
Effect of Information Technology on Organizational Performance at Yemeni Oil Exploration–Production Company

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ABSTRACT

This research paper examines the influence of six essential information technology factors; human resource capabilities, devices and equipment, communication networks, software applications, databases, and information security on organization performance in the Yemeni Oil Exploration and Production company, a situation that is characterized by political instability and limited resources. By using the constructs of perceived usefulness and perceived ease of use of the Theory of Technology Acceptance Model, a cross-sectional survey of 202 employees, who were selected using stratified-random sampling process, was conducted. Questionnaires collected the data and were thoroughly validated and analyzed based on a descriptive analysis, classical assumption test, and multiple regression. Results show that the strongest positive short-term predictors of operational efficiency, speed of decision-making, service quality, and financial results are communication networks ($\beta = 0.442, p < .001$), databases ($\beta = 0.216, p < .001$), and human resource skills ($\beta = 0.185, p < .001$). There is also a positive contribution of software ($\beta = 0.067, p < .01$) and information security ($\beta = 0.056, p < .05$) and together they explain 68.6% of the variance in performance (Adjusted $R^2 = 0.686$) Devices and equipment, on the contrary, showed a small negative influence ($\beta = -0.078, p < .05$) which shows that mere acquisition them without proper planning might not be effective. Such findings highlight the importance of ensuring strong communication infrastructures and user-focused adoption projects within resource-poor, unstable environments and provides easily applied advice on IT investment and capacity-building projects in such environments.



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1. INTRODUCTION

As the world of business is evolving, information technologies (IT) become one of the inalienable elements of enhancing the performance of any organization and its strategic orientation (Yunus, 2023). Various sectors all over the world are working to implement IT as a major asset to support and improve their market position, where putting money in new technology is an edge in competency (Ebneyamini & Bandarian, 2019). This is best seen with regard to the oil and gas industry where innovation is essential in ensuring efficiency in exploratory and production, and operational processes hence making IT the focus point of all activity within the industry (Dmitrieva & Romasheva, 2020; Ebneyamini & Bandarian, 2019). Available evidence suggests that strong IT frameworks improve communication networks, enhance workflow processes, and promote reliance on data in decision-making, thereby increasing organizational productivity and effectiveness (Yunus, 2023; Matkovskaya et al., 2021).

Yemeni Oil Exploration and Production Company is forced to work in a unique geopolitical environment marked by scarcity of resources as well as continuous political instability and technological backwardness (Al-qadhi & Chen, 2021). As one of Yemen's most productive sectors, the oil industry faces severe challenges that threaten both service quality and financial viability (Ainin, Naqshbandi, & Dezdar, 2016; Dalle et al., 2020; Alzahrani & Seth, 2021). In such an environment, evaluating the return on IT investments—particularly as they pertain to improving rendered services, operational flexibility, and financial outcomes—ceases to be merely a scholarly inquiry and becomes a matter of urgent economic concern (Akintokunbo & Arimie, 2021; Waziri, Ali, Aliagha, & Abd Majid, 2015). Although prior research in oil and gas companies indicates that technological resources can optimize business processes, facilitate tactical decision-making, and enhance organizational adaptability (Roztock, Soja, & Weistroffer, 2019; Widjaja, Sumintapura, & Yani, 2020), most of these investigations focus on mature markets and developed economies (Elbanna & Abdel-Maksoud, 2020). Consequently, the mechanisms through which IT contributes to performance growth in less developed regions—especially within the oil exploration sector—remain underexplored (Musheke & Phiri, 2021).

The current body of work stresses the expansive capacity of IT to drive noticeable enhancement in different areas of organizational performance, including promoting communication and decision-making, improving resource management, as well as product development (Akpamah & Matkó, 2021). For instance, Zhao (2023) highlighted the positive correlation between the use of technologies responsible for the enhancement of communication and key organizational performance indicators, such as profit and sales growth, and additional innovation capacity (Zhao, 2023). However, whereas these investigations demonstrate the advantages of IT in general structural terms, there are challenges in how these studies are drawn as the focus is usually on developed countries and matured industries, thus creating a gap in understanding IT within different scenarios (Elbanna & Abdel-Maksoud, 2020). Particularly, the precise mechanisms through which IT contributes to performance growth in less developed regions or in the oil exploration sector remain unduly addressed (Musheke & Phiri, 2021).

Technology Acceptance Model (TAM) provides a powerful theoretical perspective of how IT investments can be converted to real-life performance improvement. Originally proposed by Davis (1989), TAM asserts that two core perceptions—perceived usefulness (PU) and perceived ease of use (PEOU)—determine users' attitudes toward technology and their subsequent adoption behaviours. Venkatesh and Davis (2000) further refined this model, demonstrating its applicability across various sectors and cultural settings. In the context of Yemen's oil industry, perceived usefulness captures the extent to which IT tools (e.g., real-time dashboards, predictive analytics) are believed to enhance job performance, while perceived ease of use reflects the degree to which these tools are seen as effortless

to learn and operate. By integrating TAM, this study not only assesses the availability of IT resources but also examines end-user acceptance as a critical mediating mechanism driving performance improvements (Davis, 1989; Venkatesh & Davis, 2000).

Drawing from this theoretical base, current research examines the six major IT infrastructure components; human resource capabilities, devices and equipment, communication networks, software applications, databases, and information security, and evaluate their relationships to five kinds of organizational performance metrics. Human resource skills, defined as the knowledge and expertise of an organization's staff, directly impact the effective utilization of IT assets (Obeidat, Al Bakri, & Elbanna, 2020; Katou, 2008). Devices and equipment serve as tangible IT assets that facilitate managerial tasks and operational processes (Peskova & Sharafutdinov, 2019; Masiko et al., 2022). Both wired and wireless communication networks establish informational interconnections upon which collaborative decision-making is based (Franc a et al., 2021; Sukrasno & Elmi, 2021). Information processing and the ability to support strategy, as well as the foundation of data-driven decision-making, is made available through software suites, which comprise system and application software (Arbanas & Hrustek, 2019; Jelača et al., 2022), and through databases (Akhter, 2022; Li, 2023). Lastly, the data integrity and availability retained by information security has a positive impact on organizational performance overall which, even though it can be limited by the concerns of usability, continues to have a positive effect that is general rather than isolated (Lestari, 2024; Noparumpa et al., 2021; Suwandi & Setiawan, 2021; Alzaharani & Seth, 2021).

This research will explore the gaps in this vital area by offering new evidence on how IT application helps to boost organizational efficiency in the oil industry in Yemen. This study complements the studies by Antoni, Jie, and Abareshi (2020), Katou (2008) and Tanriverdi (2006) by assessing, analysing, and evaluating the entire range of IT resources at Yemeni Oil Exploration and Production Company and how each of them connects with the software performance, speed of decision making, quality of services and the final financial results. Notably, the integration of the Technology Acceptance Model helps the study to explain the user level processes, perceived usefulness and ease of use, through which IT investments achieve performance gains when the resources are scarce and the politics volatile. The resulting knowledge is likely to contribute to the theoretical and applied experience in these problematic settings both in regards to the use of IT and in relation with the regional situation.

2. METHOD

Research Design

The study is based on a quantitative design where the descriptive and correlational research methodologies have been involved to describe the effects of IT components on organizational performance. The research area will be to discover the trends and patterns between independent variables (IT components) and dependent variable (organizational performance). It is a suitable design to explain the investigated phenomena and can be used to analyse relationships with the help of regression approaches. The cross-sectional design is applied, and it is possible to collect data only at one point in time, which gives a picture of the status of IT integration and efficiency within the studied group.

Sampling Technique

The research technique uses stratified random sampling to give the representative sample of concerned employees in the Yemeni Oil Exploration and Production Company. By dividing the employees into subgroups, stratified sampling assists in taking into consideration the diversity of the population by making sure that all of the following important sections are represented accordingly.

The size of sample is determined by the number of employees working in a company which makes up a total sample size of 202 workers. This would add to the generalizability of the study findings to more oil exploration workers in Yemen.

Data Collection

The Primary data was attained through the analysis of questionnaires which was particularly developed to the current research. The survey questions in the questionnaires involved the six components of IT (human resource skills, devices and equipment, communication networks, software, databases, and information security) and how they affect the organizational performance. The questionnaire items were validated through expert reviews and pilot testing to ensure clarity and relevance. The data was collected from employees of Pertamina Company in Yemen to capture their experiences and perceptions regarding IT integration and its impact on organizational performance. Additionally, secondary data was sourced from relevant academic articles, reports, and other published research to complement and enhance the primary data collection.

Variable Measurement

The study examines the following variables: Independent Variables (X): These include human resource skills, devices and equipment, communication networks, software, databases, and information security. These variables are considered the predictors that influence organizational performance. Dependent Variable (Y): Organizational Performance, measured in terms of productivity, efficiency, and competitiveness, is the outcome variable. The measurement of these variables will be based on a Likert scale (1-5), with respondents indicating their level of agreement with statements related to each IT component and organizational performance. Internal consistency will also be calculated via Cronbach alpha in assessing reliability, whereas the content validity will be determined by experts opinion.

Statistical Analysis – Regression Approach

Multiple regression analysis will be the main statistical technique to be used in this research. The approach is appropriate when the reaction of two or more independent factors on a dependent one should be determined. Prior to the regression analysis, the following assumptions shall be checked, Normality: The data collected shall be evaluated on normality through Shapiro-Wilk test. Heteroskedasticity: It will involve Breusch-Pagan test to consider the errors variance test to confirm whether differences occur in terms of errors variance. Multicollinearity: Multicollinearity analysis will also be undertaken to find out that the independent variables are not multicollinear by checking the variance inflation factor (VIF). The regression model will enable us to identify the extent of contribution of every element of IT on the performance of an organization.

Data Analysis Process

Through SPSS Statistics, a systematic method will be used to analyze the data: Data Cleaning: Before analyzing data, all the missing or incomplete answers will be dealt with and the data will be checked on its completeness and consistency. Descriptive statistics: Simple descriptive statistics (mean, standard deviation) will be performed to generalize the representation of the respondents and the important variables. Regression Analysis: Multiple regression analysis will be used to test the hypotheses and analyze the relationships between the IT components and organizational performance. The following outputs will be analyzed: R-squared: This will measure how much of the variance in organizational performance is explained by the independent variables. Coefficients: These will show the direction and magnitude of the relationship between each IT component and organizational performance. Significance Testing: p-values will be used to assess the statistical significance of each variable in the model.

3. RESULTS AND DISCUSSION

Results

Demographic findings

1) Gender and Age

Table 1. Gender and Age distribution

Category	Respondents	Percentage (%)
Male	184	91.2
Female	18	8.8
Total	202	100
20 to <30 years	11	5.3
30 to <40 years	68	33.5
40 to <50 years	78	38.8
50 years and over	45	22.4
Total	202	100

(Source: Processed by authors using SPSS, 2025)

Table 1 indicates that the respondent sample is primarily male, with males representing 91.2% (184 out of 202) of the overall sample, and females account for the remaining 8.8% (18 respondents). The predominant age group among respondents is 40 to under 50 years, with 38.8% (78 respondents). Subsequently, individuals aged 30 to under 40 years constitute 33.5% (68 respondents), while those aged 50 years and above account for 22.4% (45 respondents). The smallest demographic comprises respondents aged 20 to under 30 years, constituting 5.3% (11 respondents). The findings indicate a respondent demography that is primarily male and largely concentrated in the age range of 30 to under 50 years.

2) Educational Level and Job Position

Table 2. Educational Level and Job Position distribution

Category	Respondents	Percentage (%)
High school or less	17	8.4
Post-secondary diploma	26	12.9
Bachelor's degree	134	66.5
Postgraduate degree	25	12.4
Total	202	100
Director General	1	0.6
Deputy General Manager	23	11.2
Head of Department	50	24.7
Competent	59	29.4
Other	69	34.1
Total	202	100

(Source: Processed by authors using SPSS, 2025)

Table 2 illustrates that a significant majority of respondents possess a Bachelor's degree, accounting for 66.5% (134 out of 202) of the sample. Individuals possessing a postgraduate degree constitute 12.4% (25 respondents), whilst 12.9% (26 respondents) hold a post-secondary diploma. The smallest educational cohort comprises those with a high school education or lower, with 8.4% (17 respondents).

In terms of job positions, Table 2 shows that the largest segment falls under "Other" roles, representing 34.1% (69 respondents). This is followed by those identified as "Competent," comprising 29.4% (59 respondents), and individuals in "Head of Department" roles at 24.7% (50 respondents). "Deputy General Managers" constitute 11.2% (23 respondents), while "Director General" is the smallest category, with just 0.6% (1 respondent).

3) Years of Current Work Experience Findings

Table 3. Years of Current Work Experience distribution

Years of Experience	Respondents	Percentage (%)
1 to <5 years	4	1.8
5 to <10 years	63	31.2
10 to <20 years	99	48.8
20 years and over	37	18.2
Total	202	100

(Source: Processed by authors using SPSS, 2025)

Referring to Table 3, which outlines the years of experience among respondents, the data indicates that a considerable portion possess substantial professional experience. Notably, 48.8% (99 out of 202) have between 10 and less than 20 years of experience. This is followed by respondents with 5 to less than 10 years of experience, making up 31.2% (63 respondents). Those with 20 years or more constitute 18.2% (37 respondents), while the smallest group includes respondents with 1 to less than 5 years of experience, comprising just 1.8% (4 respondents).

Validity and Reliability Test

Table 4. Instrument Test

Variable	Cronbach's Alpha	Reliability	Tolerance	VIF	Sig. (Het)	B (Reg)
Results of Multiple Linear Regression (Constant)					0.008	0.256
Human Resource Skills (X1)	0.757	Reliable	0.635	1.574	0.369	0.185
Devices and Equipment (X2)	0.798	Reliable	0.653	1.533	0.456	-0.078
Communication Networks (X3)	0.778	Reliable	0.872	1.147	0	0.442
Software (X4)	0.783	Reliable	0.717	1.395	0.738	0.067
Databases (X5)	0.758	Reliable	0.695	1.439	0.569	0.216
Information Security (X6)	0.773	Reliable	0.77	1.299	0.223	0.056
Organizational Performance (Y)	0.899	Reliable				

(Source: Processed by authors using SPSS, 2025)

As shown in Table 4, the Instrument Test findings confirm that the research instruments are valid and reliable. Validity was established, with all variables displaying correlation values above 0.1636, and reliability was confirmed as all Cronbach's Alpha values exceeded 0.6, indicating data consistency. The Classical Assumption Tests supported the model, revealing that the data was normally distributed (Sig. of 0.200), free from multicollinearity (with Tolerance values greater than 0.10 and VIF values below 10), and showed no signs of heteroscedasticity (all significance values were above 0.05).

Additionally, as demonstrated in Table 5, model analysis revealed an Adjusted R Square of 0.686, explaining 68.6% of the variation in Organizational Performance, with the F-Test validating the model’s significance (F-value 74.248). The Multiple Linear Regression Analysis provided the following equation:

$$OP=0.256 +0.185 \text{ HRS}-0.078 \text{ D\&E}+0.442 \text{ CN}+ 0.067 \text{ S}+0.216 \text{ C} +0.056\text{IS} \text{ -----}(1)$$

Table 5. Regression Analysis: Model Fit and Assumption Diagnostics

Model Fit Statistic	Value
Adjusted R ²	0.686
F Test	74.248

(Source: Processed by authors using SPSS, 2025)

where Human Resource Skills (X1), Communication Networks (X3), Software (X4), Databases (X5), and Information Security (X6) positively contribute to Organizational Performance. Communication Networks have the strongest influence, while Devices and Equipment (X2) have a minor negative effect. This highlights the role of effective communication infrastructure, skilled human resources, robust databases, and secure information systems in enhancing organizational performance.

Hypothesis testing Findings

Table 6. Hypothesis Test

Hypothesis	P-Value	T Count & T Table	Result	Interpretation
H1: Human resources skills improve organizational performance.	0.000 < 0.05	4.991 > 1.653	Significant positive	Accepted
H2: Devices and equipment improve organizational performance.	0.031 < 0.05	-2.175 < 1.653	Significant negative	Rejected
H3: Communication networks improve organizational performance.	0.000 < 0.05	13.315 > 1.653	Significant positive	Accepted
H4: Software improves organizational performance.	0.007 < 0.05	1.820 > 1.653	Significant positive	Accepted
H5: Databases improve organizational performance.	0.000 < 0.05	6.060 > 1.653	Significant positive	Accepted
H6: Information security improves organizational performance.	0.013 < 0.05	1.750 > 1.653	Significant positive	Accepted

(Source: Processed by authors using SPSS, 2025)

The Hypothesis Testing results in Table 6 indicate that Human Resource Skills (H1) have a positive and significant impact on Organizational Performance, with a t-value of 4.991, (0.000 < 0.05) emphasizing the role of skilled employees in enhancing performance. In contrast, Devices and Equipment (H2) show a significant but negative impact, with a t-value of -2.175 (0.031<0.05), suggesting that equipment alone may not improve performance. Communication Networks (H3) emerge as the most influential factor, with a strong positive impact and a t-value of 13.315 (0.000 < 0.05), underscoring the importance of effective communication infrastructure. As noted in Table 5, Software (H4) also positively influences Organizational Performance t-value of 1.820 (0.007 < 0.05),

showing that modern software is essential for efficiency. Furthermore, Databases (H5) significantly enhance performance, as indicated by a t-value of 6.060 ($0.000 < 0.05$), demonstrating the value of solid data management. Lastly, Information Security (H6) has a positive impact on performance t-value of 1.750, ($0.013 < 0.05$), emphasizing the need for secure information systems.

Discussion

Demographic

1) Gender and Age

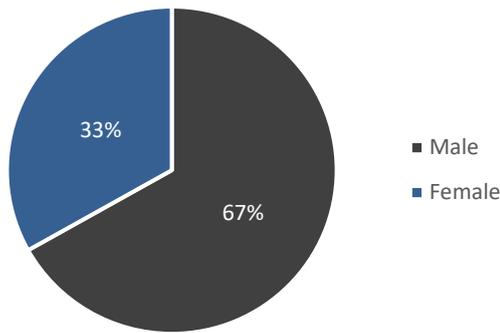


Figure 1: Gender Distribution

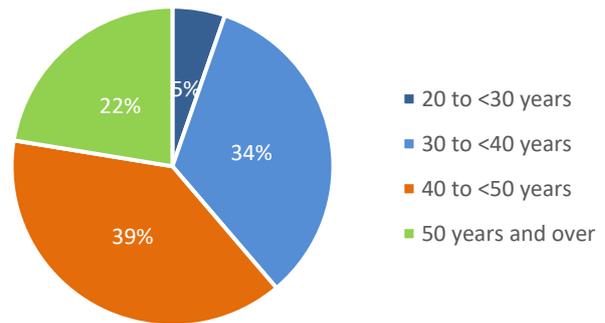


Figure 2: Age Distribution

The gender composition at Jannah Hunt Corporation, as shown in Figure 1, reveals a heavily male-dominated workforce, with 91.2% male and only 8.8% female employees. This imbalance may reflect industry norms in oil exploration, where physical demands and traditional roles have often led to a male-majority workforce. However, research has shown that gender-diverse teams can enhance creativity and decision-making, suggesting that increasing female representation might bring fresh perspectives and innovation, thereby enriching organizational outcomes (Vedres & Vásárhelyi, 2023; Naqvi, Ishtiaq, & Kanwal, 2013).

The age distribution, as illustrated in Figure 2, shows that most employees are in the 40-50 age range, representing 38.8% of the workforce, followed by 33.5% in the 30-40 range. This concentration of mid-career professionals suggests a workforce with strong experience and stability, crucial for the demands of an established corporation. However, with only 5.3% under 30, Jannah Hunt may face limitations in fostering innovation and adaptability, as younger employees tend to bring new ideas and a readiness to adopt emerging technologies, vital for continuous industry competitiveness.

2) Educational Level and Job Position

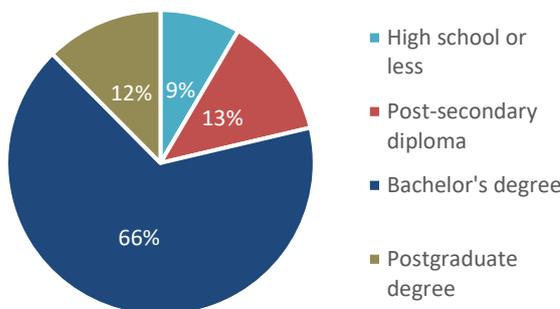


Figure 3: educational level

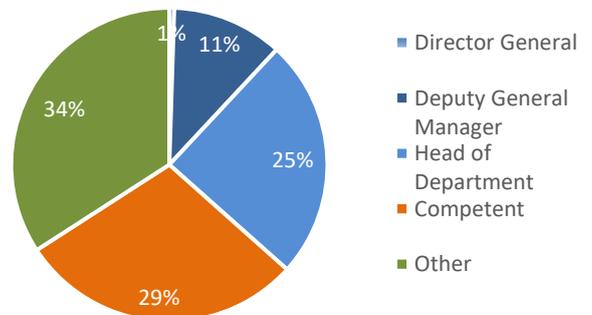


Figure 4: job positions

The educational level of employees at Jannah Hunt Corporation, as shown in Figure 3, indicates a highly educated workforce, with 66.5% holding a bachelor's degree and 12.4% having postgraduate qualifications. This educational profile aligns well with the company's operational needs, as employees with higher education often bring critical thinking and specialized knowledge to complex industry tasks. The predominance of bachelor's degree holders suggests that Jannah Hunt prioritizes candidates with robust foundational skills, which can enhance performance in technical and managerial roles.

The job positions at Jannah Hunt, also illustrated in Figure 4, show that most employees fall into the "Competent" (29.4%) and "Other" (34.1%) categories, with fewer individuals in senior roles, such as Deputy General Manager (11.2%) or Director General (0.6%). This distribution reflects a workforce focused on operational and technical roles rather than executive management. It also suggests potential for career development programs to support employees in transitioning to higher-level positions, which could help build internal leadership capacity and strengthen overall organizational performance.

3) Years of Current Work Experience

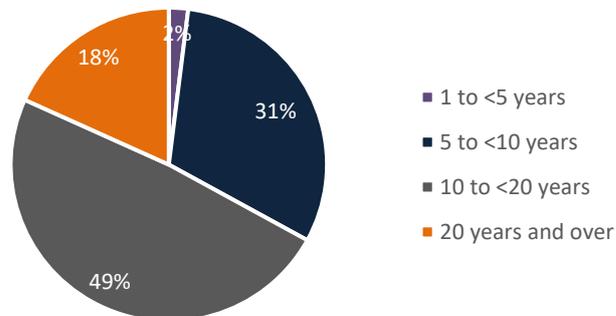


Figure 5: Years of Current Work Experience

The years of current work experience at Jannah Hunt Corporation, as shown in Figure 5, reveal a highly stable workforce, with nearly half (48.8%) of employees having between 10 and 20 years of experience, indicating strong retention and substantial industry knowledge. Such stability is advantageous for consistency and expertise in operations. However, with only 1.8% of employees having less than five years of experience, the organization may lack the fresh perspectives and adaptability often brought by early-career professionals. To address this, Jannah Hunt might consider targeted recruitment efforts for younger employees, balancing seasoned expertise with innovation and agility to support long-term competitiveness.

Instrument Test

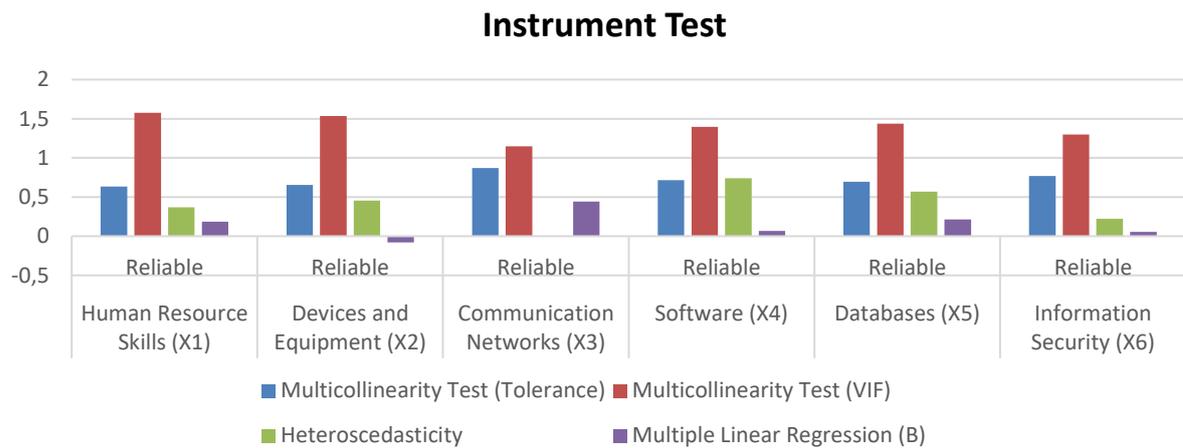


Figure 6: Instrument Test

The Instrument Test Findings in Figure 6 present results from essential statistical tests, confirming each variable's reliability, validity, and influence on Organizational Performance. Cronbach's Alpha values above 0.6 for all variables, with Organizational Performance (Y) reaching 0.899, indicate high internal consistency, suggesting that the items effectively measure the intended constructs. Tests for multicollinearity through Tolerance and Variance Inflation Factor (VIF) values show that each variable independently contributes to explaining Organizational Performance without redundancy, as all Tolerance values are above 0.10 and VIF values remain below 10, affirming the model's stability.

For the Heteroscedasticity Test, most variables meet the stability criteria with significance values above 0.05, indicating consistent variance across observations. However, Communication Networks (X3) shows a significance of 0, suggesting a need for closer inspection to verify homoscedasticity within this variable. The Results of Multiple Linear Regression in Figure 6 reveal each variable's impact on Organizational Performance, supporting or rejecting hypotheses as appropriate. Human Resource Skills (X1), with a positive coefficient of 0.185 and a significance value of 0.369, supports Hypothesis 1 (H1), indicating that skilled employees positively influence performance, as a unit increase in human resource skills corresponds to a 0.185 increase in organizational performance (Rocchio et al., 2022). Devices and Equipment (X2), however, show a minor negative effect with a coefficient of -0.078 and a significance value of 0.456, leading to the rejection of Hypothesis 2 (H2) and suggesting that equipment alone may not significantly enhance performance without other supportive elements (Györödi et al., 2020).

Communication Networks (X3) demonstrate the highest positive impact with a coefficient of 0.442 and a significance of 0, strongly supporting Hypothesis 3 (H3); this emphasizes the vital role of effective communication infrastructure in boosting organizational outcomes (Li, 2024). Software (X4), with a coefficient of 0.067 and a significance of 0.738, supports Hypothesis 4 (H4), indicating that modern software positively contributes to performance, though its impact is less pronounced (Deng, 2024). Databases (X5), displaying a positive coefficient of 0.216 and a significance value of 0.569, supports Hypothesis 5 (H5), reinforcing that robust database management enhances performance (Dmitrieva & Romasheva, 2020). Finally, Information Security (X6) which has a coefficient and the significance of 0.056 and 0.223 respectively confirms the Hypothesis 6 (H6) that demonstrates the importance of secure information systems to safeguard the integrity of the data and consequently promote the organizational performance (Li, 2024).

Collectively, these results in Figure 6 confirm the validity of the model as the Communication Networks (X3) and Databases (X5) in addition to Human Resource Skills (X1) are found to be the most significant factors. This shows how a powerful communication infrastructure, good data management and a well-qualified workforce are important in promoting the success of organizational success at Jannah Hunt Corporation (Januariyansah et al., 2022).

Hypothesis Testing Findings

T Count vs. T Table Comparison Chart

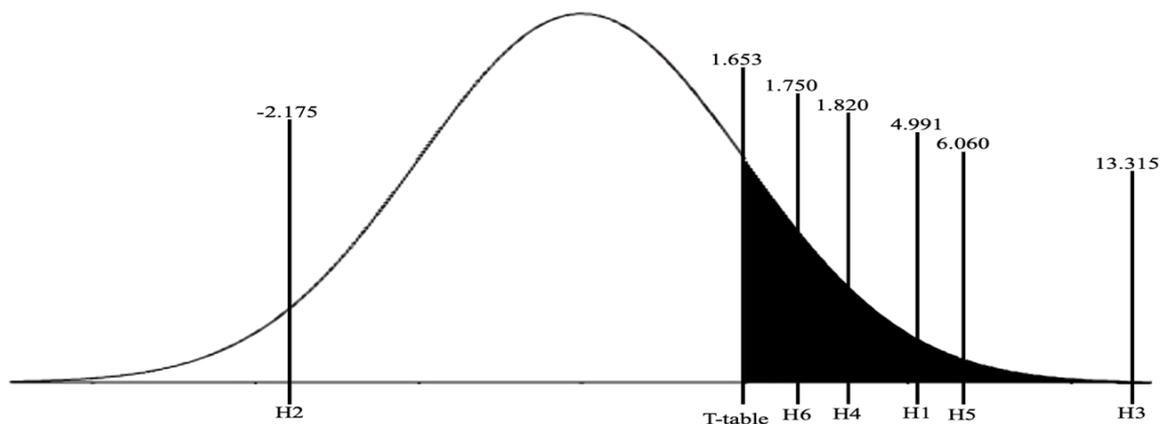


Figure 7: T Count vs. T Table Comparison

The T Count vs. T Table Comparison shows that Human Resource Skills ($t=4.991$), Communication Networks ($t=13.315$), Software ($t=1.820$), Databases ($t=6.060$), and Information Security ($t=1.750$) all exceed the critical value of 1.653, indicating strong support for their respective hypotheses. In contrast, Devices and Equipment ($t=-2.175$) falls below the threshold, revealing a significant negative effect and leading to the rejection of Hypothesis 2 (Hussein, 2010). Beyond these statistical results, the positive impact of human resource capabilities underscores the importance of training and skill development: when staff perceive IT tools as useful and easy to use, they are more likely to integrate them into daily workflows, boosting overall performance. This finding aligns with extensive evidence on TAM's perceived usefulness (PU) and perceived ease of use (PEOU) driving technology uptake (Davis, 1989; Venkatesh & Davis, 2000) and reinforces the call for oil-sector managers to invest not only in hardware, but in capacity-building programs that enhance users' confidence and competence.

The exceptionally strong t-value for Communication Networks suggests that robust connectivity infrastructures—both wired and wireless—serve as critical facilitators of real-time decision-making and cross-departmental collaboration. This result echoes Musheke and Phiri (2021), who demonstrated that effective communication networks translate directly into faster information flow and better operational coordination in resource-constrained environments. Similarly, the significant effects for Software and Databases corroborate findings by Arbanas and Hrustek (2019) and Akhter (2022), showing that advanced applications and structured data repositories enable more accurate forecasting, planning, and reporting. The negative impact of Devices and Equipment is unexpected but may reflect contextual factors: substandard or outdated hardware can increase downtime and maintenance costs, offsetting any theoretical productivity gains. It can be also attributed to what is observed by Peskova and Sharafutdinov (2019) that the presence of devices alone can not be assumed to increase performance unless they are supported and upgraded accordingly.

4. CONCLUSION

In the current study, information technology has been found to have significant influence on organizational performance at Jannat Hunt oil expedition and production company in Yemen. The relationship established between IT implementation and the better performance metrics showed strong positive correlations where the key contributors to better performance output were identified to be the communication networks, databases and the skilled human resource. Communication infrastructure more specifically has proved to be that factor key to work as the effective flow of information becomes of huge importance. Surprisingly, although the two elements, software and information security influenced performance positively, the impact of the elements devices and equipment was ambivalent, implying that devices and equipment in general when not set strategically in place, might make no difference. The demographic trend shows that it is more mid-career and has some experience that, however, can surely seem to be in need of some new ways of thinking that younger people can offer. Combined with the high level of education among employees this becomes a chance to make Jannat Hunt to create an internal leadership and flexibility in new technological environment. The research findings provide real-life recommendations in terms of how IT can be implemented in resource-constrained environments by recommending that integrating IT investment with the development of the workforce should be adopted among organizations as a way of ensuring optimality in terms of performance gain and resiliency. Future studies may further look into such state long-term impacts of advanced information technology solutions on operation resilience in the situations of other comparable developing economies.

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