IMPACT OF INFORMATION TECHNOLOGY ON PROJECT MANAGEMENT PRACTICES AND TOOLS FOR FINANCIAL INSTITUTIONS

Shopee Dube[1], Irene Mpulubusi Chimoga[2]

[2]University of Johannesburg, Auckland Park, SOUTH AFRICA
ORCID ID: 0000-0003-0033-7992
Email: Shopeed@uj.ac.za
[2]Rusangu University, Monze, ZAMBIA
Email: ichimoga@ru.edu.zm

Abstract: This lack of information technology (IT) innovation techniques can negatively impact the performance of project management practices and, by extension, the organization's performance. This study aimed to contribute to both theory and practice by analyzing the effect of information technology (IT) on the performance of project management (PM) practices adopted by selected financial institutions in South Africa. An online questionnaire survey was administered to determine the PM staffs' perceptions of the role of IT in PM practices to achieve this study's aims. Purposive sampling was used to identify key practices (also known as success factors) in project management, as defined by the Project Management Institute (PMI), namely scope management, cost management, time management, and quality management. The data is analyzed using the partial least square (PLS) technique. The study centered on how these practices can be enhanced through IT applications to improve financial institutions' performance. A sample of eight South African financial institutions was surveyed using a structured questionnaire and the Google Forms online tool to collect data. The data findings were analyzed using Excel's descriptive statistics and graphical tools in the form of graphs and tables. The results indicate that IT can enhance PM practices in financial institutions and that IT applications are utilized to enhance work processes. This study has contributed significant findings to the body of knowledge. This research makes substantial theoretical and practical contributions to theory and practice. In addition, the study's future directions represent a pathway to advanced research.

Keywords: Project management practices, financial institutions; information technology; cost management and financial institutions

1. Introduction

The complexity and significance of information technology (IT), which encompasses the utilization of hardware, software, and networks to produce goods, services, or outcomes, have increased dramatically. IT is increasingly used in project management (PM) because it offers a substantial collection of tools and approaches that improve the efficiency and effectiveness of projects within enterprises (Project Management Institute (PMI), 2021; Schwalbe, 2019). Today's financial institutions recognize that to be effective. They must employ current PM approaches, particularly those augmented by IT. For many firms, project management methods in scope, quality, time, and cost structures lack a sustainable rate of company growth.

Numerous approaches, strategies, and tools encompassing all elements of project management from inception to conclusion have been developed, but project results continue to fall short of stakeholders' expectations (Fernandes, Ward, & Araújo, 2013; Project Management Institute (PMI), 2021). Recent research indicates that project failure has cost trillions over the previous half-century (William & Tjhin, 2021). Inadequate project management, insufficient top-level management support, inappropriate technology selection, inadequate infrastructure, and obsolete technology are among the leading causes of project failure (Bakunzibake, Klein, & Islam, 2019; Dube & Marnewick, 2016; Goedeke, Mueller, & Pankratz, 2017; Gunawong & Gao, 2017; Ojha & Pandey, 2017; Rajala & Aaltonen, 2021; Twizeyimana, Larsson, & Grönlund, 2018). According to a research by the Standish Group, 83.9% of IT projects fail to owe to budget overruns, late completion, or lack of promised capability (Johnson, 2021).

IT in PM tools and practices is anticipated to facilitate simplifying work processes, especially for complex and/or uncertain projects (Yevu et al., 2022). Several conventional PM techniques and phases, including initiation, planning, execution, controlling, and closing, still adhere to a predetermined order (Kashyap, 2019; Project Management Institute (PMI), 2021; Schwalbe, 2019). However, creative strategies and sustainable procedures that could contribute to their success are absent from these activities. Thus, for such activities to be effective, these institutions must acknowledge that PM tools can become potent instruments for improving consumer and institution satisfaction. Financial institutions must keep pace with how IT has

redefined the production of value and worth for their organization to perform effectively (Shaqour, 2022). As a result, financial institutions are seeking new, sustainable PM techniques. Several scholars have investigated PM practices in private organizations (Badewi, 2016; Obeidat & North, 2014; Tereso et al., 2019). However, there is a gap in the literature about the effect of IT on financial institutions' PM procedures. Thus, the job of IT combines organizational abilities and project management approaches to streamline the work structures of financial organizations.

This study aimed to assess the influence of IT on PM practices in financial institutions. To accomplish the goal, the following three research questions were posed: What methods and tools do financial institutions employ to increase the success of their projects? (ii) Which factors influence the effectiveness of PM practices? What impact does IT have on project management practices? Several scholars have investigated PM practices in private organizations (Badewi, 2016; Obeidat & North, 2014; Tereso et al., 2019). However, there is a gap in the literature about the effect of IT on financial institutions' PM procedures. This research is significant because it fills a significant gap in the literature regarding the objective. The remaining sections of the paper are structured as follows: The literature review outlines the mapping of PM practices, tools, and strategies to PM knowledge Areas. This is followed by information technology in project management, financial institutions, and factors affecting the performance of project management practices. This study focuses solely on information technology and project management. Following a description of the study's methodology, the most significant findings are presented and discussed. The findings' implications and suggestions for future research are provided. The study's limitations are outlined, and the research concludes with its main conclusion.

2. Literature Review

2.1 Project Management Practices

Implementing effective project management practices increases business value and improves project management benefits. Badewi (2016); Kashyap (2019); Mullaly and Thomas (2008) and Varajao et al. (2021) assert that successful projects result from the application of project management practices and the use of innovative tools. Project managers and practitioners currently use "bodies of knowledge" in project management to guide PM best practices. To be effective and sustainable, all financial institutions working in a project environment must adopt these PM practices.

2.2 Project Management Tools and Techniques

Choosing the best tools and methods for a project can be daunting because each project is unique, faces different obstacles, has different priorities and allocated resources, and operates in different environments. Even within the same business, different projects use diverse tools, techniques, and approaches to meet specific project requirements (Crawford, 2005; Dube & Marnewick, 2016; Project Management Institute (PMI), 2021). Project management tools are generally pervasive, but certain systems are more advanced and less prevalent.

According to Milosevic (2003), Project Management Tools and Techniques (PMMT) are systematic procedures or practices project managers employ to achieve particular PM deliverables. Good project management (PM) tools and procedures give the necessary principles for planning project operations, monitoring and controlling results, and ensuring quality. Their absence results in poor project planning, a lack of accountability and stakeholder engagement, and low team morale (Gido, Clements, & Baker, 2018; Project Management Institute (PMI), 2021). Thus, the PM process's effectiveness is contingent upon applying the proper tools and procedures (Kashyap, 2019; Project Management Institute (PMI), 2021; Sane, 2019; Varajao et al., 2021). In this regard, ongoing communication is crucial to bolster the execution of sustainable PM practices that will result in optimal organizational performance.

2.3 Project Management Knowledge Areas

The Project Management Institute has subdivided the vast field of project management into more "digestible" parts known as PM "knowledge areas" (KAs), which are the core technical subject matter required for effective project management. These are essential areas that enable effective PM practices that, when implemented in organizations, can produce successful project deliverables. To ensure the success of a project, each PM process must generate one or more outputs from one or more inputs using the appropriate PM tools. The KAs are categories of related concepts and procedures. The appropriate PM tools and techniques for each of the KAs are displayed in Table 1.

Table 1: Knowledge areas

Knowledge areas	Description	Tools and Techniques
Integration management	Coordinate activities across all project management areas and process groups	Project selection, return on investment, project charter, project plan, stakeholder analysis, feasibility study
Scope management	Ensures that the project work includes all elements required to complete the work	Work breakdown structure (WBS), scope statement, change request, scope change control, performance appraisal, lesson learned
Cost management	Plans, estimates, manages and controls project finances	Cost estimating techniques, earned value management, cost change control system, cost baseline, activity cost estimates and updates, cost performance reports
Quality management	Ensures that the project delivers a quality output that is fit for purpose	Benefit/cost analysis, flowcharting, cause-and-effect diagram, cost of quality, control charts, quality audits, benchmarking
Time/Schedule management	Ensures that the project work is completed in a timely way	CPM, program evaluation review technique (PERT), Gantt charts or bar charts, simulation, milestone charts, variance analysis, schedule baseline, schedule update, project activities list, activity duration estimates
Risk management	Identifies, assesses and manages risk	Risk matrix, Monte Carlo analysis, decision tree analysis, check list, SWOT analysis, earned value management
Human resource management	Secures, manages and monitors the use of human resources throughout the project	Stakeholder analysis, responsibility matrix reward and recognition systems, organization charts, project team directory
Communications management	Ensures that communications on the project are planned and carried out appropriately	Stakeholder analysis earned value management
Procurement management	Carries out purchasing and contracting as required	Make-or-buy analysis, contract type selection, statement of work, contract change control system, source selection
Stakeholder management	Identifies and engages stakeholders throughout the project.	Stakeholder analysis, stakeholder register, stakeholder engagement plan, stakeholder, mapping/representation
Adapted from Gido et al. (2018); Project Management Institute (PMI) (2021); Schwalbe (2019); Westlnd (2019)		

While all the KAs are important for successful PM practices, four will be discussed below: scope, cost, time, and quality. Before doing so, the role of IT in PM and financial institutions is discussed.

2.4 Information Technology

Utilized in PM methods, information technology can be applied to governance, operations, hardware, and infrastructure (Arefazar et al., 2022). According to Gershon (2022), IT refers to organizations that utilize computers, such as constructing communication networks and protecting data and information. There appears to be no doubt that enhanced quality and productivity are achieved without additional effort in PM practices due to the use of IT. Brown et al. (2020) reported that IT tools continue to drive project improvement, resulting in project managers making better-informed resourcing decisions and executives of organizations gaining greater insight into factors affecting technology investments. This has highlighted the necessity for financial institutions to realize the importance of PM tools and use them within their companies.

2.5 Financial Institution

A financial institution is a firm that engages in financial and monetary activities, including deposits, loans, investments, and currency exchange. The institution's commercial operations in the financial services industry include banks, trust companies, insurance companies, brokerage firms, and investment dealers (Hayes, 2022). Thus, for such activities to be effective, these institutions must acknowledge that PM tools can become potent instruments for improving consumer and

institution satisfaction. Financial institutions must keep pace with how IT has redefined the production of value and worth for their organization to perform effectively (Hayes, 2022; Irechukwu, 2015; Naeem & Inam, 2021). The significance of IT in the PM practices of financial institutions has been acknowledged in terms of its capacity to expand the client base, reduce exchange costs, improve the quality and timeliness of response, enhance opportunities for publication and marketing, promote self-service and service customization, and enhance customer communication and client relationships (Garau, 2014; Project Management Institute (PMI), 2021).

IT is crucial in today's economy as large financial and business transactions are conducted daily, necessitating robust IT systems to support them (Gingnell et al., 2014). Thus, IT improves the PM practices (or KAs as described above) of scope, cost, time, and quality because when these are incorporated into the daily functions of projects, the probability of success increases.

2.6 Factors Affecting Performance in Project Management Practices

An analysis of the literature suggests that the management of scope, cost, time, and quality are the most important factors to be implemented in project management (Gido et al., 2018; Project Management Institute (PMI), 2021; Schwalbe, 2019; Westlnd, 2019). In addition, the literature suggests that leadership, trust, and communication are important. For this study, the four factors mentioned above of scope, cost, time, and money management (summarized in Figure 1) are recognized as significant to the performance of PM practices. They are discussed in the sections that follow.

Figure 1: Factors affecting performance in project management practices (Source: developed by the authors)

2.7 Scope management

Scope refers to the labor and processes required to create the project's deliverables. Gido et al. (2018) define scope as the activities or tasks performed to produce deliverables that satisfy the customer's satisfaction and requirements. According to Dekkers and Forselius (2007), project scope management comprises the processes involved in defining and controlling what work is or is not included in a project and is central to the KAs. Project managers should ensure that the project team and stakeholders understand the project's intended outputs and processes. To define all deliverables, project organizations must agree on the project's products and, to some extent, how they should be produced.

Simply put, scope management encompasses all activities and defining what will not be performed. This serves as the foundation for planning, budgeting, and task management. Therefore, scope management should be improved through the use of IT tools and techniques such as a project charter, a work breakdown structure, change requisition forms, scope change control, and a requirements management plan (Gido et al., 2018; Project Management Institute (PMI), 2021; Schwalbe, 2019). Thus, managing project scope aids in documenting all the information required to achieve an institution's project objectives to stay on track, ensure that all objectives are met throughout the project life cycle, and eliminate unnecessary information.

2.8 Quality Management

Quality management ensures that all project activities required to design, plan, and implement a project are effective and efficient in terms of the project's purpose and performance (Gido et al., 2018; Project Management Institute (PMI), 2021; Schwalbe, 2019). It is more important to prevent and avoid inferior outputs than to measure and correct them. Financial institutions should embed quality management as a continuous process to prevent low-quality outputs and see a project through to completion.

Project managers are tasked with monitoring the quality of project activities early and frequently throughout the project by comparing results to quality standards and ensuring that corrective actions are taken immediately when necessary (Gido et al., 2018; Project Management Institute (PMI), 2021; Schwalbe, 2019). Deliverables must be produced on time and within budget, but the project will fail if they are of poor quality. Therefore, financial institutions should utilize cutting-edge IT tools to meet stakeholders' success criteria and quality requirements.

2.9 Time Management

(Gido et al., 2018; Project Management Institute (PMI), 2021; Schwalbe, 2019) Time management involves making the most of the time allocated to a project to meet scheduled deliverables and complete all work by or before the project completion date. Financial institutions must always be organized, productive, and prompt to meet project deadlines. According to Bolick (2019), time is frequently the scarcest resource in PM practices. Therefore, time management can be optimized when utilizing IT processes such as computer-aided design (CAD) to see the project through to its conclusion. In addition, using Gantt charts, an interactive and collaborative tool that displays a project as a spreadsheet on the left and a timeline on the right, can improve PM practices.

2.10 Cost Management

According to the Project Management Institute (PMI) (2021), cost management is estimating, allocating, and controlling costs for all project-related tasks. It assists the project manager in establishing cost controls that minimize the possibility of the project running over budget. Cost management should significantly ensure that accountable schedules align with scope, time, and quality standards at financial institutions. Its lack could result in project failure. Profitability shifts a company from cost to performance or failure to success (Zack, McKeen, & Singh, 2009). Any organization's primary purpose should be profitability. Profitability enables the organization to have sufficient cash for its growth and survival during lean seasons (Project Management Institute (PMI), 2021; Schwalbe, 2019). Project managers should invest in innovative tools and techniques for generating documents such as earned value management, cost performance reports, and activity cost estimates and updates. Financial institutions' cost management should improve their strategic business positions and eliminate needless costs if handled appropriately.

2.11 Study Hypotheses

The current study proposes four project management practices based on the preceding discussion: scope management, cost management, time management, and quality management. Following the study's objective, the impact of information technology on scope management, cost management, time management, and quality management is examined. In addition to the discussion above, several previous studies have highlighted the positive impact of information technology on project management practices. Lastly, this study proposed four hypotheses based on Figure 2's framework.

Hypothesis 1. Information technology has a positive relationship with scope management.

Hypothesis 2. Information technology has a positive relationship with cost management.

Hypothesis 3. Information technology has a positive relationship with time management.

Hypothesis 4. Information technology has a positive relationship with quality management.

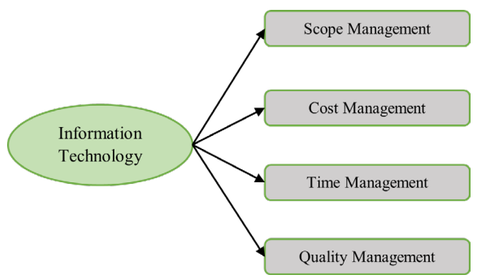

Figure 2. Study Framework

3. Methodology

For the study, a mixed-method research methodology was employed. The justification for combining quantitative and qualitative research methodologies is that neither method alone can capture a situation's patterns and nuances. Quantitative and qualitative methods complement each other and enable a more comprehensive study when applied in tandem (Venkatesh, Brown, & Bala, 2013). The online survey questionnaire was utilized to administer the study questions and address them. The online survey approach consists of a structured questionnaire that the target population can complete via the Internet. It collects data electronically and communicates the procedures to respondents while assuring their privacy and security (Lavrakas, 2008). This methodology was used to get insights and comments for efficient data collection from the study's closed-format questions.

The target population consisted of project managers and IT professionals involved in projects at select financial institutions in South Africa. Eight respondents completed the online questionnaire created with Google Forms and made available via the Internet. The data analysis was subjected to quantitative inspection corresponding to a corresponding PM KA, namely the scope, cost, time, and quality management. The questionnaire included a section for collecting respondents' ages, genders, races, financial institutions, and years of experience. The questions were presented in short-answer and multiple-choice formats, and responders were required to select the best response. The following four-point Likert scale was utilized as a response option: 1-Excellent, 2-Very excellent, 3-Good, 4-Poor. Excel was used to analyze the data using descriptive statistics. In addition, open-ended questions were posed, and the responses were examined qualitatively. Each question corresponds to a PM KA, namely management of scope, cost, time, and quality. The responses to the closed questions were analyzed quantitatively.

4. Results and Discussions

This section presents the findings of the study. Graphical tools like charts and tables are used to present the results.

4.1 Demographics of respondents

As stated previously, respondents provided various demographic data displayed below. No respondents under 29 replied to the questionnaire, as seen in Figure 3. Half (50%) were between the ages of 30 and 39, 37.5% were between the ages of 40 and 49, and one (12.5%) was between the ages of 50 and 59. Therefore, all eight respondents were at least 30 years old and can be called mature. This indicates that seasoned personnel in financial institutions concur with the recommendation that project managers invest in innovative document-generation tools and procedures.

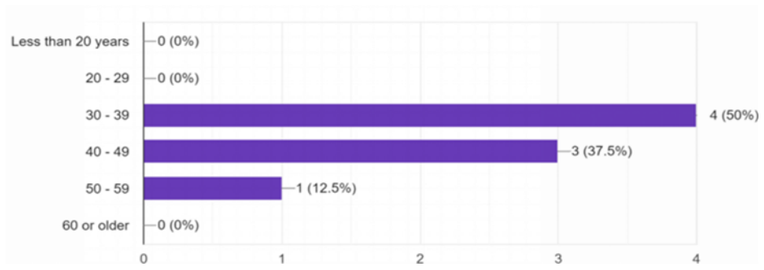

Figure 3: Age group

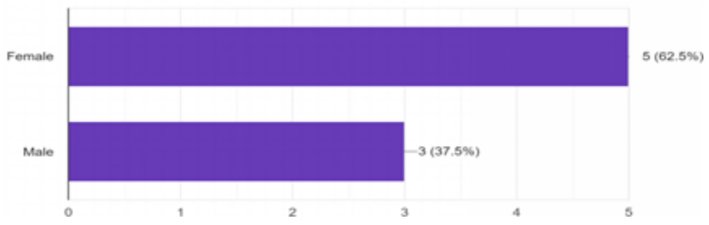

Figure 4: Gender

The research sample was heterogeneous because it included both male and female respondents. Figure 4 indicates that 62.5% were women and 37.5% were men. This indicates that financial organizations are dominated by women, although it is not conclusive. The gender of the respondents was not predetermined, as gender was not a selection criterion for the first 15 participants.

Figure 5 depicts the racial/ethnic composition of respondents. All four ethnic groups listed on the questionnaire were represented by respondents: 37.5% for Africans, 12.5% for Asians, 12.5% for Coloreds, and 12.5% for Indians. As with gender and age, the researcher had no control over the racial distribution, and it is unknown to what extent these percentages reflect those of the participating institutions.

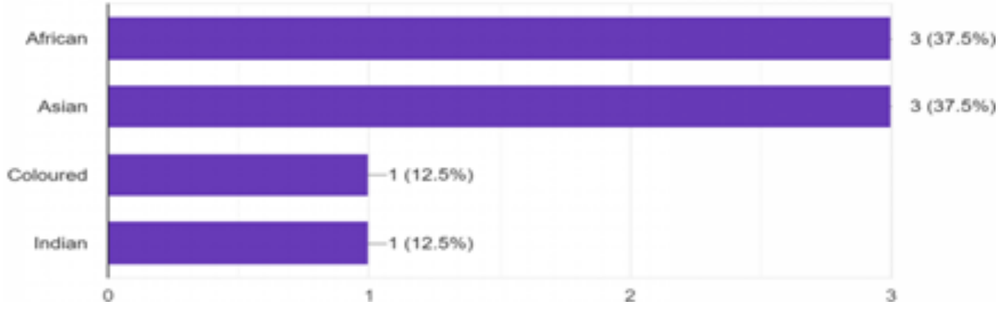

Figure 5: Race/Ethnic groups (note: In this study, the Asian race included, for example, Chinese, Japanese etc. and not Indians – Indians were separately administered to)

Figure 6 illustrates the functions of the respondents. Two (25%) were project team leaders, and the same proportion (25%) were project management consultants. The remaining four (12.5%) respondents held the positions of top management, line management, customer service assistant, and project manager, respectively. With one exception, the respondents were either managers or consultants, making them well-suited to answer the questions based on their job descriptions.

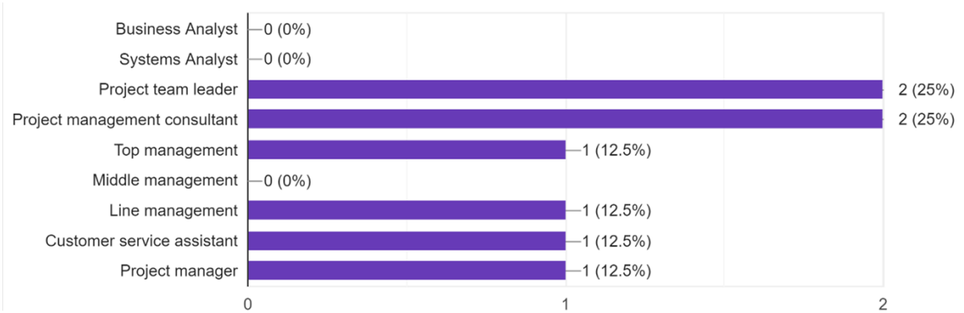

Figure 6: Current Job Positions

Table 2 displays the respondents' years of work experience. The overwhelming majority (87.5%) have five to twenty years of experience. As with their job descriptions, the respondents were well-equipped to provide informed and precise responses to the questions.

Table 2. Years of experience

Years of experience		
Years	**Frequency**	**Percentages**
Less than 4 years	1	12.5%
5 – 9	2	25%
10 -14	2	25%
15 – 20	3	37.5%
More than 20 years	0	0%
Total	8	100%

4.2 Structural Equation Modeling (SEM) Results

This study investigated the connection between scope management, cost management, time management, quality management, and information technology. Using a questionnaire, primary data were collected. The final data statistics are presented in Table 3. The results revealed that the data is suitable for examining the relationship between variables because it contains neither a missing value nor an outlier.

Table 3. Data Statistics

	No.	Missing	Mean	Median	Min	Max	Standard Deviation	Excess Kurtosis	Skewness
IT1	1	0	2.011	2	1	5	0.948	0.708	0.992
IT2	2	0	2.069	2	1	5	1.209	0.508	1.19
IT3	3	0	1.857	2	1	5	0.923	0.999	1.142
IT4	4	0	1.81	2	1	5	0.894	1.148	1.146
IT5	5	0	2.101	2	1	5	1.175	0.783	1.222
SM1	6	0	2.095	2	1	5	1.132	0.802	1.178
SM2	7	0	1.852	2	1	5	0.959	2.812	1.607
SM3	8	0	1.878	2	1	5	1.008	1.43	1.308
CM1	9	0	2.016	2	1	5	0.995	1.638	1.269
CM2	10	0	2.011	2	1	5	1.15	0.996	1.305
CM3	11	0	2.127	2	1	5	1.295	0.286	1.176
TM1	12	0	2.016	2	1	5	1.148	0.56	1.133
TM2	13	0	1.947	2	1	5	1.068	0.727	1.131
TM3	14	0	2.011	2	1	5	1.049	1.171	1.254
TM4	15	0	1.915	2	1	5	0.983	1.208	1.249
QM1	16	0	2.085	2	1	5	1.095	0.604	1.098
QM2	17	0	1.926	2	1	5	1.086	0.66	1.197
QM3	18	0	1.995	2	1	5	1.184	0.925	1.302
QM4	19	0	1.799	2	1	5	0.977	2.129	1.478

Note: SM=Scope Management; CM=Cost Management; TM=Time Management; QM=Quality Management; IT=Information Technology

After conducting data analysis, this study examined factor loadings to assess the dependability of each scale item. To reach the minimum level of dependability, factor loading must exceed 0.5. In addition to examining construct reliability, this study examined composite reliability. The extracted average variance (AVE) is also validated to assess external consistency. According to the study, all retained scale items are dependable, as all items in Table 2 have factor loadings greater than 0.5. Figure 7 illustrates the PLS measurement model used to examine factor loadings. As the literature recommends, CR exceeds 0.70, and AVE exceeds 0.5. Table 4 provides discriminant validity, confirmed by the AVE square root. In Table 5, factor loadings, CR, and AVE are reported.

Table 4. Factor Loadings, CR and AVE

Variables	Items	Loadings	Alpha	CR	AVE
Cost Management	CM1	0.876	0.758	0.859	0.671
	CM2	0.802			
	CM3	0.777			
Information Technology	IT1	0.7	0.818	0.869	0.571
	IT2	0.796			
	IT3	0.736			
	IT4	0.75			
	IT5	0.794			
Quality Management	QM1	0.8	0.797	0.865	0.616
	QM2	0.754			
	QM3	0.811			
	QM4	0.773			
Scope Management	SM1	0.839	0.804	0.884	0.718
	SM2	0.838			
	SM3	0.865			
Time Management	TM1	0.89	0.886	0.898	0.689
	TM2	0.801			
	TM3	0.886			
	TM4	0.732			

Note: SM=Scope Management; CM=Cost Management; TM=Time Management; QM=Quality Management; IT=Information Technology

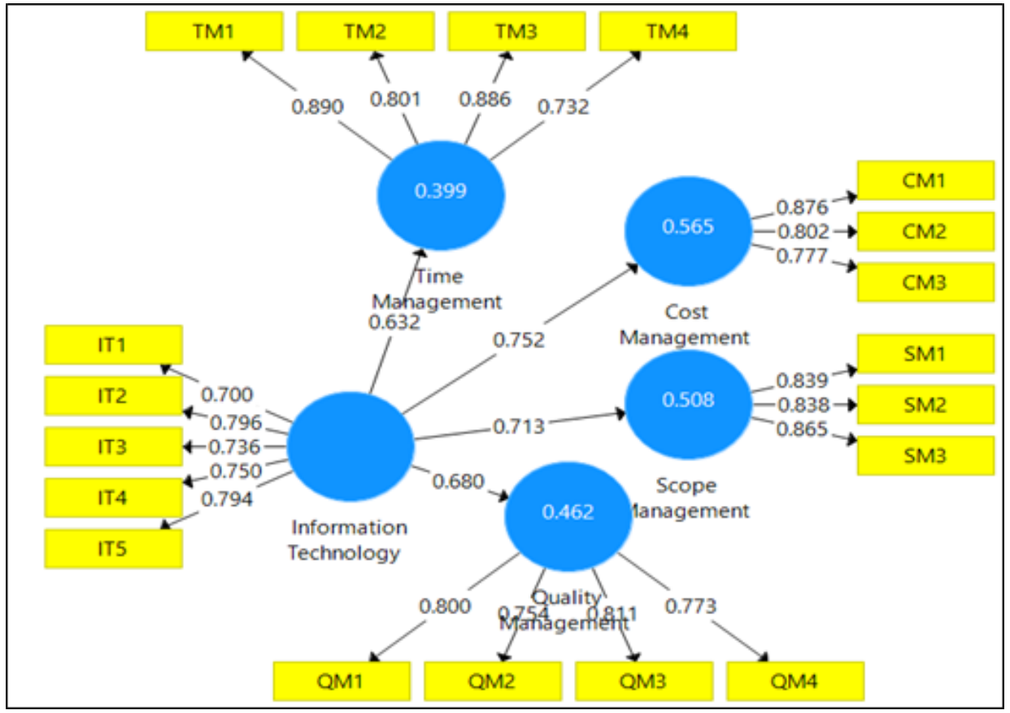

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Figure 7. Measurement Model

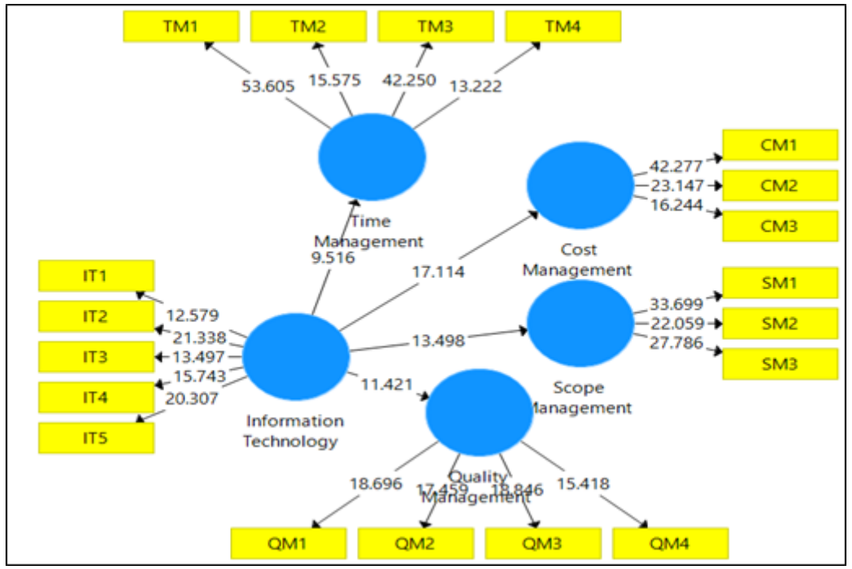
Table 5. AVE Square Root

	Cost Management	Information Technology	Quality Management	Scope Management	Time Management
Cost Management	0.819				
Information Technology	0.652	0.756			
Quality Management	0.634	0.68	0.785		
Scope Management	0.683	0.713	0.568	0.848	
Time Management	0.7	0.632	0.676	0.681	0.83

Figure 8 depicts a PLS structural model used to investigate the relationship between scope management, cost management, time management, quality management, and information technology. To accept the hypothesis, the t-value of 1.96 was taken into account. The results are shown in Table 6. All four hypotheses regarding the impact of information technology on scope management, cost management, time management, and quality management are supported by t-values greater than 1.96. It demonstrates that information technology can facilitate project management practices, including scope management, cost management, time management, and quality management.

Table 6. Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Information Technology -> Cost Management	0.752	0.754	0.044	17.114	0
Information Technology -> Quality Management	0.68	0.678	0.06	11.421	0
Information Technology -> Scope Management	0.713	0.712	0.053	13.498	0
Information Technology -> Time Management	0.632	0.63	0.066	9.516	0



Note: SM=Scope Management; CM=Cost Management; TM=Time Management; QM=Quality Management; IT=Information Technology

Figure 8. Structural Model

4.3 Results and Discussions Relating to the Impact of IT on Project Management Practices

As noted in the Introduction, the study's objective was to analyze the impact of IT on PM practices in financial institutions. The findings responding to this objective are presented and discussed below. The actual questions asked in the questionnaire serve as a basis for the presentation and discussion.

(i) Question: "How do you scale the impact of project management practices of scope management, cost management, quality management, and time management in this organization?" The findings indicated that 50% of the respondents considered the impact of current PM practices to be "very good", 37.5% rated it as "good", and 12.5% indicated "excellent". All respondents were thus generally satisfied with the current PM practices in their organizations. When applied appropriately, the PM practices usually result in successful projects (Badewi, 2016; Kashyap, 2019; Mullaly & Thomas, 2008; Varajao et al., 2021).

(ii) Question: "Can the use of IT innovation on project management practices improve the work processes?" All respondents (100%) answered in the affirmative, indicating that they agreed that using IT innovation in PM practices improves work processes. As pointed out (Kashyap, 2019; Varajao et al., 2021), many organizations are improving their work processes by introducing new PM practices and innovative IT tools.

(iii) Question: "What role do project management practices play in your organization's projects?" The purpose of the question was to determine the PM practices' role in affecting the projects' performance. The majority of respondents indicated that the role of project management practices in organizations is to determine PM practices and how they affect the performance of the projects. The verbatim responses of three respondents are given below.

One respondent stated: *"They play a guidance role. This aids in avoiding unusual diversions from the standards and goals set".* A second respondent said: "*Gives direction to the project and ensures they are followed. Plays a very critical role in the success of project management when applied correctly".* According to a third respondent: *"To ensure good planning, evaluation of projects, that project is within the budget and stipulated time frame. Project management practices are critical in ensuring that the project is monitored and controlled all the time, products and services are delivered at the end of the project."*

According to Gido et al. (2018) and Project Management Institute (PMI) (2021), PM techniques considerably improve project outcomes and facilitate effective and efficient project management. Respondents were asked to identify the project management (PM) tools and practices they utilized to complete their projects effectively. The primary project tools were cost estimation methodologies, earned value management, PERT, Gantt charts, cost of quality, control charts, stakeholders matrix, network diagrams, WBS, scope management, and quality analysis. The Project Management Institute (PMI) (2021) suggests using the abovementioned tools and practices.

Respondents were asked to explain the impact of IT on their firms' PM processes. This inquiry was central to the study. According to the answers, IT facilitates the seamless operation of projects and effective management. In addition, they said that it increases communication by centralizing papers (such as those dealing with time schedules and expenses) that project members can then exchange while working on the project. Participants answered that IT has a significant impact as the utilized technologies are resourceful, expedite PM procedures, and solve business issues. Badewi (2016); Dube and Marnewick (2016); Gido et al. (2018); Kashyap (2019); (Project Management Institute (PMI), 2021); Varajao et al. (2021) echo the thoughts voiced by respondents regarding the influence of IT on PM practices.

5. Theoretical and Practical Implications

This study's findings have implications and insights for project managers and researchers interested in understanding PM practices and appropriate tools and techniques in financial institutions. This study contributes to the theory and practice of PM practices in financial institutions. It emphasizes that such institutions will likely encounter fewer risks in managing their projects if they are familiar with PM's best practices. Financial institutions must recognize that the absence of PM tools can harm their performance, as these tools serve as a guide for preventing unusual deviations from the established standards and goals. This study has contributed an original and significant finding that previous research has not addressed to the same extent. Theoretically, the significance of the study would be for scholars to discuss the relationship between information technology and project management with a unified mind.

This study has practical ramifications that are considered essential for project management. The study demonstrated that project management teams should have a basic understanding of technology because the use of technology is crucial for the flawless development of any project in the present day. In addition, the study demonstrated that project management efficiency could be achieved if project management teams utilize information technology effectively. Industry's large and small sectors should adopt information technology because it is essential for the project's success. Similarly, the study revealed that employees must be trained to use the newly developed information technology in project management, which is crucial for advanced education.

In contrast, the study emphasized that the government should assist the industrial sector by integrating activities with the IT sector to improve the performance of projects. IT is essential for efficiently and effectively completing a project within the allotted time frame and budget. Project management is necessary for achieving reasonable results.

7. Limitations and Future Directions

The research had numerous limitations. The first drawback of the study is its industry-specific nature, as data were collected from South African financial institutions. Thus, the findings are limited to the financial sector and cannot be generalized beyond it. Second, the study's sample size was modest, limiting the generalizability of the findings to the entire banking industry. Thirdly, the research findings reflect the perspectives or experiences of the survey respondents and do not necessarily reflect those of financial institutions worldwide. In future research, it would be beneficial to undertake a comparative study with a bigger sample size since the resulting increase in perspectives could provide additional light on PM methods and the role of IT. Second, a future study spanning a broader range of industries, such as construction, manufacturing, etc., might be done to evaluate if PM methods and the role of IT are sector-specific or applicable across industries.

8. Conclusions

The study examined the impact of information technology on project management practices in financial institutions in South Africa. To achieve this objective, the study addressed the three (3) research questions posed by the researchers. The findings established that (i) the tools and techniques used to improve the success of projects in financial institutions are cost estimating techniques, earned value management, PERT, Gantt charts, cost of

quality, control charts, stakeholders matrix, network diagrams and WBS. This was established by the respondents who are mature workers in financial institutions; they agreed that project management tools and techniques are required for effective performance. (ii) The factors that affect the performance of PM practices were established as the utilization of PM knowledge areas (KAs), an important determinant for improving PM performance in financial institutions. Upon analyzing the findings, the respondents indicated that financial institutions should invest in innovative tools and techniques for generating documents. (iii) The impact of IT on PM practices was established to be more job-satisfying when performed with IT. The perception of the majority respondents viewed that information technology has a significant impact on PM practices. It was established that IT assists in the smooth management of projects and proper management; improves the success of communication for centralizing the documents shared on the project, such as information on time schedules and cost while working on the project.

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