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Title in English

Effect of Cloud-Based Project Management Software on Industrial Operations
_ Empirical Study Done on Saudi Diesel Equipment Company

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Chapter One

Introduction

Traditional project management methods that rely on planning are not effective in today's project environment; which is very dynamic, uncertain and fast-changing. (Ciric et al. - 2018) In a fast-paced and competitive business world, project managers need to plan ahead and be ready for change. However, the traditional approach to project management has some limitations that make it hard to adapt to dynamic projects. Therefore, the project management discipline needs to embrace change and find ways to manage projects successfully in this changing environment. (Ciric et al. - 2019) This paper focuses mainly on the effects of using cloud-based project management solutions compared to the traditional project management methods, and the applicability of agile methodologies in the manufacturing sector.

Research Problem

- **Theoretical Gap:**

While previous research has established a positive relationship between project management methodologies and project optimization and outcomes, there is a lack of understanding regarding the specific use of cloud-based project management tools in the manufacturing sector.

- **Empirical Gap:**

Limited empirical studies have explored the effects of cloud-based project management tools on industrial operations in the context of the manufacturing sector, leaving a gap in the literature.

- **Main Research Question:**

What are the effects of using cloud-based project management tools on the Industrial Operations?

- **Research Sub-Questions:**

- How can using cloud-based project management tools and services, like Monday and Jira, improve the project management process?
- How can using Monday and Jira improve the effectiveness of communication between stakeholders?
- What is the effect of using Monday on project scheduling?
- What is the effect of using Jira on document control?

Research Importance

This study will contribute to the existing literature by proposing new theories that will help researchers to explore the topic from the manufacturing perspective. Most of the previous

studies focused on construction and mainly on software development. (Gujar, S. M., & Shafighi, N. , 2023)

This study will mainly examine how project management is implemented in the manufacturing industry, with the use of cloud-based tools, like Monday and Jira, to manage the industrial operations.

Research Objectives

To answer this research's main question, the following objectives have been identified:

1. Examining the current project management practices in the Industrial Operations.
2. Identifying the key challenges faced in project management in the Industrial Operations.
3. Evaluating the contribution of using Monday and Jira tools on project success.

Research Hypotheses

- Using cloud-based project management tools will positively affect Industrial Operations.
- Using cloud-based project management tools will significantly increase communication effectiveness.
- Using cloud-based project management tools will improve manufacturing scheduling.

Literature Review

Project management is a complex task that requires coordinating different aspects and resources of a project within a fixed time frame. To optimize this process, many enterprises are adopting online project management software solutions that can automate and streamline their project workflows. The software enables real-time collaboration, feedback, and monitoring of projects across different locations and devices. Some of the key players in this market are ProjectManager.com, Nulab, Asana, Smartsheet, Zoho Corporation, Basecamp, Zapier, Wrike, and OpenProject GmbH. (Fortune Business Insight, 2021)

Managing inventory and resources is essential for manufacturing, as it depends on the market demand and supply. Manufacturing project management software helps with resource management, which covers the people, materials, equipment, knowledge, and time needed for the project. Resources are often scarce and need to be allocated carefully. A resource allocation plan can help with this, as well as a project schedule that shows the task dependencies. This way, you can identify any gaps or risks in your resources. You can also use a similar plan for inventory management. You can't avoid uncertainties in project management and manufacturing, but you can plan ahead and mitigate them with comprehensive plans. (Louie, 2022)

The Role of Monday and Jira in Project Management

- **Monday, a project Management Tool and Software**

Monday.com is a project management tool that is created where ease of use, versatility, and customizability was inspired by the iPhone. It allows a company to automate functions which improves work accuracy and time. It can also improve communication with the chat and comment functionalities that can also be automated when certain events or triggers happen. (Pierce, 2020)

Furthermore, Monday has the capability of integrating many 3rd party softwares and services like Jira, Gmail, Microsoft Teams, Slack, and many more. It also offers a variety of dashboards to get a high-level overview of the organization to help in decision-making. (Monday, 2023)

- **Jira, a project Management Tool and Software**

Jira is a project management tool that offers agile issue tracking and other essential features. It can help the project manager to monitor the work and progress of the team members. It also allows notifications, bug reports, feature requests, and other reporting. (Özkan & Mishra, 2019)

Jira is a fully functional software that is widely used by engineers and product development software companies. However, Jira cannot work with all the applications of the companies, but it can work with some apps like “Miro or GitHub” for product development. For connecting with any app or integrating apps of any size, another agile software tool called Asana or Monday is suggested. (White & Watts, 2022)

Research Gap

The literature review shows that agile project management tools help project managers to achieve better results in resource allocation and team communication when needed. These tools are more suitable than traditional tools, like Gantt Chart and WBS, to manage budgets, schedules, competitive environments, and daily challenges. Studies have shown that Jira and Monday, in particular, have enabled more centralized management, lower project costs, and higher privacy and security; as well as improved coordination and communication among the team members. However, there is a lack of studies that specifically focus on the importance of these agile project management tools in running a project process. It is because researchers have discussed all the agile tools together, which creates confusion about which tool is best for which type of industry. (Özkan & Mishra, 2019)

Research Methodology

This research will use a quantitative approach that is focused on the industrial operations division in Saudi Diesel Equipment Company. The study will use questionnaires and personal observation as the primary data collection method. The sample for the questionnaire will be divided based on the used project management tool assigned to each department within the division.

Research Limitations

This research is limited to the industrial operations division in Saudi Diesel Equipment Company. At the time of conducting the study, the project management tools focused on in this research are recently implemented, with no extensive use of them at the moment. This can limit the research outcomes due to the lack of experience of the employees using these tools, and the lack of previous proper project management documentation within the division. This limitation can be overcome by consulting employees who have been handling the company's projects for many years, on how the project management process was being conducted previously; to have an idea on how to measure and analyze the results of the research.

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