environmental impact by establishing partnerships.					
PS6	Our firm reduced the risk of environmental accidents, spills, and releases.					
PS7	Our firm reduced purchases of non-renewable materials, chemicals, and components.					
PS8	Our firm reduced the use of traditional fuels by substituting some less polluting energy sources.					
PS9	Our firm undertook voluntary actions (e.g., actions that are not required by regulations) for environmental restorations.					
PS10	Our firm undertook actions for environmental audit, public disclosure, employee training and immunity.					

(Social Sustainability)

Sr No:	**Statements**	**1**	**2**	**3**	**4**	**5**
SS11	Our firm improved employee or community health and safety.					
SS12	Our firm recognized and acted on the need to fund local community initiatives.					
SS13	Our firm protected claims and rights of aboriginal peoples or local community.					
SS14	Our firm showed concern for the visual aspects of the Firm's facilities and operations.					
SS15	Our firm communicated the firm's environmental impacts and risks to the general public.					
SS16	Our firm considered interests of stakeholders in investment decisions by creating a formal dialog.					

(Economic Sustainability)

Sr No:	**Statements**	**1**	**2**	**3**	**4**	**5**
ES17	Our firm sold waste product for revenue.					
ES18	Our firm reduced costs of inputs for same level of outputs.					
ES19	Our firm reduced costs for waste management for same level of outputs.					
ES20	Our firm worked with government officials to protect the company's interest.					
ES21	Our firm created spin-off technologies that could be profitably applied to other areas of the business.					
ES22	Our firm differentiated the process/product based on the marketing efforts of the process/product's environmental performance.					

Please mention your level of agreement on the following statements about **Stakeholder Engagement** on five-point Likert scale

① Strongly Disagree, ② Disagree, ③ Neutral, ④ Agree ⑤ Strongly Agree

(Stakeholder Engagement)

Sr No:	**Statements**	**1**	**2**	**3**	**4**	**5**
SE1	Projects stakeholders were formally identified.					
SE2	Stakeholders were classified by their level of influence, power, and interest in the project.					
SE3	Stakeholders of the project, especially those with high power and influence, had their needs deployed inactions and activities throughout the life of the project.					
SE4	Stakeholders were mapped by the level of urgency and legitimacy in the project.					
SE5	The Stakeholders of the project had their objectives open in actions and activities.					
SE6	During the execution of the project, inclusions and/or changes in activities were planned to adapt to the identified needs of the stakeholders.					
SE7	There has been frequent communication with the main Stakeholders regarding the project.					

Please mention your level of agreement on the following statements about **Monitoring & Evaluation** on five-point Likert scale

① Strongly Disagree, ② Disagree, ③ Neutral, ④ Agree ⑤ Strongly Agree

(Monitoring & Evaluation)

Sr No:	**Statements**	**1**	**2**	**3**	**4**	**5**
M1	There is a comprehensive planning of the project cost.					
M2	The timeliness of the project is incorporated into the project plan.					
M3	There is a risk assessment and mitigation planning.					
M4	A project framework is put in place for planners to measure performance from the beginning to the end of the project.					
M5	The M&E budget is defined within the total project budget.					

Sr No:	**Statements**	**1**	**2**	**3**	**4**	**5**
E1	There is a performance of a midterm project evaluation.					
E2	There is a performance of the end-of-project evaluation to ascertain how the project performed.					
E3	After project implementation, lessons are captured and documented for subsequent projects.					
E4	Lessons learned from evaluation are shared with project implementing staff as well as stakeholders.					
E5	External project evaluators are allowed in the M&E process.					