ISSN 1816-6075 (Print), 1818-0523 (Online)
Journal of System and Management Sciences
Vol. 14 (2024) No. 12, pp. 469-483
DOI:10.33168/JSMS.2024.1228

Leveraging AHP for Optimal Project Management Software Selection

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Abstract. This study evaluates the efficacy of the Analytical Hierarchy Process (AHP) in the Project Management Software Selection (PMSS) for a technology company. The research identifies and analyzes the critical selection criteria for project management software through expert judgments and pairwise comparisons. The methodology integrates views from project management professionals to ascertain the most relevant criteria, which include functionality, usability, cost and pricing models, integration capabilities, and support reliability. The results indicate that functionality and usability are the most influential criteria, guiding the selection process. The application of AHP enabled a quantitative evaluation of various software options, ultimately recommending a specific tool that best aligns with the organizational needs and enhances operational efficiency. The study concludes that the AHP method provides a robust framework for making informed decisions in PMSS, suggesting its broader applicability in similar decision-making scenarios.

Keywords: Project Management Software, Analytical Hierarchy Process (AHP), Software Selection Criteria, Decision-making Process

1. Introduction

Research by the Standish Group reveals that only a minority of projects meet their defined success criteria: 29% are successful, 52% are challenged, and 19% fail outright (Hestia & Wojewoda, 2015). Similarly, Eveleens & Verhoef (2010) classify these outcomes as successful (completed on time and within budget), challenged (exceeding time or budget constraints), or failed (terminated early in development). Effective project management, which requires strategic planning, organization, motivation, and precise resource management, is essential for overcoming these challenges and ensuring project success (Project Management Institute, 2021; Radujković & Sjekavica, 2017).

The fintech industry, known for its rapid growth and innovation, encounters specific challenges due to its fast-paced environment and stringent regulatory demands. This sector often struggles with decentralized project management approaches, which can lead to project delays and escalated costs, thereby emphasizing the need for robust project management solutions to maintain competitiveness (Market Research Guru, 2023; Unutmaz Durmuşoğlu, 2018).

Given the limited research on structured methodologies tailored specifically for fintech, this study explores the application of the Analytical Hierarchy Process (AHP) for Project Management Software Selection (PMSS). Developed by Thomas L. Saaty in 1980, AHP is a decision-making tool that assists in the complex scenarios by structuring decision criteria into a hierarchical model and systematically evaluating options through Multi-Criteria Decision Making (MCDM). This technique quantifies the weights of decision criteria using pairwise comparisons, where the importance of one criterion is directly compared to another, providing a scale of preference. Previous research has demonstrated AHP's effectiveness in prioritizing these decision-making criteria and aiding in the selection of project management tools by aligning them with organizational needs (Gupta et al., 2023; Assaf et al., 2023; Loh et al., 2020). This research seeks to apply AHP to identify and select optimal software solutions across the fintech industry, addressing both theoretical frameworks and practical needs for effective PMSS implementation. As part of this study, PT ABC serves as a case study to assess the applicability of these tools across the broader fintech sector.

2. Literature Review

This literature review focuses on the utilization of the Analytical Hierarchy Process (AHP) to enhance the accuracy of software selection decisions.

2.1. Project Management Software

Project management software plays a pivotal role in planning, executing, and monitoring projects. It improves resource allocation, enhances collaboration among stakeholders, and contributes to the overall success of projects. These tools streamline tasks, thereby supporting critical analysis and decision-making, while ensuring efficient workflow and communication. However, the challenge lies in selecting software that satisfies specific project requirements and aligns with organizational characteristics and constraints. This selection process is further complicated by the variety of available software, each tailored to different facets of project management (Majstorovic & Majstorovic, 2020; Gecchele et al., 2023; Project Management Institute, 2021).

2.2. Analytical Hierarchy Process (AHP)

The Analytical Hierarchy Process (AHP) is a structured, quantitative method that aids informed decision-making in complex scenarios such as software selection. AHP organizes decision-making elements into a hierarchy, including criteria and sub-criteria, and uses pairwise comparisons to quantify preferences and align choices with project requirements (Saaty, 1987). This method structures decision elements across three hierarchical levels: objectives at the top, criteria and sub-criteria in the middle, and options at the bottom. Decision-makers employ pairwise comparisons to assess the relative importance of each criterion and option, translating these evaluations into criteria weights via a mathematical model. The validity of these weights is confirmed by evaluating the consistency of the comparisons, thus ensuring rational and consistent decision-making (Gecchele et al., 2023; Gupta et al., 2023).

2.3. Application of AHP in Project Management Software Selection

Kutlu et al. (2014) demonstrated the effectiveness of AHP in selecting project management software by evaluating widely used tools such as HP-PPM, MS-Project, and Primavera. In their study, five project managers found HP-PPM to be the most appropriate, based on criteria specifically defined by experts. This research underscores AHP's capacity to support a transparent and rational selection process, aligning with stakeholder needs and enhancing organizational profitability by accommodating diverse preferences. Similarly, Pekin et al. (2006) utilized AHP to filter and rank forecasting software from the Internet, incorporating a secondary filtering step to refine the selection, based on evaluations by three semi-experts. Additionally, Motaki and Kamach (2017) applied AHP to address uncertainties in ERP system selection, establishing criteria weights through expert consultations and pairwise comparisons to ascertain their relative significance.

3. Methodology

This research methodology helps to analyses PMSS using the AHP method. The methodology encompasses data collection, Focus Group Discussions (FGD) with Our approach encompasses data collection, focus group discussions with project management experts, identification of criteria and sub-criteria, and application of AHP to structure decision-making effectively (Render et al., 2018). This research employs the AHP to analyze PMSS. The methodology involves:

1. Data Collection: We gathered both primary and secondary data from internal sources at PT ABC, focusing on existing development processes and expert opinions. This was facilitated through structured questionnaires and focus group discussions (FGDs) designed to extract detailed insights from participants (FGD) (Efe, 2016; Cornwall & Jewkes, 1995; Yayeh, 2021).
2. Identification of Criteria: Using AHP, we identified relevant criteria and sub-criteria for PMSS, based on feedback from experts. This two-stage questionnaire process ensured that each criterion's relevance and importance were rigorously evaluated and quantified, leading to a set of prioritized decision factors (Saaty, 1988; Badri, 2001; Jin Fang et al,2021).
3. Expert Determination and Pairwise Comparison Data Collection: We engaged experienced professionals to assess the significance of each criterion through pairwise comparisons. This method involves comparing each criterion against others to determine their relative importance, which is fundamental in AHP for achieving consistent and reliable decision-making inputs (Sivilevičius and Maskeliūnaitė, 2010; Akhmadullina et al, 2019).
4. Criteria Weighting and Consistency Checks: We assigned weights to each criterion using AHP's structured judgment matrix. These weights were then subjected to consistency ratio calculations to validate the reliability of the assessments. The consistency ratio (CR) is calculated from the consistency index (CI), which is derived from the principal eigenvalue (λ_max) of the matrix. A CR below 0.1 generally indicates acceptable consistency in AHP assessments ((Sangiorgio et al., 2018; Ishizaka and Lusti, 2006; Saaty, 1980).

Criteria Weighting Wi

∑ *Comparison of Criteria in Rows / Number of Rows*

Principal eigenvalue (λ_max)

$$\lambda_{max} = \frac{1}{n}\sum_{i=1}^{n}\frac{a_{ij}\ x\ w_j}{w_i}$$

Consistency index (CI)

$$CI = \frac{\lambda_{max} - n}{n - 1}$$

Concistency Ratio

$$CR = \frac{CI}{RI}$$

This structured methodology leverages the systematic framework of AHP to address the complexities involved in PMSS, grounded in both comprehensive theoretical frameworks and empirical insights.

4. Research Findings and Discussion

This section integrates the outcomes of data collection and applies AHP to recommend the PMSS decision-making process. It also addresses the limitations encountered during the study, thereby enhancing the understanding of the decision-making framework and its practical application within this research context (Khan et al., 2020).

4.1. Data Collection on Criteria and Sub-criteria

The analysis leverages an extensive literature review and insights from seasoned technology and project management professionals. These experts, including a Technology Director with 22 years, a VP of Engineering with 18 years, an IT Department Head with 21 years, a Senior Project Manager with 9 years, and an Engineering Manager with 15 years of experience, were instrumental in identifying the critical factors for PMSS. Their insights underscore the significance of selecting the right project management software for enhancing current performance and future adaptability of organizations (Project Management Institute, 2021).

Table 1. Criteria and Sub Criteria

Criteria	SubCriteria	Source
1. Functionality	1.1. Task Management	(Głodziński & Szymborski, 2019; Hansen et al., 2023; Project Management Institute, 2021; Theunissen et al., 2022; Zaidan et al., 2015; Ziemba et al., 2023)
	1.2. Scheduling	
	1.3. Collaboration	
	1.4. Reporting	
	1.5. Workflow flexibility	
2. Usability and User Experience	2.1. Interface Design	(Cochran & Chen, 2005; Głodziński & Szymborski, 2019; Şen & Baraçli, 2010; Zaidan et al., 2015; Ziemba et al., 2023)
	2.2. Learning Curve	
	2.3. Mobile Accessibility	
3. Cost and Pricing Model	3.1. Subscription Model	(Cochran & Chen, 2005; Efe, 2016; Hansen et al., 2023; Ziemba et al., 2023)
	3.2. Free vs. Paid	
	3.3. Per User vs. Flat Fee	
4. Integration and	4.1. Third-party Integrations	(Głodziński & Szymborski,

Compatibility	4.2. Data Security and Privacy	2019; Hansen et al., 2023; Zaidan et al., 2015)
	4.3. Automation	
5. Support and Reliability	5.1. Customer Support	(Efe, 2016; Şen & Baraçli, 2010; Zaidan et al., 2015)
	5.2. Updates and Maintenance	
	5.3. Uptime and Reliability	
	5.4. User Reviews and Reputation	

The research uses these insights to develop a set of criteria that help in choosing the right project management tool. This framework aims to boost operational efficiency and maintain long-term productivity.

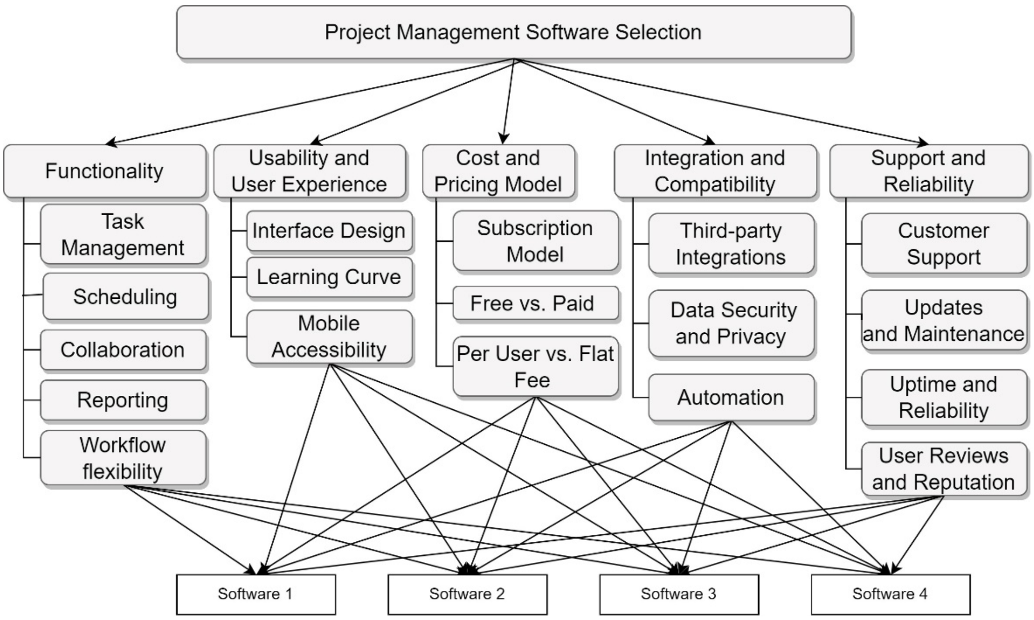

Fig.1: Hierarchy Structure PMSS

4.2. Pairwise Comparison Result

For a deeper perspective, we also carried out pairwise comparisons on various criteria and their sub-criteria. The "Functionality" criterion encompassed areas like Task Management and Workflow Flexibility, while "Usability and User Experience" delved into factors like Interface Design and Mobile Accessibility. "Cost and Pricing Model" addressed considerations such as the Subscription Model and Total Cost of Ownership. The criterion "Integration and Compatibility" covered vital areas like Third-party Integrations and Data Security. Lastly, "Support and Reliability" evaluated elements like Customer Support and Company Stability. Each of these criteria was rigorously analyzed to gauge its importance in the decision-making process of the respondents.

We examined the criteria and their sub-criteria through pairwise comparison. The "Functionality" criterion covered areas like Task Management and Workflow Flexibility. "Usability and User Experience" investigated aspects such as Interface Design and Mobile Accessibility. The "Cost and Pricing Model" criterion delved into the Subscription Model and Total Cost of Ownership. "Integration and Compatibility" explored Third-party Integrations and Data Security. Finally, "Support and

Reliability" included facets like Customer Support and Company Stability. Each was analyzed to gauge their significance in decision-making.

Table 2. Pairwise Result.

	Functionality	Usability and User Experience	Cost and Pricing Model	Integration and Compatibility	Support and Reliability
Functionality	1	2.261	3.162	1.941	1.735
Usability and User Experience	0.442	1	3.928	2.496	2.958
Cost and Pricing Model	0.316	0.255	1	1.675	2.249
Integration and Compatibility	0.515	0.401	0.597	1	2.71
Support and Reliability	0.576	0.338	0.445	0.369	1

4.3. Criterion Weight

Table 3. Main Criteria Weight

Normalization						**Weight**
Main Criteria	Functionality	Usability and User Experience	Cost and Pricing Model	Integration and Compatibility	Support and Reliability	
Functionality	0.351	0.531	0.346	0.259	0.163	0.33
Usability and User Experience	0.155	0.235	0.430	0.334	0.278	0.29
Cost and Pricing Model	0.111	0.060	0.110	0.224	0.211	0.14
Integration and Compatibility	0.181	0.094	0.065	0.134	0.254	0.15
Support and Reliability	0.202	0.079	0.049	0.049	0.094	0.09

In the assessment of main criteria for selecting project management tools, "Functionality" emerged as the most influential parameter, representing 0.33 of the total weight. This was closely followed by "Usability & UX", which held 0.29, emphasizing the consistent importance of user-centered design across evaluations. Meanwhile, financial aspects, encapsulated by "Cost & Pricing", secured 0.14, while "Integration & Compatibility" slightly surpassed it with 0.15. The criterion of "Support & Reliability" rounded off the list with a weight of 0.9, underscoring its role but suggesting it as a lesser priority compared to the other factors. These weights provide a clear indication of the areas of priority when considering project management tools.

Table 4. Main Criteria Weight

Main Criteria	**Weight**
Functionality	0.33
Usability and User Experience	0.29
Cost and Pricing Model	0.14
Integration and Compatibility	0.15
Support and Reliability	0.09

In the evaluation of essential criteria for project management tools, a deeper dive into the sub criteria "Functionality" parameter reveals that "Task Management" stands out as the most vital feature, accounting for a substantial 0.35 weightage. This emphasizes the fundamental need for effective task allocation and tracking in project management tools. Other significant aspects within this category include "Scheduling" and "Collaboration", holding 0.21 and 0.20 respectively, indicating the importance of timely execution and teamwork in successful project outcomes. "Reporting" and "Workflow flexibility" also hold their ground with 0.15 and 0.09, signifying the role of data-driven decision-making and adaptable processes.

Table 5. Sub Criteria Functionality Weight

Sub Criteria	**Weight**
Task Management	0.35
Scheduling	0.21
Collaboration	0.20
Reporting	0.15
Workflow flexibility	0.09

Sub criteria "Usability & User Experience" parameter, "Interface Design" is clearly paramount, capturing a dominant 0.56 of the weight. This suggests that a user-friendly and intuitive interface is crucial for efficient tool adoption and usage. The "Learning Curve", which represents the ease of mastering the tool, is also deemed essential, contributing to 0.28. In today's fast-paced environment, tools that require minimal training are preferred. Additionally, with the increasing reliance on mobile devices, "Mobile Accessibility" at 0.17 highlights the need for tools to be accessible and optimized for various devices.

Table 6. Sub Criteria Usability and User Experience Weight

Sub Criteria	**Weight**
Interface Design	0.56
Learning Curve	0.28
Mobile Accessibility	0.17

On the financial front, sub criteria "Cost & Pricing" category, the "Subscription Model" is the most influential factor, with a weightage of 0.57. This indicates a preference for flexible payment structures that can adapt to various business needs and sizes. The "Free vs. Paid" criterion holds 0.27, emphasizing that while budgetary considerations are important, there's also a recognition of the value that comes with paid features. The model of "Per User vs. Flat Fee" at 0.16 showcases the diversity in pricing preferences among businesses.

Table 7. Sub Criteria Cost and Pricing Model Weight

Sub Criteria	**Weight**
Subscription Model	0.57
Free vs. Paid	0.27
Per User vs. Flat Fee	0.16

Exploring sub criteria "Integration & Compatibility" category, the significance of "Third-party Integrations" is evident with its 0.42 weight, emphasizing the demand for tools that can seamlessly integrate with existing systems and applications. The need for robust "Data Security and Privacy" measures is also underscored, holding a substantial 0.41. In our interconnected digital age, ensuring data protection is paramount. Meanwhile, "Automation", with its 0.17, points towards the growing trend of leveraging technology to streamline repetitive tasks and processes.

Table 8. Sub Criteria Integration and Compatibility Weight

Sub Criteria	**Weight**
Third-party Integrations	0,42
Data Security and Privacy	0,41
Automation	0,17

Lastly, within the "Support & Reliability" category for project management tools using the Analytic Hierarchy Process (AHP), clear preferences emerged. "Customer Support" was identified as the most vital aspect, holding a dominant weight of 0.40. This underscores the significant value users place on prompt and effective assistance when navigating tools or encountering issues. Following closely, "Updates and Maintenance" and "Uptime and Reliability" captured weights of 0.28 and 0.21 respectively, highlighting the importance of consistent tool performance and the need for regular updates to ensure optimal functionality. Interestingly, "User Reviews and Reputation" garnered a weight of only 0.11, suggesting that while user feedback is considered, it is not the primary determinant in gauging the reliability of a project management tool.

Table 9. Sub Criteria Support and Reliability Weight

Sub Criteria	**Weight**
Customer Support	0.40
Updates and Maintenance	0.28
Uptime and Reliability	0.21
User Reviews and Reputation	0.11

4.4. Selection of Project Management Software Alternatives for PT ABC

The application of AHP for selecting project management software alternatives for PT ABC is informed by data derived from employee questionnaires aimed at capturing software preferences. This data was obtained through a method of pairwise comparison, contrasting key criteria among various software options. These parameters include Functionality, User Experience, Payment Model, Integration Compatibility, and Integration Compatibility.

Table 10. Selection Alternative Software

Criteria	Weight	Jira	Ms Project	Notion	Asana
Functionality	0.33	0.214	0.056	0.035	0.025
Usability and User Experience	0.29	0.165	0.050	0.041	0.020
Cost and Pricing Model	0.14	0.068	0.021	0.021	0.014
Integration and Compatibility	0.15	0.087	0.029	0.017	0.011
Support and Reliability	0.09	0.053	0.016	0.011	0.007
Total Score		0.587	0.172	0.126	0.077

The aggregated scores indicate that Jira outperforms other software options significantly, achieving the highest weight with a notable score of 0.587. This score substantially exceeds those of other software options, such as Ms Project at 0.172, Notion at 0.126, and Asana at 0.077.

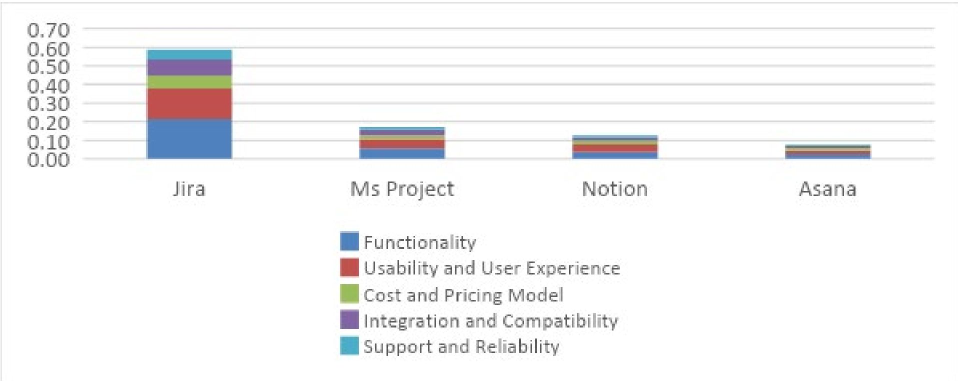

Fig.2: Selection Software Alternative

4.5. Consistency Index (CI) and the Consistency Ratio (CR)

Calculate the Weighted Sum Vector

Table 10. Weighted Sub

Main Criteria	**Weighted Sum**
Functionality	(1 x 0.33) + (2.26 x 0.29) + (3.16 x 0.14) + (1.94 x 0.15) + (1.74 x 0.09) = 1.877
Usability and User Experience	(0.44 x 0.33) + (1 x 0.29) + (3.93 x 0.14) + (2.5 x 0.15) + (2.96 x 0.09) = 1.638
Cost and Pricing Model	(0.32 x 0.33) + (0.26 x 0.29) + (1 x 0.14) + (1.68 x 0.15) + (2.25 x 0.09) = 0.777
Integration and Compatibility	(0.52 x 0.33) + (0.4 x 0.29) + (0.6 x 0.14) + (1 x 0.15) + (2.71 x 0.09) = 0.772
Support and Reliability	(0.58 x 0.33) + (0.34 x 0.29) + (0.45 x 0.14) + (0.37 x 0.15) + (1 x 0.09) = 0.499

Calculate the Consistency Vector

Table 11. Consistency

Vector

Main Criteria	Consistency Vector
Functionality	1.877 / 0.33 = 5.688
Usability and User Experience	1.638 / 0.286 = 5.719
Cost and Pricing Model	0.777 / 0.143 = 5.426
Integration and Compatibility	0.772 / 0.146 = 5.302
Support and Reliability	0.499 / 0.095 = 5.275

Calculate the Consistency Index (CI)

$$CI = \frac{5.482-5}{5-1} = 0.121$$

Calculate the Consistency Ratio (CR)

$$CR = \frac{0.121}{1.12} = 0.108$$

$$CR = 0.108$$

The Consistency Ratio (CR) is a measure used to determine the consistency of judgments in a pairwise comparison matrix, commonly used in the Analytic Hierarchy Process (AHP). A CR of 0.108 indicates that the judgments made in the pairwise comparison are consistent.

4.6. AHP method software selection

Presented below is a matrix that compares scores obtained from an internal survey in a paired manner. This number represents the employees' comparative evaluation of the functioning of project management software, which is based on their personal experience. The pairwise comparison matrix presented below illustrates the real-time scores obtained from an internal survey. This score represents the employees' experiential evaluation of the functionality of project management software.

Table 12. Alternative Software Functionality Criteria

Functionality	Jira	Ms Project	Notion	Asana
Jira	0.671	0.758	0.618	0.544
Ms Project	0.116	0.131	0.231	0.205
Notion	0.108	0.056	0.099	0.165
Asana	0.105	0.055	0.051	0.086

The subsequent table displays the outcomes of an internal survey conducted in the IT department of PT ABC, which compared the user experiences of four distinct project management applications.

These values represent the comparative evaluation of each software in terms of user experience.

Table 13. Alternative Software Usability and User Experience Criteria

Usability and User Experience	Jira	Ms Project	Notion	Asana
Jira	0.671	0.652	0.438	0.521
Ms Project	0.135	0.131	0.207	0.213
Notion	0.152	0.063	0.099	0.249
Asana	0.110	0.053	0.034	0.086

This table provides a direct comparison of four project management software, as rated by personnel of the IT department of PT ABC, according to their respective payment models. The data in this table represents a comparative evaluation of the expenses associated with different software applications.

Table 14. Alternative Software Cost and Pricing Model Criteria

Cost and Pricing Model	Jira	Ms Project	Notion	Asana
Jira	0.671	0.618	0.385	0.268
Ms Project	0.142	0.131	0.137	0.178
Notion	0.173	0.095	0.099	0.236
Asana	0.214	0.063	0.036	0.086

The outcomes of a pairwise evaluation of four project management applications according to compatibility and integration criteria are presented in the table below. This evaluation is predicated on employee feedback from the IT department of PT ABC, which describes the degree of compatibility and ease of integration of each software with other systems.

Table 15. Alternative Software Integration and Compatibility Criteria

Integration and Compatibility	Jira	Ms Project	Notion	Asana
Jira	0.671	0.618	0.385	0.268
Ms Project	0.142	0.131	0.137	0.178
Notion	0.173	0.095	0.099	0.236
Asana	0.214	0.063	0.036	0.086

The presented summary illustrates a pairwise comparison of four project management software applications, with particular emphasis on the service criteria. The results of a survey administered to employees of the IT department of PT ABC regarding their perceptions of the service quality of each software were utilized to generate this matrix.

Table 16. Alternative Software Support and Reliability Criteria

Support and Reliability	Jira	Ms Project	Notion	Asana
Jira	0.671	0.669	0.578	0.454
Ms Project	0.132	0.131	0.249	0.188
Notion	0.115	0.052	0.099	0.222
Asana	0.127	0.060	0.038	0.086

The final outcomes of the AHP procedure are succinctly presented in this table, which also includes the computed scores for each software and the relative weights assigned to each parameter. The parameter weights are determined in accordance with the survey-identified significance of each criterion. The cumulative score, which is presented at the end of the table, integrates every weighted score and offers a thorough evaluation of every software application by considering all assessed parameters.

Table 17. Outcome of AHP Methods

Criteria	**Weight**	**Jira**	**Ms Project**	**Notion**	**Asana**
Functionality	0.33	0.214	0.056	0.035	0.025
Usability and User Experience	0.29	0.165	0.050	0.041	0.020
Cost and Pricing Model	0.14	0.068	0.021	0.021	0.014
Integration and Compatibility	0.15	0.087	0.029	0.017	0.011
Support and Reliability	0.09	0.053	0.016	0.011	0.007
Total Score		0.587	0.172	0.126	0.077

Based on the analysis of the data, it can be inferred that Jira emerges as the preferred alternative project management software for the PT ABC Case Study when AHP is applied and nearly all parameters are considered. Service, Integration and Compatibility, User Experience, Payment Model, and Functionality are among the parameters evaluated. The aggregated score indicates that Jira carries the most weight with a statistically significant value of 0.587, surpassing the scores of Notions (0.126), Ms. Project (0.172), and Asana (0.077).

Jira's functionality and user experience are particularly noteworthy, demonstrating its superiority in facilitating the management of projects by offering a diverse range of features. This is pertinent to the requirements of PT ABC, an organization that places a high value on software featuring an intuitive interface; the User Experience weight rating of 0.29 reflects this. Concurrently, the Functionality weight evaluation of 0.33 reflects PT ABC's requirement for comprehensive features to efficiently manage projects. Ms. Project, meanwhile, appears to outperform Notion and Asana in nearly every metric, but remains significantly inferior to Jira.

The findings suggest that Jira is the most appropriate project management software for PT ABC, according to the criteria that the relevant stakeholders have identified and evaluated. The validity of the conducted AHP results is confirmed by the low consistency ratio, which indicates the consistency of the scores and supports this decision.

5. Conclusion

This research has systematically utilized the AHP to support informed decision-making in PMSS. The application of AHP has underscored the crucial role of functionality and usability in determining the most effective project management tools. Insights from a detailed case study reveal that task management capabilities and a user-friendly interface are essential for users.

However, this study is not without limitations. It was conducted as a single case study at PT ABC, potentially limiting the broader applicability of the findings across different industries or organizational contexts. Additionally, the study's reliance on a narrow set of criteria and the input from a relatively small group of experts may affect the comprehensiveness and generalizability of the results. There is a risk that focusing on specific criteria may have overlooked other significant factors that contribute to the effectiveness and user satisfaction of project management software.

To overcome these limitations, future research should aim to expand the sample size and include multiple case studies from various sectors. This expansion would enhance the robustness and relevance of the findings. It would also be beneficial to extend the range of criteria considered, incorporating emerging trends and advancements in project management technology. Further refinement of the AHP methodology could include integrating a broader spectrum of expert opinions and utilizing alternative decision-making techniques, such as the Fuzzy Delphi Method, to further validate the weighting and prioritization of criteria. Pursuing these recommendations will not only bolster the methodological framework but also enrich the insights into the software selection process. Such comprehensive research is crucial for developing tools that effectively meet the dynamic and varied needs of modern organizations, ultimately boosting productivity and adaptability.

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