

STRATEGIES FOR EFFECTIVE PROJECT MANAGEMENT

Vijay Verma

Research Scholar

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Abstract

Research and development (R&D) projects have received little to no attention from the project management discipline, which has focused primarily on engineering, IT, and building projects. In order to strengthen their competitive edge in the economy, public research institutions, which are significant organizations, must expand their effort in research and development initiatives. This study's goal was to investigate how strategic project management (SPM) is used to carry out R&D projects at public research institutions. The results showed that the majority of public research institutions execute R&D projects using a formal and rigid conventional project management methodology. Also, it seems that there is minimal room for emergent strategy development and strategic learning. Therefore, public research institutions must adopt the SPM concept and procedure to enhance R&D project execution and economic impact.

Keywords: *Strategies, Project Management, Research and Development (R&D), Corporate Strategy.*

1. Introduction

In the current environment, no business can succeed without successful initiatives. Organizations that are successful are those that have both excellent strategy and strong execution, and those that don't. Traditional project management methods are insufficient to meet the needs of project

stakeholders, as evidenced by the continued failure of projects. Consequently, some project management companies have made significant efforts to educate senior management about the significance of employing strategic project management (SPM) in project execution. Additionally, R&D initiatives are carried out by research organizations. Research and development drives are innately perilous, and the connections among information sources and results are once in a while challenging to assess. Particularly difficult is determining whether expenditures on various activities or resources contribute to the results. another factor that contributes to research organizations' reputation for pursuing more difficult goals is the fact that they frequently have to satisfy the needs and interests of both the public and the private sector (such as industry). In light of these characteristics and the requirement to carry out research and development projects that will address both the general public and the industry, project management for R&D projects must be approached from a strategic perspective. Therefore, the use of strategic project management is based on the assumption that public research organizations' leaders and project managers will carry out their missions, fulfill their mandates, and contribute to the public good in the years to come. The genuine pertinence of SPM for the execution of Research and development projects has not yet been felt in non-industrial countries like Nigeria. Thus, leading this investigation was vital. Therefore, the purpose of this study was to provide empirical support for the use of SPM as a project management tool, to demonstrate its value, and to recommend its implementation in public research institutions' R&D projects.

2. Literature Review

2.1. Project and Project Management

Project management and projects may be distinguished clearly from one another. According to Munns and Bjeirmi (1996), a project is a collection of distinctive and complicated actions or processes that needs resources to complete in order to accomplish the intended result. Project management, on the other hand, is defined by PMI (2008) as the use of tools, methods, knowledge, and skills in the project's activities and procedures to accomplish the goals. As a result, the accomplishment is limited in terms of time, money, and quality. How these methods and tools are

utilized is determined by the activities and procedures based on the phases and lifecycle of the project (Atkinson, 1999). The project's goals may be met by employing existing or specially designed organizational structures, various resources, and the use of a variety of tools and approaches.

2.2. Project and Project Management

Project success is influenced by project planning, according to research (Aladwani, 2002; Dvir and others, 2003; Ubani et al., 2010; 1999, Whittaker) the method involved with arranging a task involve making the savviest arrangements for the responsibility of assets. It describes the actions and events of the project, as well as the costs, deadlines, and success milestones necessary to achieve the project's objectives. The plan for the project must include a list of all the materials, equipment, facilities, people, and other resources needed to complete it.

According to Antvik and Sjöholm (2007), project execution was initiated without a good plan, which frequently causes delays, excessive costs, and other issues with the project's execution.

According to a number of studies (Baker et al.), an effective project plan is necessary for project success. Poor project planning is seen as the single most important factor in project failure, according to research. One aspect of effective planning is developing a comprehensive plan at the outset of a project. The project team is able to manage a number of success indicators and supportability factors that have an impact on the project's viability thanks to planning (Akinsola et al., 1997).

The concentrate by Kerzner (2013) made it plentifully clear that lessening vulnerability is the principal objective of undertaking arranging, which was additionally supported.

Gibson et al.'s study says that (2006), there is a positive correlation between project success and project planning efforts and a negative correlation with hazards. Project managers, on the other hand, view project planning as a time-consuming activity because it accounts for 48% of project management operations, according to the Project Management Institute (PMI). Thus, Zwikael (2009) decided the overall meaning of the task the executives' methods utilized all through the

arranging stages and their impact on the venture's progress in Israel, Japan, and New Zealand. However, he fails to take into consideration the planning input parameters that have been shown to influence project planning activities.

2.3. Project Planning Input Factors

Many elements may have an impact on project planning procedures. According to studies by Chatzoglou (1997), Whittaker (1999), and Yeo (2002), management issues directly affect project planning procedures. In addition, Verner et al. 1999) and Chatzoglou (1997) noted that the planning is affected by the project planning approaches used. on the other hand, discovered that the structure of the project is an important tool for project planning activities. Aladwani (2002) found that the personal/human factor is given a significant amount of weight during the project's planning stage.

There has been no lone review led to assess the vital task arranging exercises considering the info variables of venture anticipating the undertaking a good outcome, in spite of the way that different examinations have shown that the nature of the arranging still up in the air by different elements.

2.4. Project Success

Project success is extensively discussed in the literature. These studies concentrate on the global factors that determine project success Studies have so distinguished factors that add to project achievement and standards for assessing project achievement. Success factors and success criteria must be distinguished because both are frequently mentioned in literature. Criteria are the metrics used to determine if a project was successful or unsuccessful.

Numerous studies have cited quality, cost, and time as factors that contribute to project success (De Wit, 1988; Olsen, 1971; 1987, Pinto and Slevin; 1999 Turner) Cost, time, and quality are being used to evaluate the delivery stage, indicating that something is being done correctly.

The iron triangle, which represents the three constraints of time, money, and quality, was historically the basis for how project success criteria were understood. These days, there are a lot more achievement models, including quality, partner fulfillment, and information the board

(Atkinson, 1999). E. Tesfaye, T. Lemma, E. Berhan, and B. Beshah consider projects to be successful if they are delivered on time, within budget, and in accordance with the planned quality measurements. A variety of models for evaluating project performance were constructed using a number of fundamental assumptions. Project success, on the other hand, is dependent on the factors taken into account from a success assessment perspective, according to studies in the field.

Utilizing the iron triangle, the purpose of this study is to assess the efficiency of project management procedures. The project manager must spend a lot of time and effort on these repetitive and onerous operations. Many studies have shown that project management procedures are essential to the success of a project. The primary factors that determine a project's success were the focus of these studies. Despite this, no research has been conducted on building projects.

3. Research Methodology

The essential information for this exposition comes from contextual analyses of two separate Swedish organizations' advancement drives, Ericsson Radio and Volvo Vehicle Organization, individually. This program had a lot of strategic value and were probably the two most important development projects that the two companies did in the 1990s. The main contextual analysis zeroed in on an endeavor that assisted Ericsson Radio with making progress in Japan. In 1992, Digital Phone awarded Ericsson a significant contract to design and establish a mobile phone network in the urban area. The system was supposed to be fully operational in 1994. Because of the project, management decided to rethink their standard approach to project management and create a new one called "the fountain model," which places a greater emphasis on concurrent work and cross-functional collaboration and interaction.

As a result, they were able to significantly shorten the development time, and the system was delivered on time. The project's management faced significant difficulties with the use of deadlines and milestones, as well as with the growing amount of overlap and interaction between various functional units. The second case study examines the development of the Volvo S70 vehicle, which debuted in late 1990. The project presented a significant challenge to the project management team in terms of meeting the overall schedule, managing the rapid production ramp-up, and maintaining

high standards. The initiative inspired management to test out novel approaches to functional unit integration. In many ways, the two situations are distinct from one another, including the industrial setting, client base, technology used, etc. Yet, they also have a number of characteristics that make them comparable. For instance, both projects were seen as being extremely successful, both had a substantial strategic significance, and both had similar organizational and management practices. In general, our research was motivated by a desire to combine Alvesson & Sköldbberg's grounded theory and reflexive interpretation ideas. We focused on providing a chronological description of the project's process as the initial focus of the studies, which began as individual case studies. In keeping with Eisenhardt's recommendations, we sought to learn a "rich tale" about the setting, history, and organizational structure of both initiatives. Two overarching themes for our research arose from the rich histories of the projects, and for each of the themes, we categorized the functions of project management. In the analysis section, these responsibilities will be presented and analyzed in more detail.

In each case study, project managers were the primary sources of information. In the Ericsson case, we conducted 32 interviews, each lasting an average of two hours. We conducted 16 interviews over the course of three hours on average. We talked to three line managers, two project managers, four sub-project managers, a technical expert, two team leaders, and two senior management team members in the Volvo example. Every interview was recorded and transcribed by the lead researcher. To add to the Volvo data, additional interviews with other project managers and Annica Bragd's ethnography have also been carried out. This ethnography provides documentation of the project management team's work on one of the most recent development projects.

4. Results And Discussion

The results showed that traditional project management methods, rather than SPM, were improperly used in public research companies. The planning and execution phases are the two most important phases in a project's life cycle. These stages must be properly carried out for a

project to be effectively completed. Findings on the pre-execution planning of projects revealed various procedures that were not properly carried out.

4.1 Preparation of Project Plan

A typical response from participants regarding the actual application of planning for R&D initiatives and project management and control throughout the process. For the drafting of project plans, a 3.69 average was noted. Since project plans were created on average across all businesses, this outcome may have been considered positive. However, the rate of project failure in businesses and the search for the most efficient method of project execution have resulted in the need for organizations to raise the implementation level. "Project failure rates are extraordinarily high and these failure rates are mostly attributable to insufficient planning, which is essentially the cornerstone of project success," said Research (2011). This suggests that initiatives that are poorly designed will be difficult to carry out, which will have a negative impact on the project's success.

Due to poor timing and planning, numerous initiatives that were supposed to be successful have ended up in the gray area. According to Dlakwa and Culpin (1990), this failure cannot be separated from the project managers' inability to efficiently manage project activities by utilizing tried-and-true project management concepts and practices. Meredith and Manthel (2010) additionally focused on the meaning of arranging and organizing the task objectives with the general reason, objectives, and technique of the business. Highlighting the significance of accurate scope definition, efficient task breakdown structure, resource scheduling, and allocation to diverse activities as the foundation for monitoring and control.

Table 1: The mean value of response rating of four organizations

	A	B	C	D	overall
	mean	mean	mean	mean	mean
Preparation of Project Plan	3.55	3.99	3.22	3.14	3.69
Manage and Control activities of the Project	3.66	4.55	2.44	3.15	3.12

Management changes during implementation.	3.44	3.66	2.44	3.56	3.56
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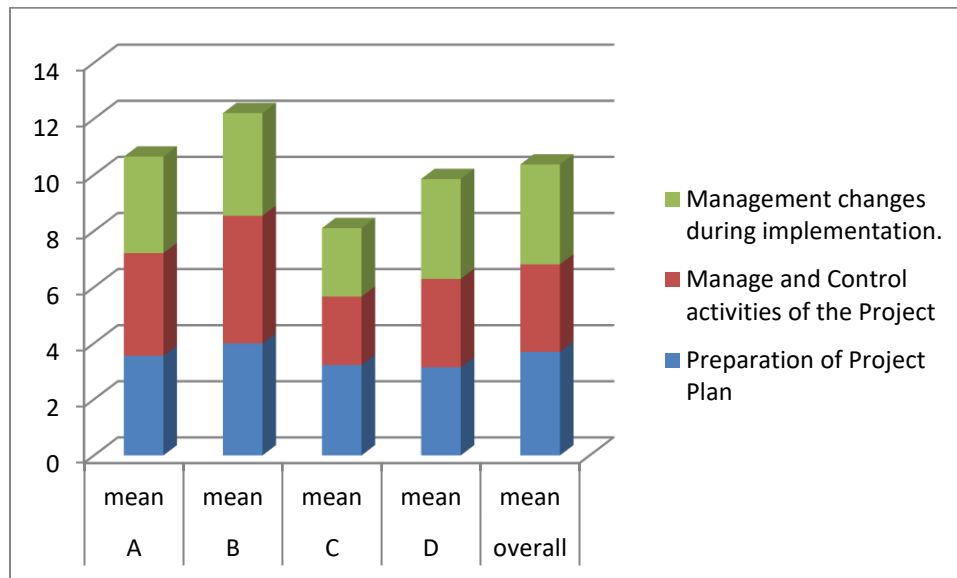


Figure 1: the four organizations' average response ratings

5. Conclusions

According to the contextual analysis examination, the majority of R&D projects carried out by open research organizations in Nigeria were as yet administered according to traditional practices. It takes more than just typical or conventional project management strategies to handle strategic initiatives like R&D projects. As R&D projects are exceptional, they need to be managed strategically at all levels and stages, but particularly at the beginning. In spite of their importance, innovative work projects are managed generally despite the fact that they are the motors of development and change in each country's economy. This demonstrates that, despite the strategic significance of such initiatives, the conventional method continues to rule the industry. Therefore, the effective management and execution of R&D projects necessitate the use of a project management tool that employs SPM methods in order to enhance or decrease projects that have been abandoned or failed and assist businesses in gaining a competitive advantage. Therefore,

incorporating SPM into the management of R&D projects would enhance companies' capacity to select the most suitable initiatives and link those initiatives to corporate strategy to ensure success. To accomplish its essential goals, public exploration associations should embrace the utilization of SPM in the administration of Research and development projects. The focus of this will be on making the best use of the organization's resources and working together.

References

1. Adeyemi, L., & Idoko, M. (2008). *Developing Local Capacity for Project Management--Key To Social And Business Transformation In Developing Countries. Paper presented at the PMI Global Congress.*
2. Akinsola, A. O., Potts, K. F., Ndekugri, I., & Harris, F. C. (1997). *Identification and evaluation of factors influencing variations on building projects. International Journal of Project Management, 15(4), 263-267. doi:http://dx.doi.org/10.1016/S0263-7863(96)00081-6*
3. Aladwani, A. M. (2002). *IT project uncertainty, planning and success: An empirical investigation from Kuwait. Information Technology & People, 15(3), 210-226. doi:doi:10.1108/09593840210444755*
4. Antvik, S., & Sjöholm, H. (2007). *Project management and methods. Projektkonsult Håkan Sjöholm AB.*
5. Atkinson, R. (1999). *Project management: cost, time and quality, two best guesses and a phenomenon, it's time to accept other success criteria. International Journal of Project Management, 17(6), 337-342. doi: http://dx.doi.org/10.1016/S0263-7863(98)00069-6*
6. Baccarini, D. (1999). *The logical framework method for defining project success. Project Management Journal, 30(4), 25-32.*
7. Baker, B. N., Murphy, D. C., & Fisher, D. (1988). *Factors affecting project success. In: Cleland, D. I. & King, W. R. (Eds.) Project Management Handbook, second edition pp. 902 – 909. New York: Van Nostrand Reinhold.*
8. Chatzoglou, P. (1997). *Factors affecting completion of the requirements capture stage of projects with different characteristics. Information and Software Technology, 39(9), 627- 640. doi:http://dx.doi.org/10.1016/S0950-5849(97)00020-7 De Wit,*

9. Chatzoglou, P., & Macaulay, L. (1998). *A Rule-Based Approach to Developing Software Development Prediction Models*. *Automated Software Engineering*, 5(2), 211-243. doi:10.1023/A:1008621131645
10. Gibson, G., Wang, Y., Cho, C., & Pappas, M. (2006). *What Is Preproject Planning, anyway?* *Journal of Management in Engineering*, 22(1), 35-42. doi: doi:10.1061/(ASCE)0742-597X(2006)22:1(35)
11. Keider, S. P. (1984). *Why Systems Development Projects Fail*. *Journal of Information Systems Management*, 1(3), 33-38. doi:10.1080/07399019408963043
12. Kerzner, H. R. (2013). *Project Management: A Systems Approach to Planning, Scheduling, and Controlling: New York: John Wiley and Sons, Inc.*
13. Kline, R. B. (2011). *Principles and Practice of Structural Equation Modeling*. New York: The Guilford Press.
14. Koops, L., Bosch-Rekvelde, M., Coman, L., Hertogh, M., & Bakker, H. (2016). *Identifying perspectives of public project managers on project success: Comparing viewpoints of managers from five countries in North-West Europe*. *International Journal of Project Management*, 34(5), 874-889. doi:http://dx.doi.org/10.1016/j.ijproman.2016.03.007
15. *Measurement of project success*. *International Journal of Project Management*, 6(3), 164-170. Dvir, D., Raz, T., & Shenhar, A.J. (2003). *An empirical analysis of the relationship between project planning and project success*. *International Journal of Project Management*, 21(2), 89-95. doi:http://dx.doi.org/10.1016/S0263-7863(02)00012-1.

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