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EXAMINING THE INFLUENCE OF PROJECT SUSTAINABILITY PRACTICES ON PROJECT SUCCESS

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ABSTRACT

Many projects fail because resources are not managed efficiently. As a result, Project Managers have become concerned with sustainable project management and its influence on project success. However, there is a gap in literature regarding the relationship of these two frameworks that is sustainable project management and project success. In fact, the term sustainability is among the toughest challenges that mankind will ever have to face since its definition has evolved to encompass more than just sustainable environmental development but social and economic sustainability as well. Thus, the versatility of the term sustainability has caused more awareness and relevance to the all of society. Consequently, many organisations are presently integrating this popular approach into their business practices, which alternatively influences the outcomes of projects. As such, the aim of this research is to contribute to the knowledge area by assessing the factors that influence sustainable project management on project success and therefore integrating project management practices to project success.

INTRODUCTION

Sustainability has taken greater importance in the 21st century than ever before. The popular status quo has influenced many industries and disciplines and Project Management is not the exception. The term sustainability is closely associated to environmental protection and is usually linked to the need to reduce/replace non-renewable energy. However, its' principles go further than this and encompass inclusivity, profit sharing and sustainable growth [1]. For example, it is the responsibility of organisations to empower employees. This is achieved by providing incentives and training which in-adversely promotes productivity. When there is a motivated and dedicated

work force, productivity is high and so is profits which can equally be shared amongst stakeholders. Thus, sustainable growth can only be achieved if all aspects of sustainability can be engaged.

According to [2], there has been an increase in businesses incorporating sustainability in their business models. Thus, the field of Project Management has become concerned with Sustainable Project Management. Although there is a limited literature regarding the link between Project Management and Sustainability as a whole, many researchers have taken initiatives to bridge this gap [3-4].

The goal of this research is to examine the influence of project sustainability practices on project success. This research will also highlight why some projects succeed whilst others fail and how to cultivate sustainable projects.

PROJECT MANAGEMENT AND PROJECT SUCCESS

The Project Management Institute in [5] defines 'Project Management' as a discipline which is concerned with meeting requirements of a project by using a project management methodology. A project here is a unique, but temporary work. Thus, a project is characterised by a start and an end date.

Moreover, a successful project is determined by how effectively a project manager accomplishes a project in relation to three factors: time, cost and scope. These factors are also known as the 'triple constraints' which focuses on short-term outcomes of project success [6]. This can be contrasted to sustainability which is concerned with longevity.

However, the concept of the 'triple constraints' has been criticised for not incorporating other factors for project success [7-9]. According to [10], current researchers are concerned with evaluating success after delivery which means that stakeholder satisfaction and feedback can be used as criteria for successful projects.

Needless, the interpretation or criterion of project success is subject to many disagreements. The concept can be interpreted in many ways which has brought about confusion and frustration. Researchers in [11] explained that there are interdependencies between factors which are equally significant as specific factors, but the Critical Success Factors approach does not have a framework to take such interrelationships into account. For example, Management support, is a factor relating to a company that can be influenced by the overall performance of the market. Likewise, the complexity of the work packages on the job will undermine the confidence of the project manager. Management support along with ineptitude on the job by the project manager could result in failure. These two factors are evidently interrelated; however, the critical success factor approach would find it difficult to interpret it as such. Hence, it can be concluded that the definition of project success is not universal and remains open-ended and obscure.

CRITICAL SUCCESS FACTORS

In a study carried out in [12] a framework of 33 success factors were grouped into 9 categories to form a Project Excellent Model. The idea behind the research was to link project success and critical success factors. Whilst conducting the research, the researcher observed that there were more parameters than expected and having a more flexible approach could yield to better findings, rather than imposing a universal checklist of possible success criteria.

The Table 1 depicts the various Success Factors Framework in [12] where respondents were asked to group the 33 success factors from the most important to the least important about a successful project they had worked on.

Table 1 Success Factors Framework in [12]

Category of Success Factors	No.	Statement (Success Factor)
Project Characteristics	1	Awareness of project nature
	2	Awareness of project external factors
	3	Clearly defined scope
Project management process	4	Project management methodology
	5	Level of emphasis on quality
	6	(product/process)
	7	Monitoring and control
	8	Information sharing within the project team
	9	Risk management
	10	Environmental and sustainability
	11	considerations
	12	Learning from current and past experiences Health and safety considerations Organisational structure
Contracting	13	Selection of contracting strategy and tender
	14	process
	15	Contract management Proper selection of project execution resources
Leadership and team	16	Top management support
	17	Competent project manager
	18	Competent/multidisciplinary project team
	19	Collaboration between project parties
	20	Training provisions
Stakeholder engagement	21	Integrated project team (client and contractor)
	22	Early involvement of project parties
	23	Active client involvement
	24	Active involvement of users
	25	Active involvement of external stakeholders
Policy and strategy	26	Clear goals
	27	Project planning
	28	Legal and administrative processes
Modern project management	29	Opportunity management
	30	Integral approach
	31	Adaptive project management
Resources	32	Efficient use of people and resources
	33	Use of new technology

In support to the findings in [12], study [13] elaborated on Westerveld's model and conducted a Q-sorting to discern the views of respondents on the factors which led to the success of their projects. Researchers interviewed 13 Dutch companies and respondents were asked to score the various success factor and determine the most significant for successful projects.

The results revealed that the 'Environmental and Sustainability Considerations' was identified as the vital success factor that made a distinction amongst all the perspectives listed. As a result, it is evident that project managers do value the importance of sustainability and there should be distinct sets of success criteria to determine sustainability. Furthermore, the suggested method in the study can be used by the professionals in a project team to discern what variables are deemed essential for a satisfactory project outcome.

THE EVOLUTION OF SUSTAINABILITY

The popular explanation of sustainability was introduced in 1987 by Gro Harlem Brundtland who emphasised sustainable development as "development that meets the needs of the present without compromising the ability of future generations

to meet their own needs" [1]. A decade later, a researcher by the name of Elkington [14] went further to clarify sustainable development by introducing three concepts: economic growth, social inclusion, and environmental protection. He coined this new model as the 'Triple Bottom Line (TBL)' or Triple P: that comprises of 'People, Planet, and Profit.'

In essence, the 'Triple Bottom Line (TBL)' model [14] represents three overlying mutually dependent goals and maintains that sustainable development demands concentrated efforts to social, environmental and economic circumstances.



Figure 1. Fundamental Concept of Sustainable Development of the Triple Bottom Line Model [14]

Findings in [15] confirmed that all economic growth entails a modification of the natural environment. Along similar lines, it was also highlighted that the primary concern for economics in the TBL is cost control, growth and profit [16]. Often economic growth results in unsustainable deterioration of the environment because of the need to share natural resources. Nonetheless, researchers in [8] argued that effective use of resources and process changes can reduce overall costs for an organisation. Thus, the secret to sustainability is not producing less but producing differently.

Environmental protection is also a component of the TBL model and can be easily defined as safeguarding the planet from climate change [17]. The key sustainability issues in environmental dimension-related project management include aspects such as air, water, electricity, soil, waste generation, and material usages [18]. Hence, sustainable protection should therefore be enforced by utilising renewable and non-renewable resources wisely in the future, eliminating waste and pollution.

Lastly, social sustainability focuses on enhancing lives and acts as a mechanism for equality within societies. Determining the effect companies have on communities is very important. Resolving issues of concern of stakeholders will promote trust and confidence that can be central to a company's daily conduct of business [8].

As a result, the three dimensions of sustainability are constantly competing at the current rate of development. Furthermore, they are fluid and are affected by constant disruptions such as social, political, economic, and environmental constraints that generate pressure when connected [14].

While there is lack of literature on the relationship between projects and sustainability, there is an apparent link [4]. Therefore, there is a need for more research to fully engage with the idea of 'Triple Bottom Line Model' (TBL). Apart from that, sustainable development requires continuous efforts to meet current and potential human needs within the constraints of environmental, cultural, social, and technological constraints [15]. There should be no compromises when it comes to environmental sustainability and economic development [17-19].

THE NOTION OF SUSTAINABILITY IN PROJECTS

The classical approach to project management is centered on fulfilling requirements of a project by assigning and utilising resources in relation to the 'triple constraints' [19]. Consequently, projects are focused on temporary actions that achieve beneficial goals. However, this is achieved by consuming resources. Subsequently, criticism has been leveled at the classical model as it does not consider broad social and environmental issues, which are fundamental to sustainability practices.

In addition, there is a difference between project success and project management success that prevents the actual convergence of sustainability issues; in general, project success is alongside the idea of efficiency (attained vs. set goals), while project management success is concerned with

effectiveness. This induces certain important drawbacks for project managers [20].

To illustrate the importance of Sustainability in Project Management, a study in [4] explained that sustainable development can deliver an emergence of new ideas, and assist project managers in their managerial roles when it comes to the five process groups; that is initiating, planning, executing, monitoring and controlling and closing projects. Incorporating the 'Triple Bottom Line (TBL)' will also ensure that the project will meet long term goals. Hence, a move towards a sustainable approach will be beneficial to project managers who are engaged in complex projects such as construction which uses many resources which has a direct impact on people, planet, and profit.

CONCLUSIONS

Sustainability is at the forefront of many disciplines regarding social, economic, and environmental viability. Project Management has also seen fit to incorporate sustainability into its practices to yield successful project outcomes [9]. Successful projects here do not only refer to delivering a project on time, within budget and scope but considers the long-term sustainability of the project to include the environmental protection, social benefits, and economic ramifications long after the project is completed.

Although there is not much research conducted in sustainable project management practices and project success, there have been more initiatives to discover the underlying principles of the two perspectives [15-17]. Projects are conducted every day and may range from a simple project such as organising a concert, to complex construction and IT projects. Regardless of the size of the project, sustainability is introduced to curtail wastage and improve the way one views project management [2]. Future research is needed to emphasis the influence of sustainable project management on project success where the potential contributions could effectively determine success or failure of a project. For example, one potential outcome from the research could be how to effectively utilise resources, which could impact an organisation's economic growth. Hence, a new framework or model could be created to incorporate sustainable project management and project success to establish continuity.

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