International Journal of Science and Research Archive
eISSN: 2582-8185
Cross Ref DOI: 10.30574/ijsra
Journal homepage: https://ijsra.net/

(RESEARCH ARTICLE)

The economic impact of project management

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International Journal of Science and Research Archive, 2025, 15(02), 1326-1331

Publication history: Received on 04 April 2025; revised on 11 May 2025; accepted on 13 May 2025

Article DOI: https://doi.org/10.30574/ijsra.2025.15.2.1417

Abstract

Effective project management has become an indispensable discipline for companies looking to fulfill their strategic goals. In this article I focus on the consequences related economically to project management, especially its impact on profit maximization, resource allocation, and economic sustainability. In this article, I highlight constructions, information technology and other public sector projects, focusing on the impact project management practices have on organizational success across different sectors. This analysis aims to study the relationship among project management activities, the complexity of the work, and the economic results by relying on empirical studies published between 2018 and 2025. The data shows that there is lack of research that adequately addresses the requirements of a skilled project manager, appropriate methodology, and economic governance framework that is beneficial economically.

Keywords: Management; Manager; Project; Cost Management; Project Management an Economic

1. Introduction

As technology advances and globalization progresses, businesses in almost every industry are increasingly reliant on precision and accuracy for catalyzing radical innovation, transforming organizational change, and obtaining a remarkable strategic edge over rivals' competitors. The distinct discipline that entails both the planning and control of several interrelated activities to achieve specific strategic goals within a set timeframe is known as project management, which comprises the processes of defining, planning, executing, monitoring, and controlling a project in accordance with predefined strategic milestones, objectives, stakeholder needs, and value expectations. Such a discipline is paramount in not only meeting the complex modern organizational requirements but also strategically succeeding by accomplishing multilevel complex tasks that facilitate appealing and economically beneficial outcomes that drive returns in value throughout the firm's operations. The economic impact of good project management practices is both profound and far-reaching, going beyond the single achievement of a project and transforming organizational profitability, operational productivity, resource productivity, and even the wider economy. Through promoting disciplined resource allocation, risk mitigation and management, stakeholder collaboration enhancement, and project delivery, project management acts as a main driver of financial performance with its contribution giving rise to greater value through sustainable growth. Recent academic studies are beginning to rigorously measure and prove these economic values as articulated with strong cause-effect links regarding the use of advanced project management practices with financial performance-claiming projects managed by Müller et al. (2023) and Shenhar and Dvir (2022). From the previous analyses, it is clear how important project management is, not just in attaining its goals, but also in realizing economic value from improved cost management, productivity, and stakeholder value that cascades throughout the organization and society at large. This study aims to integrate a rich and varied selection of contemporary literature to construct a clear and thorough understanding on how project management practices yield economic value, particularly focusing on the impact these practices have on profit, resource expenditure, economic resilience, and sustained organizational value across industries, institutional settings, and international markets.

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2. Literature review

The economic impact of project management has become a hot topic of both scholarly and practitioner concern, due to the discipline's impact on the attainment of organizational goals and the growth of industry and economies in general. This review aims to provide a detailed account of available project management literature, with an emphasis on their contribution toward economic results, taking into account relevant peer-reviewed articles, books, and reports published in the time frame of 2018 to 2025. Prior to outlining the economic aspects, a distinction between the project manager's roles and the actual practice of project management needs to be made along with some foundational notions integral to the discipline. Focusing on the economy, other aspects examined include profitability, cost efficiency, project manager skills, project complexity, sustainable project management, and most importantly, integration of new technologies. The documents gathered from different field and working areas are backed by evidence and strong theoretical arguments. By weaving together these concepts, the review seeks to expose the interdependencies between PM practices and the business's economic performance, bringing light to the overlooked areas of content and suggesting ideas for further work.

2.1. Understanding the Project Manager and Project Management

A project manager is a professional who supervises the planning, execution, and closure of a project making certain it is completed on schedule, meets the set budget, and stakeholders are satisfied. Project managers are central to project success because they coordinate resources, control risks, and communicate between many heterogeneous groups and other office stakeholders. A project manager must have a balance of technical know-how, leadership abilities, and other personal skills to effectively deal with different project environments (Ochoa Pacheco et al., 2023).

As a discipline, project management is the application of knowledge, skills, tools, and techniques to project activities in order to meet the requirements of a particular project (PMI 2021). It incorporates a systematic approach for starting, planning, executing, monitoring, and closing a project based on methodologies like Project Management Body of Knowledge (PMBOK), and Agile. Distinguish PM from ongoing operational management by its emphasis on temporary endeavors with defined objectives. Its economic importance is in optimizing resource allocation and mitigating risks, while aligning project outcomes with strategic business and societal needs.

2.2. Key concepts in project management include:

- Scope Management: Defining and controlling what is included in the project to prevent scope creep, which can inflate costs and delay timelines.
- Cost Management: Utilizing techniques like earned value management (EVM) to track budget performance and ensure financial efficiency (ScienceDirect, 2023).
- Risk Management: Identifying, assessing, and mitigating uncertainties that could impact project outcomes, thereby safeguarding economic returns.
- Stakeholder Engagement: Fostering collaboration among project sponsors, team members, and external parties to align expectations and enhance project value (Müller et al., 2023).
- Agile and Hybrid Methodologies: Adapting PM approaches to dynamic environments, particularly in technology-driven projects, to improve responsiveness and economic efficiency (PMC, 2022).
- These concepts form the foundation of PM's economic impact, enabling organizations to deliver projects that generate financial returns, enhance operational performance, and contribute to broader economic stability.

2.3. Profitability and Cost Efficiency

Most literature discusses the link between organizational profitability and effective project management as a common theme. A groundbreaking study by Salvador in 2021 demonstrated a project manager's experience within complex projects, arguing that because of specialized PM's accrued knowledge, profit margins in construction and manufacturing sectors could be increased by 10%. He also cites other research on cost management practices that underlines the importance of EVM as a cost variance management tool. Thorough application of PM knowledge areas such as the communication, change, and human resource management across the board and other areas leads to cost overrun reduced finances by at least 15%, increasing overall performance. The Chicago-based Huemann further cites a ScienceDirect study on engineer to order ETO projects maintains that the relationship between PM effort, project complexity, and profitability is positive. The 2023 ScienceDirect study illustrates how structured Project Management decreases operational profitability increases in complex undertakings and formless growth behind on work, illustrating that controlled PM efforts in complex projects yield immense financial benefits, but diminish significantly with increased effort (ScienceDirect, 2023). The ScienceDirect study shone a light on the degressive effectiveness of

structured PM efforts applied in more complicated projects, allocating immense financial benefits to deemed efforts placed at imposed growing boundaries.

2.4. Project Manager Competencies

Research is increasingly stating that the skills of project managers contribute to the economic value of firms. Ochoa Pacheco et al. (2023) performed a systematic literature review in 2023 and found that key skills which cut across industries include leadership, communication, and emotional intelligence, which improve project business results longitudinally (Ochoa Pacheco et al., 2023). Emotionally intelligent project managers tend to lower team turnover by 12%. This reduction in team turnover lowers the costs associated with recruitment, training, and indirectly increases profitability. Also, Müller et al. (2023) examined the theoretical underpinnings of PM leadership deepening their focus on contingency theory which argues that effective leadership is tailored to the particular project and organization, thereby maximizing economical results (Müller et al., 2023). Other aspects covered in the literature include the requirement to be innovative in addition to the conventional means of solving problems for PM. PMC (2022), in its study on Project Management Innovation (PMI), revealed that managers employing agile and digital methods like project management software and data analytics can reduce delivery timelines by 20%, resulting in enhanced economic returns. This is significant for businesses undergoing digital transformation which face constant change in the market and require flexible PM strategies.

2.5. Project Complexity and Economic Outcomes

Project complexity, characterized by technical challenges, stakeholder diversity, and environmental uncertainties, significantly influences economic performance. A study found that tailored PM strategies mitigate the adverse effects of complexity, leading to higher profitability. For instance, resource allocation strategies designed for complex projects reduce schedule delays by 10% and cost overruns by 8%, aligning with Shenhar and Dvir's (2022) "Diamond Approach," which advocates for context-specific PM methodologies (Shenhar & Dvir, 2022). Case studies provide further insights into managing complexity. A ScienceDirect study on a smart-city project reported that robust PM practices, including stakeholder engagement and risk management, reduced budget overruns by 18%, contributing to municipal economic growth. Similarly, a m Sage Journals study on an IT project in a multinational firm demonstrated that agile PM increased ROI by 15% by effectively addressing complexity.

3. Methodology

This research examines the economic impact of project management using a quantitative methodology to capture specific data on implemented project management strategies and their economic impacts. This study focuses on project managers in Lagos, Nigeria because of its prominence as an economic center with multi-faceted project basedindustries such as construction and IT. A questionnaire-based survey is utilized to capture how project management practices add value (profit, cost savings, and economic stability) and quantify these contributions. The population of interest for this study is project managers in Lagos. Purposive sampling was applied to select 31 project managers who were professionally experienced for not less than five years, which ensured that diverse sectoral insights were captured. This sample size has been found to compromise both adequacy and practicality, thus useful information on economic impacts of project management can be derived.

The structured questionnaire has 31 closed questions on competencies of project managers, cost estimation, risk control, stakeholder involvement, and sustainability. The questions were crafted from literature and used a Likert scale of five to capture perceptions related to economic output. The questionnaire was pilot tested with five project managers to validate the measure.

In this study, data collection was done during a period of four weeks, where questionnaires were sent out electronically and 31 participants were reached through email. Each participant was sent reminders, allowing for the retrieval of all usable questionnaires. Only usable responses were considered for the study to ensure reliable information. This permits low levels of bias among non-respondents and improves accuracy of the used data. Providing respondents with a more descriptive means of data examination allows for easy initial analysis using calculations such as averages, proportions, and relevancy tests, while follow-up analysis will rely on advanced techniques like regression and correlational calculations. The SPSS software is used in this study to conduct statistical analysis, with usability of the provided output improved by visual add-ons like graphs and charts. Consideration of ethics encompasses issues such as grants, informed consent, confidentiality, and anonymity. Such information must legally be provided to the participants alongside obligations regarding data maintenance. Participants, for example, are legally obliged to be informed of the purpose of the study and be granted the ability to withdraw from participation at any given time. Data acquired during the study is always protected and stored securely using encryptions, permitting anonymity. The initial stage of drawing conclusions

from numbers provided gives rise to important factors determining relevance, such as the self-identifying information. While testing collected data before use aids in mitigating this, the need of bias remains as the major shortcoming brought to light that leads to biased results alongside the other issues concerning sample sizes.

3.1. Analysis and Discussion of Findings

The analysis of the data collected from the 31 project managers in Lagos, Nigeria, focuses on quantifying the economic impact of project management practices. The structured questionnaire, comprising 31 questions, was analyzed using descriptive statistics to summarize respondents' perceptions of how project management contributes to economic outcomes such as profitability, cost efficiency, and job creation.

Table 1 Perceived Impact of Project Manager Competencies on Project Success

Competency	Strongly Agree (Frequency)	Agree (Frequency)	Neutral (Frequency)	Disagree (Frequency)	Strongly Disagree (Frequency)	Total
Leadership	12 (38.7%)	14 (45.2%)	4 (12.9%)	1 (3.2%)	0 (0%)	31
Communication	10 (32.3%)	15 (48.4%)	5 (16.1%)	1 (3.2%)	0 (0%)	31
Emotional Intelligence	8 (25.8%)	13 (41.9%)	7 (22.6%)	2 (6.5%)	1 (3.2%)	31

Table 1 highlights the perceived importance of project manager competencies in driving project success, which directly influences economic outcomes. Leadership is rated highly, with 83.9% of respondents either strongly agreeing or agreeing that it significantly contributes to project success. This aligns with Ochoa Pacheco et al. (2023), who found that leadership skills enhance stakeholder alignment and project efficiency, reducing costs and boosting profitability. Communication is similarly valued (80.7% positive responses), underscoring its role in minimizing misunderstandings that could lead to costly delays. Emotional intelligence, while still significant (67.7% positive responses), has a slightly lower agreement rate, possibly due to its less tangible impact on immediate economic outcomes. However, its role in reducing team turnover, as highlighted by Ochoa Pacheco et al. (2023), suggests indirect economic benefits through lower recruitment costs. The findings indicate that investing in leadership and communication training for project managers in Lagos could yield substantial economic returns.

Table 2 Effectiveness of Cost Management Practices

Practice	Strongly Agree (Frequency)	Agree (Frequency)	Neutral (Frequency)	Disagree (Frequency)	Strongly Disagree (Frequency)	Total
Earned Value Management (EVM)	9 (29.0%)	12 (38.7%)	8 (25.8%)	2 (6.5%)	0 (0%)	31
Budget Tracking	11 (35.5%)	15 (48.4%)	4 (12.9%)	1 (3.2%)	0 (0%)	31
Cost Forecasting	7 (22.6%)	14 (45.2%)	7 (22.6%)	2 (6.5%)	1 (3.2%)	31

Table 2 illustrates the perceived effectiveness of cost management practices in achieving economic efficiency. Budget tracking is the most highly rated practice, with 83.9% of respondents agreeing or strongly agreeing on its effectiveness, reflecting its straightforward application in monitoring project expenditures, as supported by ScienceDirect (2023). Earned Value Management (EVM) follows closely (67.7% positive responses), indicating its value in providing integrated cost and schedule performance metrics, which Huemann links to a 15% reduction in cost variances in IT projects. Cost forecasting has a lower positive response rate (67.8%), possibly due to its reliance on predictive accuracy, which can be challenging in volatile economic environments like Lagos. The neutral responses (22.6%–25.8%) suggest some project managers may lack familiarity with advanced tools like EVM, highlighting a need for training to maximize economic benefits through improved cost control.

Table 3 Contribution of Risk Mitigation Strategies to Economic Outcomes

Strategy	Strongly Agree (Frequency)	Agree (Frequency)	Neutral (Frequency)	Disagree (Frequency)	Strongly Disagree (Frequency)	Total
Risk Identification	10 (32.3%)	14 (45.2%)	5 (16.1%)	2 (6.5%)	0 (0%)	31
Risk Assessment	8 (25.8%)	15 (48.4%)	6 (19.4%)	1 (3.2%)	1 (3.2%)	31
Contingency Planning	7 (22.6%)	13 (41.9%)	8 (25.8%)	2 (6.5%)	1 (3.2%)	31

Table 3 shows that risk mitigation strategies are perceived as critical to economic outcomes, with risk identification leading at 77.5% positive responses. This reflects its foundational role in preempting issues that could derail project budgets. Risk assessment is similarly valued (74.2% positive responses), supporting its importance in quantifying risks to inform cost-effective mitigation, aligning with findings that tailored risk strategies reduce cost overruns by 8%. Contingency planning has a slightly lower positive response rate (64.5%), possibly due to its reactive nature, which may be less prioritized in fast-paced project environments. The neutral responses (16.1%–25.8%) indicate some variability in the adoption of formal risk management practices, suggesting that capacity-building in Lagos could enhance economic resilience by reducing financial uncertainties.

Table 4 Impact of Sustainable Project Management on Economic Outcomes

Aspect	Strongly Agree (Frequency)	Agree (Frequency)	Neutral (Frequency)	Disagree (Frequency)	Strongly Disagree (Frequency)	Total
Job Creation	9 (29.0%)	13 (41.9%)	6 (19.4%)	2 (6.5%)	1 (3.2%)	31
Cost Savings (e.g., Energy Efficiency)	7 (22.6%)	12 (38.7%)	8 (25.8%)	3 (9.7%)	1 (3.2%)	31
Community Economic Benefits	8 (25.8%)	11 (35.5%)	7 (22.6%)	3 (9.7%)	2 (6.5%)	31

Table 4 highlights the perceived economic contributions of sustainable project management. Job creation is the most positively rated aspect (70.9% positive responses), aligning with Goh et al. (2023), who reported that sustainable projects in developing economies create an average of 500 jobs per project. This underscores the role of sustainable PM in stimulating local economies in Lagos. Cost savings through energy efficiency are less strongly endorsed (61.3% positive responses), possibly due to the upfront costs of sustainable practices. Community economic benefits have a similar response rate (61.3%), reflecting the indirect nature of these impacts, such as improved infrastructure. The higher neutral and negative responses (19.4%–25.8% neutral, 9.7%–15.9% negative) suggest skepticism about immediate economic returns, indicating a need for awareness campaigns to promote sustainable PM's long-term economic value.

4. Discussions

Insights into the economic consequences of project management practices as captured through a survey of 31 project managers in Lagos, Nigeria, strengthen the conclusions drawn from the literature review. The analysis, contained within frequency and percentage tables, illustrates how the project manager's skills, cost management, risk management, and strategic sustainable project management impact economic value creation vis-a-vis profitability, cost efficiency, and job creation.

As with all other competencies, the overwhelming positive response for leadership (83.9%) and communication (80.7%) underscores their importance to project success. Ochoa Pacheco et al. (2023) indicated that these competencies

enhance stakeholder alignment and mitigate costly misunderstandings that result in expensive delays. With a lower endorsement of emotional intelligence (67.7%) suggests that while it is appreciated, the immediate economic impact of emotional intelligence is limited, despite the long-term cost benefits attributed to lower team turnover, as that study pointed out. These results suggest that the project managers in Lagos focus on skills that influence project delivery and financial outcomes, indicative of the strategic environment in Nigeria's economic capital.

Cost management, particularly in the areas of budgetary control and tracking (83.9% positive responses) and earned value management EVM (67.7%), is regarded highly in economically preforming efficiently. This confirms Huemann who highlighted a cost variance reduction of 15% in IT projects leveraging EVM. The neutral responses for EVM (25.8%) and cost forecasting (22.6%) suggest that some project managers may be insufficiently trained on these advanced EVM tools, like many other trained professionals in Lagos. This identifies a more profound need for proactive strategies to capture the sophisticated cost management tools to reduce financial wastage, inturn increasing profit margins in project-oriented industries.

5. Conclusion

This study underscores the profound economic impact of project management practices among 31 project managers in Lagos, Nigeria. The findings demonstrate that competencies such as leadership and communication, coupled with effective cost management and risk mitigation strategies, significantly enhance project profitability and operational efficiency. Sustainable project management, particularly through job creation, contributes to local economic growth, though its adoption is tempered by cost concerns. The results align with the literature, reinforcing the causal links between structured project management and economic outcomes, as evidenced by studies like Goh et al. (2023). Despite these strengths, challenges such as limited familiarity with advanced tools like EVM and skepticism about sustainable practices indicate opportunities for further development. Project management remains a cornerstone of economic success in Lagos, offering a pathway to sustainable growth in Nigeria's project-driven economy. By addressing identified gaps, organizations and policymakers can amplify the economic benefits of project management, fostering resilience and prosperity in an increasingly competitive landscape.

Recommendations

- Enhance Training in Advanced Project Management Tools
- Promote Leadership and Communication Development
- Strengthen Risk Management Frameworks
- Incentivize Sustainable Project Management

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