

Organizational Culture and Effective Communication as Moderators in the Relationship between Sustainable Project Management and Project Success.

Ch Zeeshan Mukhtar,
Department of Management Sciences, Bahria University, Islamabad, Pakistan.
chaudharyzeeshanmukhtar@gmail.com
Dr Shahid Iqbal
HOD Management Sciences, Bahria University, Islamabad Campus
siqbal.buic@bahria.edu.pk@gmail.com

Abstract

Lately, sustainability has been increasingly important in project management. Sustainability is considered a key success factor for project acceptance. Hence, it is necessary to identify mechanisms that ensure sustainable project management. Organizations worldwide strive to embrace Sustainable Project Management (SPM) to not only achieve the organization's or project's objectives but to remain in the market to deliver value. This could only be achieved if the project management process produces sustainable results. Several mechanisms lead modern projects to sustainability. This paper examines two key mechanisms of Effective Communication (EC) and Organizational culture (OC) in moderating the relationship between Sustainable Project Management (SPM) and Project Success (PS). Considering the views of various project team members from diversified modern projects. Quantitative technique of data collection by questionnaire was applied and 246 responses were received from project management professionals working on various projects in Pakistan. Seemingly this paper contributes to the literature on SPM in the context of Pakistani projects and is helpful for practitioners that seek acknowledgment in sustainable project management. The results from cross-sectional data depicted the interdependence of PS on SPM. However, the moderating impact of OC and EC on the relationship between PS and SPM is insignificant.

Keywords: Project Management; Sustainable Project Management; Sustainability; Organizational Culture; Effective Communication; Project Success.

Introduction

Sustainability has entered the field of PM and adoption of sustainable project management (SPM) is an important factor in project success (Humayon, 2020). There is ample room for SPM Implementation via various mechanisms such as Commitment to Leadership and Values, OC, Employee Involvement, and EC are the main drivers of successful SPM practices implementation (Iqbal & Ahmed, 2021). PS is mainly measured by knowing the extent of sustainability involved in different processes and deliverables (Hasheminasab et al., 2020). However, there is still enough need for additional study to acquire a complete knowledge of the relationship between SPM and PS as well as the crucial role of other factors that affect it, either directly or indirectly. Projects help organizations transition to becoming more sustainable, which in turn helps create a more sustainable society (Marcelino-Sádaba et al., 2015).

Mechanisms of organizational culture and effective communications are of notable importance while studying the relationship between sustainable project management and project success. Remodeling the project management practices into sustainable project management practices can lead to improved project outcomes, such as increased efficiency, reduced costs, and enhanced reputation (Silvius and Schipper, 2014; Aarseth et al., 2017; Sabini et al., 2019). This can, in turn, increase the likelihood of project success, defined as meeting project objectives within budget, schedule, and quality constraints (Cleland, 2015).

Adopting sustainability through projects requires effective communication. (Genç, et al, 2017). Effective Communication (EC) will typically provide better outcomes, which will increase the likelihood that the project will be successful as a whole. EC mechanism can prevent project delays and cost overruns caused by stakeholder concerns and objections and protect owners and others from needless legal action (L. S. Greenberger, 2016). EC guarantees that project information is handled effectively and efficiently (Marcelino-Sádaba et al., 2015).

Organizational Culture (OC) has a crucial role in the success of projects (Santos et al, 2019). Organizations with a culture that is not supportive of sustainability and SPM practices may struggle to implement sustainable practices and may face resistance from employees and other stakeholders (Kumar, 2017; Lindgreen, 2010). A further factor contributing to project success is the incorporation of green human resource practices into organizational culture (Roscoe et al, 2019).

Statement of the research problem

The adoption of sustainable project management (SPM) is a key component of project success now that sustainability has entered the area of project management (Humayon, 2020). There is ample room for SPM Implementation via various mechanisms such as Commitment to Leadership and Values, OC, Employee Involvement, and EC are one of the main drivers of successful SPM practices implementation (Iqbal & Ahmed, 2021). PS is mainly measured by knowing the extent of sustainability involved in different processes and deliverables (Hasheminasab et al, 2020).

Prior studies have not fully identified the key mechanisms that can be used to strengthen and improve the link between SPM and PS (Mavi et al, 2018). Prior studies do not investigate the key mechanisms that strengthen the relation between SPM and PS. Two crucial moderating variables are found to study the link in order to fill this research gap. Focus is placed on OC and EC because these tools are essential for "placing sustainability on the agenda" (Shaukat et al., 2021). Mechanisms of SPM in Pakistan's small and medium enterprises are fragmented, since the environmental aspect is least practiced. Furthermore, Non-government organizations (NGOs) are facing issues at policy-making and operational levels while implementing sustainability, implying the importance of investigating this relationship (Ahmed et al. 2021). Adopting SPM practices requires organizations to consider the long-term impact of their projects on the environment and society. This can lead to improved project planning, as NGOs are better equipped to identify and mitigate potential risks and challenges (Wu, 2018).

Additionally, future studies must thoroughly understand organizational culture-specific practices, as these practices are crucial for SPM adoption in firms that benefit from them (Shaukat et al, 2021). Not much research has been done on sustainability in the context of developing countries (Yazici et al 2020). Very few researchers worked on empirical research regarding the nexus of SPM and PS in the context of developing countries (Malik at.al 2020).

Objectives of the Study

The prime objectives of this research are:

- To investigate whether SPM has a pragmatic impact on PS.
- To investigate whether OC plays a moderating role in the relationship of SPM to PS.
- To investigate whether EC plays a moderating role in the relationship of SPM to PS.

Literature Review

Sustainable Project Management and Project Success

Sustainable Project Management (SPM) is an essential aspect of contemporary project management that prioritizes the Triple Bottom Line of environmental, social, and economic sustainability. The objective of SPM is to reduce the negative effects of projects on the environment and society, while maximizing long-term benefits for stakeholders (Ingason & Schoper, 2017). Success of the projects is determined based on the positive behavioral change that the project has generated or removed a problematic or harmful prevailing problem in a particular community or benefit a particular community who lacked a basic necessity or means to prosper (Srivastava, 2017). (Srivastava,2017) also indicates the use of innovative approaches to deal with social problems.

Organizational Culture as a moderator in the Relationship between Sustainable Project Management and Project Success

Organizational culture affects a project in a way that it changes in project team's level of commitment aiming to achieving project objectives (G. H. Hofstede & Hofstede, 2001). The organizational culture defines the future of the project and affects team efficiency (J. K. Pinto & Prescott, 1990). Hence, as stated by (Tsai, et al.2017), it is a significant factor in the project success and to ensure the effective implementation of the project by the project team. (Alkhlaifa et al,2019) organizational culture positively effect project performance and effectiveness when dealing with a diverse set of teams, modes of communication, and leadership.

Effective Communication as a moderator in the relationship between Sustainable Project Management and Project Success

Effective communication is critical for ensuring that project objectives and expectations are aligned, and for resolving conflicts and misunderstandings that may arise during the project (Yamak, 2016). Effective communication can also help to promote collaboration, build trust, and increase motivation among project team members (Chen L., 2014). Effective communication can facilitate stakeholder engagement, increase transparency, and ensure that project team members have a clear understanding of the SPM practices and their role in implementing them (Yamak, 2016). Empirical studies have supported the moderating effect of effective communication on the relationship between SPM and PS (Shen, 2018). For example, a study by Yamak (2016) found that effective communication improved the implementation of SPM practices and enhanced project outcomes in construction projects.

Based on the above literature three hypotheses can lead us to the conclusion

Research Hypotheses

H1: SPM positively affects PS.

H2: OC positively moderates the relationship between SPM and PS.

H3: EC positively moderates the relationship between SPM and PS.

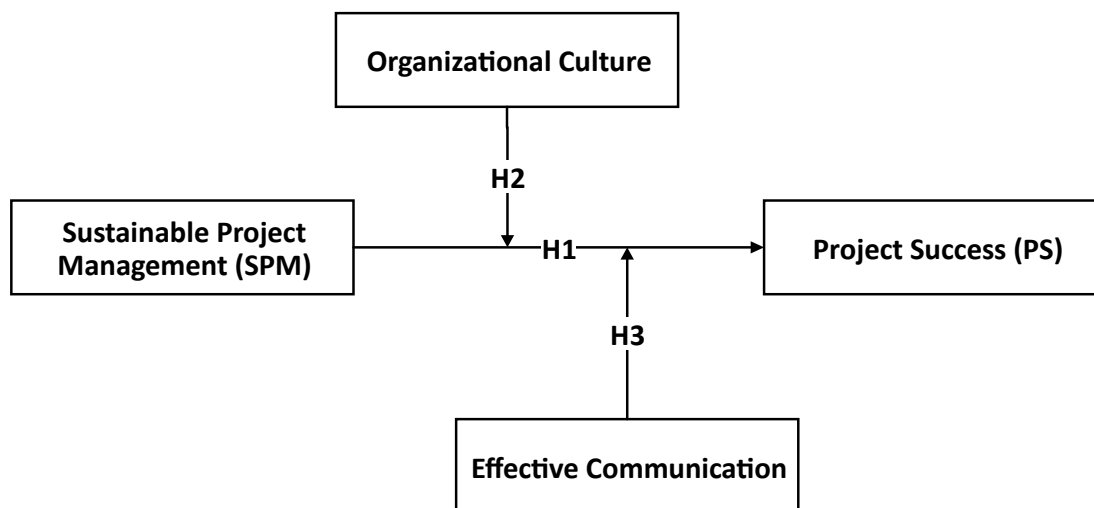
Theoretical framework

There are numerous theories that attempt to explain sustainable project management stakeholder theory, RBV models, and others are among these theories. However, the stakeholder theory that underpins this study was reviewed and adopted.

Stakeholder theory talks about multidimensionality of the social responsibility can be critically analyzed through it. Management of stakeholders either direct or indirect is of prime focus here (Theodoulidis et al, 2017). Conceptualization of sustainability is meeting organizations' stakeholders' needs (such as intellectual capital project team communities affected and affected by etc.) without compromising the organization's capacity to deliver the requirements of future stakeholders (Piwowar-Sulej & Iqbal). Being a collaborative stakeholder implies being oriented toward and having a positive image of an organization (Vidaver-Cohen & Brønn, 2015).

Stakeholder theory focuses on increasing the inefficiency of the organization by increasing its organizational responsibilities toward its stakeholders (Sarikaya, 2011). Research in the past enlarge stakeholder theory to have a rational understanding of the anticipated research study. That is why the strength of the significant effect of the influence of EC on employees' work behavior and mainly the job performance is dependent on the level of EC to boost performance at the workplace.

Research Model



Research Methodology

Sampling and data collection

The project team employed in the NGO sector of Islamabad and Rawalpindi is the main focus of this study which constitutes a total of 246 professionals, including department heads, project/program directors, coordinators, and officers. In this quantitative research cross-sectional data was analyzed. Quantitative research, according to (Willis, 2010), requires requesting participants, and opinions in a structured manner so that facts and statistics can be produced for the answering of the research questions. The main objective to consider NGO sector project team members was to get real-time results, especially those, who are

working in the development sector. Development sector projects in Pakistan are internationally recognized and sponsored by international organizations that are working on the noble cause of bringing sustainability to the world. Furthermore, the main offices of such NGOs are based in Islamabad and Rawalpindi.

Reliability Analysis

Reliability analysis was undertaken to determine the consistency of results a scale produces. It allows a researcher to study the characteristics of the scale and the items used in the scale. It is determined by attaining the number of variations in the scale used, which is determined by the relationship between the obtained values from different scales. Thus, if the relationship value of the analysis is high greater than 0.6, the scale is considered to be reliable. (Bryman, 2016)

- If a value lies at $\alpha = 0.70$ = it is an acceptable scale.

- If a value lies at $\alpha \geq 0.80$ = it is a good scale.

Table 1: Demographics of respondents

Demographic factors		Frequency	Percentage
1. Age	20 – 30 years	95	38.6
	31 – 40 years	89	36.2
	41 – 50 years	50	20.3
	51 years and above	12	4.9
2. Gender	Male	180	73.1
	Female	66	26.8
3. Educational Background	Intermediate	4	1.6
	Bachelors	66	26.8
	Masters	168	68.3
	PhD	8	3.3
4. Designation	Deputy Director	5	2.0
	Head of Department	32	13.0
	Project Team Leader	96	39.0
	Project Team Member	113	45.9
5. Experience	Less than 1 year	45	18.3
	1 – 5 years	69	28.0
	6 – 10 years	83	33.7
	11 – 15 years	29	11.8
	15 + years	20	8.1

The independent variable: SPM was measured using eight components/dimensions (project iron triangle, triple bottom line concept, project sustainability, procurement management, etc.). The results of Cronbach's alpha of each component hold a value greater than 0.6. The Cronbach's alpha value of SPM is 0.784>0.6, PS is 0.768>0.6, OC is 0.738>0.6, and EC is 0.798>0.6. All the reliability analysis results substantiate that the scale used is reliable and the results produced are consistent.

OC and EC are used as moderators in this research to determine their effects on the relationship between SPM and PS. OC and EC were taken as composite variables and only 7 items were used for each. The Cronbach's alpha value of the OC scale is 0.738>0.6 and EC is 0.798>0.6, which also substantiates that the scale used is reliable and the results produced are consistent.

Data Analysis And Results

We used regression to test H1 and moderation and mediation to test H2 and H3, respectively. The results of the aforementioned tests suggest that SPM positively affects PS ($\beta = .3340$, $t = 5.0129$, $p < .001$), OC positively moderates the relationship between SPM and PS ($\beta = -.1061$, $t = -.9342$, $p = .1178$), while EC has insignificant effect on the relationship between SPM and PS ($\beta = -.1061$, $t = -.9342$, $p = .1178$). Thus, hypotheses 1 and 2 are corroborated.

Discussion And Implication

This research has various theoretical and practical implications as well, it let one know the moderation role of OC. This research contributes to the knowledge of EC as a moderator. It also signifies the role of SPM practices in PS as we studied a detailed relation between our IV and DV. First, the findings of this research are aligned with RBV theory which implicates the significance of using SPM practices for successful projects. PS is an elusive concept as it is significantly based on outputs outcomes and the impact of the project (Baccarini, 1999). There is a dire need to inculcate sustainability in the project life cycle (Diesendorf, 2000; Mauro L Martens & Carvalho, 2017; Martínez-Perales et al, 2018; Økland, 2015). Apart from triple constraints sustainability has become vital to incorporate for the success of projects (Ebbesen & Hope, 2013). The results of this research signify the importance of SPM practices to be considered by project managers for successful projects.

Secondly, this research work contributes to the knowledge base of mechanisms that can be explored to strengthen the relationship between SPM and PS. OC is vital among the mechanisms as the members of the team are direct stakeholders in any project, they can impact the outcome as well as the output of the project (Ali et al, 2021). However, prior studies show organizational culture significantly impacts project performance and the theory that supports it is stakeholder theory. In addition, this research also highlights the importance of using the seven C's of communication and how effective communication is vital in the relationship between PS and SPM.

Contrary to the hypothesis proposed, this research failed to substantiate the moderating role of EC. Future research which should be qualitative in nature could determine the role of EC in studying the relationship of PS and sustainability.

Thirdly, Pakistan is facing a moribund economy while poor governance less efficient use of resources ineffective measures by the government to curb corruption, and inequalities in the system that have led Pakistan to poor recession nowadays Pakistan is in a great depression, and poorest condition since its making (Burki, 2018). The importance of SPM has been widely recognized and has been translated into policies and practices that would enable them to cope with these side effects of environmental, social, and economic impact/aspects. This research signifies the role of project managers and their team members and

anyone who impacts the project to vitalize the importance of inculcating sustainability in projects so that the needs of future generations cannot be compromised. Thus, huge traction and importance have been seen in the managers for adding sustainability strategies to help improve the environment. This will be a small step toward sustainable development by adopting practices from a stable a sustainable environment.

Finally, this research substantiates the past research and paves a path for future research in the local context and with different sectors, determining the relationship between SPM and PS. This research adds to the academic repository and can be used by NGO sector leaders to incorporate sustainability in their practices and to derive PS.

This research examined the impact of SPM on PS by adding two moderating variables: OC and EC. A structured survey questionnaire technique was applied to collect data from 246 respondents from direct project stakeholders: directors, HoDs, project leaders, and team, located in Islamabad and Rawalpindi, Pakistan. The results demonstrated that SPM has a significant and positive effect on PS. However, it also transpired that the effect of OC and EC remains insignificant. This research contributes to prior research that explored the relationship between SPM and PS in the context of developing countries. Hence, this research contributes to the literature gap that studies the inclusion of sustainability in PM practices and concentrates on the importance of future research to explore the mechanisms that strengthen sustainability in projects.

Conclusion And Future Direction

Even though proof of the impact of EC and OC on the relationship of SPM and PS is not abundant in the NGO sector of Pakistan. Organizations urge to adopt sustainable practices in project management to produce not only PS but to ensure social responsibility and positive citizenry. Moreover, the research was conducted and inspired by the idea of increasing concern of climate change activists and international bodies to reduce the harmful practices by organizations to protect the environment, communities, and the world as a whole. Therefore, this thesis research aimed to assess the relationship of SPM on PS and the moderating role of OC and EC on this relationship in the NGO sector of Islamabad and Rawalpindi, Pakistan. This study would provide the foundation for the Pakistani NGO sector to determine the way of achieving PS through increased SPM practices. This can be achieved through using different models and best practices generated, tested, and documented by the international actors of change on climate change, mainly UNDP. The questionnaire was formulated using different questions related to SPM and PS. The second section of the questionnaire contained questions to assess the moderating variable – OC and the third section was related to EC.

The literature reviewed for this thesis research work about SPM stated higher the sustainable practices, the higher the probability of efficient, and sustainable results/success (Aguilar-Fernández et al., 2015; Carvalho & Rabechini Jr, 2017; Dubois & Silvius, 2020; Khalifeh et al., 2020; Malik et al., 2020; MAURO LUIZ Martens et al., 2016; G. Silvius & Schipper, 2016; Tiron Tudor & Dragu, 2013; Vrchota et al., 2021) and competitive edge (Carvalho & Rabechini Jr, 2017; J. Pinto, 2019). However, no previous research study was found that used OC and EC as moderating variables in the relationship of SPM on PS, especially in the NGO sector of Pakistan. Though the objective of this research was achieved by using OC and EC as moderating variables in the same relationship.

As per the growing concern of incorporating sustainability and protecting the world from harmful practices, especially in the NGO sector of Pakistan, it was pivotal to study how much they are practicing sustainability in their respective organizations. This research work will help the policymakers, duty bearers, and strategic management of NGOs, INGOs, and climate change activists working in Pakistan, to make strategic

decisions that will be beneficial in the longer run. NGO sector can utilize the SPM to improve their efficiency of delivery and ultimately achieve sustainable growth by not damaging the environment.

It is concluded that SPM has a significant positive impact on PS; however, no strong moderation effect of EC nor OC was found in the same relationship in the NGO sector of Pakistan. This proves that the research targets are accomplished.

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