

EFFECT OF TECHNICAL COMPETENCY ON PERFORMANCE OF INFORMATION TECHNOLOGY (IT) FIRMS IN FEDERAL CAPITAL TERRITORY

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Abstract

This study investigates the impact of technical competency on the performance of IT firms in the Federal Capital Territory (FCT), focusing on technical skills, innovation, creativity, and networking. Employing a cross-sectional research design, data were collected from a sample of 268 employees out of a population of 815 from 25 selected IT firms in the Data collection was facilitated through a structured questionnaire and the reliability of the questionnaire was determined using Cronbach's alpha, and content validity assessed by a panel of experts. Multiple regression analysis was conducted using SPSS version 25. The results revealed that technical skills significantly enhance firm performance. Innovation and creativity also show a strong positive effect on IT firms' performance. Networking and collaboration were also found to have significant effect on IT firms' performance. The study concludes that technical skills, innovation, and networking play critical role in enhancing IT firm performance. The study recommends the need for investing in continuous technical training, fostering a culture of innovation through dedicated creative initiatives, and actively building professional networks both within and outside the organization.

Keywords: Innovation, Networking working, Performance, and technical competency

INTRODUCTION

Historically, the concept of competency emerged from the field of psychology in the 1970s, when researchers began to explore the traits and behaviours that differentiate high performers from average performers (Tripathi & Agrawal, 2014). This led to the development of competency models and frameworks, which have since been adopted and adapted by various industries to guide recruitment, training, and performance management (Chen, 2021).

The concept of competency has been explored extensively in the context of employee performance, organizational success, and professional development. It is a key determinant of how effectively individuals can perform tasks, adapt to new challenges, and contribute to their organization's goals (Skorková, 2016). Scholars have agreed that it is crucial across all sectors of human endeavour, including education, healthcare, engineering, business, and information technology (Tripathi & Agrawal, 2014).

Several definitions of competency exist, each highlighting different aspects of the concept. For instance, Boyatzis (1982) defined competency as “an underlying characteristic of an individual which is causally related to effective or superior performance in a job.” Similarly, Spencer and Spencer (1993) described competency as “a combination of motives, traits, self-concepts, attitudes or values, content knowledge, or cognitive behaviour skills.” These definitions underscore the multifaceted nature of competency, emphasizing its relevance to both individual and organizational performance (Chen, 2021).

Technical competency is a subset of overall competency, focusing specifically on the technical skills and abilities required to perform tasks effectively in a technological environment (Lee, 2018). Scholars have developed a number of measures of technical competency among them are three key dimensions, which are technical skill, innovation and creativity, and networking and collaboration (Albino, 2018).

Technical skill, encompassing programming, system analysis, cybersecurity, and database management, refers to the knowledge and abilities related to technology use in the IT field. These skills are crucial for IT firms, impacting product quality, operational efficiency, and client satisfaction (Ali et al., 2016). Skilled employees solve complex problems, implement advanced technologies, and maintain competitive edges (Lee, 2018). Innovation and creativity drive new ideas, products, and solutions, essential for staying

relevant in the fast-paced IT industry (Baghel et al., 2023). Creativity fosters unique solutions and process improvements, while innovation implements these ideas, enabling adaptation to market demands and delivering cutting-edge solutions (Acar et al., 2024). Networking and collaboration, involving professional relationship-building and teamwork, enhance knowledge sharing and problem-solving (Ekeh et al., 2019). Effective collaboration integrates diverse perspectives, leveraging shared resources to achieve common goals, vital for managing multidisciplinary IT projects and delivering comprehensive solutions (Martínez-Alonso et al., 2022).

Firm performance refers to the ability of an organization to achieve its goals and objectives efficiently and effectively. It encompasses various dimensions, including financial performance, operational efficiency, market share, customer satisfaction, and innovation capacity (Asghar et al., 2023). For IT firms, performance is often measured by factors such as the successful completion of projects, customer retention rates, revenue growth, technological advancements, and market positioning (Chen, 2021). IT firms must continually adapt to evolving technologies, client requirements, and industry standards to maintain high performance levels (Tripathi & Agrawal, 2014).

While the Nigerian IT sector has experienced significant growth in recent years, driven by increasing digitalization and demand for IT services, firms still face several challenges that impact their performance. One major challenge that affects the IT sector in Nigeria is the shortage of skilled IT professionals, which affects the ability of several firms to deliver high-quality services and innovate effectively.

Despite these challenges, the Nigerian IT sector presents substantial opportunities for growth and development. The rising adoption of digital technologies across various industries, coupled with government initiatives to promote the digital economy, provides a conducive environment for IT firms to thrive. However, to capitalize on these opportunities, IT firms must enhance their technical competencies and address the existing challenges. It is on this premise that this study assesses the effect of technical competency on performance IT firms in FCT-Abuja, Nigeria.

Information technology (IT) firms in the Federal Capital Territory (FCT) of Abuja face significant challenges in maintaining competitive performance. Despite the increasing demand for IT services and the potential for substantial growth, many IT firms in this region struggle to achieve and sustain high performance levels. This issue is particularly pressing given the strategic importance of Abuja as the political and administrative hub of Nigeria, where robust IT infrastructure and services are critical for both public and private sector operations.

One of the primary challenges confronting IT firms in FCT-Abuja is the apparent gap in technical competency among their workforce. Several firms face difficulties in attracting and retaining skilled technical professionals, fostering a culture of innovation, and establishing effective collaborative networks. These deficiencies hinder the ability of IT firms to deliver high-quality services, innovate in response to market demands, and efficiently manage complex projects.

Theoretically, empirical evidence on the specific effects of the dimensions of technical competency on the performance of IT firms, particularly in the Nigerian context, remains limited. This gap in the literature underscores the need for a focused study to elucidate the impact of technical competency on firm performance in FCT-Abuja. Understanding these dynamics is crucial for developing targeted interventions to enhance technical competency within IT firms, thereby improving their performance and competitiveness. Hence, this study seeks to address this problem by investigating the effect of technical skills, innovation and creativity, and networking and collaboration on the performance of IT firms in FCT-Abuja. The specific objectives of the study are to:

- i. assess the effect of technical skill on the performance of IT firms in FCT-Abuja.
- ii. examine the effect of innovation and creativity on the performance of IT firms in FCT-Abuja.

- iii. evaluate the effect of networking and collaboration on the performance of IT firms in FCT-Abuja.

Hypotheses

H₀₁: Technical skill has no significant effect on the performance of IT firms in FCT-Abuja.

H₀₂: Innovation and creativity have no significant effect on the performance of IT firms in FCT-Abuja.

H₀₃: Networking and collaboration have no significant effect on the performance of IT firms in FCT-Abuja.

LITERATURE REVIEW

Technical Competency

Technical competency encompasses the specific skills, knowledge, and abilities required to effectively perform tasks within a technological environment (Ali et al., 2016). It is a critical factor for the success of organizations, especially in the rapidly evolving IT industry. Technical competency includes a wide range of skills, from basic computer literacy to advanced programming and system management capabilities (Albino, 2018). The development of technical competencies is essential for employees to keep pace with technological advancements and industry standards. Organizations often invest in training and development programs to enhance the technical competencies of their workforce, recognizing that these skills are vital for maintaining competitiveness and achieving strategic objectives (Firdaus et al., 2021).

Moreover, technical competency is not limited to the technical knowledge itself but also includes the ability to apply this knowledge effectively in real-world scenarios. This involves problem-solving skills, analytical thinking, and the ability to innovate (Minh et al., 2023). For IT firms, technical competency directly impacts the quality of products and services, operational efficiency, and the ability to meet client demands. Employees with high technical competency are better equipped to handle complex projects, troubleshoot issues, and implement new technologies, thereby contributing significantly to the firm's overall performance and growth (Firdaus et al., 2021).

Firms must continuously adapt to new technologies and methodologies to stay relevant and competitive. This requires a workforce that is not only skilled in current technologies but also capable of learning and adapting to new ones. Thus, enhancing technical competency among employees is a strategic imperative for IT firms aiming to improve performance and achieve long-term success.

Technical Skill

Technical skill refers to the specific abilities and knowledge related to the use of technology, tools, and methodologies within a particular field (Banu, 2020). In the IT sector, this includes programming, system analysis, cybersecurity, database management, and other technical proficiencies. These skills are fundamental to the successful execution of tasks and projects within IT firms. For instance, programming skills are essential for software development, while cybersecurity skills are crucial for protecting organizational data and systems from threats. Technical skills are often developed through formal education, training programs, and hands-on experience.

The importance of technical skill in IT firms cannot be overstated. These skills directly impact the quality of products and services, operational efficiency, and the firm's ability to meet client needs. Highly skilled technical employees are better equipped to solve complex problems, implement advanced technologies, and maintain the competitive edge of the firm (Lee, 2018). They contribute to innovation by developing new solutions and improving existing processes. As such, firms that invest in developing the technical skills of their employees are more likely to achieve superior performance and maintain a competitive advantage in the market (Ghalandari, 2012).

Furthermore, technical skill is a dynamic attribute that evolves with advancements in technology. IT professionals must continuously update their skills to keep pace with new developments and industry

trends. This requires a commitment to lifelong learning and professional development. Firms that foster a culture of continuous learning and provide opportunities for skill enhancement are better positioned to adapt to technological changes and drive innovation (Tokarčíková et al., 2020). In the competitive IT industry, maintaining a highly skilled workforce is essential for achieving sustainable success and growth.

Innovation and Creativity

Innovation and creativity are essential components of technical competency that drive the development of new ideas, products, and solutions. Creativity involves thinking outside the box, developing unique solutions, and improving existing processes, while innovation refers to the practical implementation of these creative ideas (Acar et al., 2024). In the fast-paced IT industry, firms must continuously innovate to stay relevant and competitive. This requires a culture that encourages creative thinking and supports the exploration of new ideas. Employees who are empowered to innovate can contribute to the firm's ability to adapt to changing market demands and leverage new technologies.

The impact of innovation and creativity on firm performance is profound. Innovative firms are more likely to develop cutting-edge solutions that meet evolving customer needs and differentiate themselves from competitors (Marczewska et al., 2024). Creativity enables employees to identify and exploit new opportunities, solve complex problems, and enhance the overall efficiency of processes. This, in turn, leads to improved products and services, higher customer satisfaction, and increased market share (Juliana et al., 2021). Firms that prioritize innovation and creativity are better positioned to achieve long-term success and maintain a competitive advantage in the industry.

In IT firms, fostering innovation and creativity is particularly important due to the rapid pace of technological change. This requires a supportive organizational culture that values experimentation, encourages risk-taking, and provides the necessary resources for innovation. Leadership plays a crucial role in promoting a culture of innovation by setting a clear vision, providing strategic direction, and motivating employees to think creatively (Acar et al., 2024). By investing in innovation and creativity, IT firms in FCT-Abuja can enhance their ability to deliver cutting-edge solutions, drive business growth, and achieve sustained competitive advantage.

Networking and Collaboration

Networking and collaboration involve building and maintaining professional relationships, both within and outside the organization, to facilitate knowledge sharing, teamwork, and collective problem-solving (Al-Omoush et al., 2022). These skills are critical for integrating diverse perspectives, leveraging shared resources, and achieving common goals. In the IT sector, where projects often require multidisciplinary expertise, effective networking and collaboration are essential for coordinating efforts, managing complex projects, and delivering integrated solutions. Networking allows professionals to connect with peers, industry experts, and potential partners, fostering opportunities for collaboration, knowledge exchange, and professional growth (Wang & Ran, 2021).

Collaboration within the organization enhances teamwork and ensures that different departments and teams work together effectively towards common objectives (Bolzani & Scandura, 2023). It promotes the sharing of ideas, skills, and resources, leading to more innovative solutions and improved efficiency. In IT firms, collaborative efforts are often necessary for the successful completion of projects, as they involve various technical, managerial, and creative inputs. By fostering a collaborative environment, firms can enhance employee engagement, improve communication, and increase the overall effectiveness of project execution.

Additionally, external collaboration with clients, suppliers, and other stakeholders is crucial for IT firms. These relationships enable firms to understand client needs better, access new technologies and resources, and stay updated with industry trends. Effective networking and collaboration help firms to build strong partnerships, enhance their market presence, and drive business growth. For IT firms in

FCT-Abuja, developing strong networking and collaboration skills is vital for navigating the competitive landscape, managing complex projects, and achieving sustainable success.

Performance

The performance of a firm, conceptually, refers to the efficiency and effectiveness with which a company achieves its objectives. This includes financial metrics such as revenue, profit margins, return on investment (ROI), and non-financial metrics such as customer satisfaction, employee engagement, and innovation rates. Firm performance in the IT sector is particularly influenced by technological advancements, the ability to innovate, and the successful implementation of new technologies. Key performance indicators (KPIs) for IT firms often include software development cycle times, project delivery success rates, market share, and customer retention rates (Hitt, Xu, & Carnes, 2016). These metrics collectively provide a holistic view of how well an IT firm is doing in the competitive and fast-paced technology market.

In the context of IT firms, performance is significantly impacted by factors such as innovation capability, market orientation, and the effective utilization of human resources. Research indicates that IT firms that prioritize innovation tend to outperform their peers by continuously introducing new products and services, thereby maintaining a competitive edge (Kafouros et al., 2008). Additionally, the integration of advanced analytics and AI in business processes has been shown to enhance operational efficiency and customer experience, leading to improved performance metrics (Brynjolfsson & McAfee, 2014). The role of collaborative networks and partnerships is also crucial, as these alliances can lead to shared knowledge, resource optimization, and accelerated innovation (Bolzani & Scandura, 2023). Hence, the performance of IT firms is a multifaceted construct that depends on a combination of internal capabilities and external collaborations.

Empirical Reviews

Technical Skill and Performance

Shwarka et al. (2015) investigated the influence of technical skills on the performance of building construction enterprises in North Central Nigeria. The study utilized a mixed research design, including interviews with entrepreneurs from selected contracting companies, to identify key variables in the conceptual framework. The findings suggested that technical skills significantly influence the performance of these enterprises, and the results could be generalized to other areas in Nigeria and West Africa. This study highlights the importance of technical skill development in addressing performance issues among SMEs in the construction sector. However, the focus on a specific region and industry may limit the applicability of the findings to other contexts.

Asghar et al. (2023) analysed the effect of managerial skills and technology adaptation on firm performance and productivity, with process and product innovation as mediating factors. The study utilized a Partial Least Squares Structural Equation Modelling (PLS-SEM) technique to achieve its objectives. Data were collected from 150 managers of manufacturing industrial firms in Lahore, Pakistan, using a purposive sampling method. The findings revealed that managerial skills and technology adaptation significantly and positively influence process and product innovation. However, the research is limited to the manufacturing sector in a specific geographic location, which may restrict the generalizability of the results to other industries and regions.

Lee (2018) investigated the relationship between modern management practices and the demand for different occupational skills in South Korea, particularly after the Asian financial crisis. The study utilized industry-level variation in management practices generated by the average industry management index of five advanced economies (the US, Britain, France, Germany, and Italy). The methodology included analysing data to observe how modern management practices influenced the demand for technical skills. The findings indicated that modern management practices increase the demand for technical skills and contribute to organizational changes that leverage information technology. Additionally, these practices were found to enhance the return on assets and widen the and technical workers in improving firm

performance. A gap identified in this study is the need for further exploration into how these findings might apply across different industries and cultural contexts beyond South Korea.

Innovation and Creativity and Performance

Medase and Savin (2024) investigated the relationship between employees' creativity, process and product innovations, and firm-level employment growth in sub-Saharan Africa. Using data from the World Bank Enterprise Survey and Innovation Follow-up Survey across 11 countries during 2012–2015, they employed Heckman's two-stage estimation model. The study found a positive association between creativity and firm-level employment growth, particularly benefiting SMEs when combined with managerial experience and skilled staff. However, combining creativity with R&D activities showed a substitution effect. The findings suggest that encouraging workplace creativity among employees could be an effective strategy for stimulating employment growth in developing economies. The study used secondary data while the current study used a quantitative primary data.

Rumanti et al. (2023) examined the effect of organizational creativity and open innovation on SMEs performance. Utilizing data collected from 206 SMEs in Indonesia and analysed using PLS-SEM, the study found that both organizational creativity and open innovation significantly and positively influence SMEs performance. The research uniquely considered organizational creativity as a second-order variable formed by individual creativity, group creativity, internal environment, and knowledge creation. The study addressed the gap in understanding the comprehensive formation of organizational creativity and its direct impact on SME performance. The findings provide theoretical contributions to the debate on creativity and innovation in SMEs and practical insights for SMEs managers on enhancing performance through creativity and innovation.

Baghel et al. (2023) explored the impact of creativity and innovation on entrepreneurial performance in family businesses, focusing on the banking sector. They utilized secondary qualitative data collection to analyse existing articles. The study found that integrating innovation and creativity enhances organizational production levels and employee engagement. Moreover, it highlighted a positive correlation between entrepreneurial performance and the market position of family businesses. The research contributes by offering insights for budding entrepreneurs on efficient family business management. The study used a qualitative approach which differed from the current study that adopted a quantitative approach.

Networking and Collaboration and Performance

Jeje (2020) examined the effect of networking on the performance of small and medium-sized enterprises (SMEs) in the Tanzanian bakery sector. Using a concurrent nested design and multi-stage sampling technique, data were collected from 161 bakeries via questionnaires, complemented by 20 in-depth interviews with bakery owners and managers. The analysis involved principal component analysis and qualitative content analysis, followed by a moderator analysis to assess the moderating effect of bakery size and age on the relationship between networking strategies and performance. The findings indicated that networking significantly enhances bakery performance, emphasizing the need for SMEs to develop strategic linkages with relevant business environment players to boost their networking capabilities. However, the study's focus on the bakery sector may limit its generalizability to other sectors within the Tanzanian economy.

Martínez-Alonso et al. (2022) investigated the relationship between heterogeneous collaborative networks and firm performance, with a focus on the contingent effects of family management and intellectual property rights (IPRs). This study utilized a panel data sample consisting of 10,985 firm-year observations from 1,766 Spanish manufacturing firms over the period 2007–2016. The findings revealed that heterogeneous collaborative networks have a positive influence on firm performance. Additionally, the study found that this positive impact is amplified by high levels of family management and further strengthened by the presence of strong IPRs. However, the research primarily focuses on Spanish manufacturing firms, which may limit the generalizability of the results to other contexts.

Ekeh et al. (2019) conducted a study to examine the effect of networking on the performance of small and medium scale enterprises (SMEs) in Makurdi metropolis, Benue State, Nigeria. The study specifically aimed to analyse the impact of network structure, network governance, and network content on SME performance. Employing a survey research design, the researchers targeted a population of 708 SME owners and senior management staff across various sectors. Utilizing multiple regression analysis through SPSS version 21, the study found that all three network dimensions—network structure, network governance, and network content—significantly affect SME performance in Benue State. The study concluded that these network aspects are crucial for enhancing SME performance. However, the study's limitation is its focus on a single metropolis, which may not generalize the findings to other regions.

Competency Model

For this study the competency model developed by David McClelland in 1973 is particularly suitable. The scholar challenged the traditional measures of intelligence and aptitude, proposing instead that specific competencies—observable and measurable behaviours—are more accurate predictors of job performance and success (McClelland, 1973). The major assumption of the model is based on the behavioural basis assumption, which posits that competencies are defined by specific behaviours that lead to effective performance in a particular job or role (Spencer & Spencer, 1993). These behaviours can be observed, measured, and developed. Secondly, the model emphasizes predictive validity, asserting that competencies are better predictors of job performance than traditional measures such as IQ tests or educational qualifications (Skorková, 2016). They encompass a range of attributes, including skills, knowledge, attitudes, and personal traits. Thirdly, the context specificity assumption states that different jobs and organizational contexts require different sets of competencies (Chen, 2021). Therefore, competency models should be tailored to reflect the unique requirements of specific roles and industries. Finally, the developmental potential assumption highlights those competencies can be developed and enhanced through targeted training and development initiatives, thereby improving individual and organizational performance (Tripathi & Agrawal, 2014).

The application of this theory is premised on the fact that its focus on observable behaviours aligns well with the study's objective to assess the impact of technical skills, innovation and creativity, and networking and collaboration on firm performance. This approach allows for a clear operationalization and measurement of these dimensions of technical competency. It provides a comprehensive framework for understanding and enhancing the skills and behaviours that drive organizational success in the dynamic IT sector.

METHODOLOGY

This study employs a cross-sectional research design to examine the performance of IT firms in the Federal Capital Territory (FCT). A cross-sectional design is appropriate for this research as it allows for the collection of data from a specific population at a single point in time, providing a snapshot of the current state of variables of interest (Creswell & Creswell, 2017). This design is particularly effective for identifying patterns and relationships between variables without the need for longitudinal data collection. The study population consists of 815 employees from 25 selected IT firms in the FCT. These firms were selected based on the following criteria: registration with the Corporate Affairs Commission (CAC), membership in the Information Technology Association of Nigeria (ITAN), and being operational within the last five years. These criteria ensure that the selected firms are legally recognized, actively involved in the IT sector, and have a recent track record of operations, which increases the relevance and reliability of the study findings.

To determine an appropriate sample size, the Taro Yamane formula was used, which is suitable for calculating sample sizes for large populations. The formula is as follows: $n = \frac{N}{1 + N(e)^2}$ where:

- n is the sample size,
- N is the population size, and e is the margin of error (typically set at 0.05).
- Given the total population of 815, the sample size calculation is:

$$n = \frac{815}{1+815(0.05^2)} = \frac{815}{1+815(0.0025)}$$

$$n = \frac{815}{1+2.0375} = \frac{815}{3.0375}$$

$$n \approx 268$$

Thus, a sample size of approximately 268 respondents was determined. This sample size is justified as it provides a balance between accuracy and feasibility in data collection.

The sample was drawn using a simple random sampling technique. This technique ensures that every employee has an equal chance of being selected, thereby minimizing selection bias and enhancing the representativeness of the sample (Saunders et al., 2019).

Primary data was collected using a structured questionnaire, which is justified as it allows for the efficient gathering of standardized information from a large number of respondents. The reliability of the questionnaire was determined using Cronbach's alpha, with coefficients for the various constructs ranging from 0.78 to 0.85, indicating good internal consistency (Nunnally, 1978). The validity of the questionnaire was assessed through content validity, which involved a panel of experts reviewing the questionnaire items to ensure they adequately cover the constructs being measured.

Data analysis was conducted using multiple regression techniques with the aid of SPSS version 25. Multiple regression is suitable for this study as it allows for the examination of the effect of multiple independent variables on a single dependent variable, providing insights into the factors influencing the performance of IT firms in the FCT.

RESULT AND DISCUSSIONS

Although the sample size was calculated to be 268, a total of 270 questionnaires were distributed. This slight over-sampling was done to account for potential non-responses or improperly filled questionnaires, ensuring a robust data set for analysis (Baruch & Holtom, 2008). Out of the 270 questionnaires distributed, 265 were retrieved and properly filled, representing a high response rate that enhances the reliability of the study findings.

Preliminary analysis was conducted on the 265 retrieved questionnaires, confirming their suitability for further analysis. The demographic breakdown of the respondents shows that there were categorized into four age groups. Those aged 20-29 constituted 25% (66 respondents), ages 30-39 made up 40% (106 respondents), ages 40-49 accounted for 22% (58 respondents), and those aged 50 and above represented 13% (35 respondents). Gender: Of the respondents, 58% (154 respondents) were male, and 42% (111 respondents) were female. Number of Years of Working: Respondents with 1-5 years of work experience comprised 30% (80 respondents), those with 6-10 years made up 35% (93 respondents), those with 11-15 years constituted 20% (53 respondents), and those with over 15 years accounted for 15% (39 respondents). Marital Status: Married respondents represented 60% (159 respondents), single respondents made up 30% (80 respondents), and those categorized as other (including divorced and widowed) accounted for 10% (26 respondents).

The major assumptions of multiple regression, which include linearity, independence of errors, homoscedasticity, normality of residuals, and absence of multicollinearity, were satisfied based on the diagnostic tests conducted (Field, 2013). These assumptions being met supports the validity of further analysis using multiple regression techniques.

Table 1: Coefficients Summary Result on Technical Competency and Performance of IT Firms in FCT-Abuja

Coefficient	Estimate	Standard Error	t-value	p-value	Confidence Interval (95%)
Constant	0.7767	2.137	0.363	0.716	[-3.426, 4.979]
Technical Skill	0.2873	0.043	6.650	0.000	[0.203, 0.372]
Innovation and Creativity	0.3901	0.030	12.942	0.000	[0.331, 0.449]
Networking and Collaboration	0.2065	0.040	5.163	0.000	[0.128, 0.285]

R-value: 0.882; R Square: 0.778; F(265): 317.821; & Sig.: 0.000

Source: Authors Design, 2024

The R-value, also known as the correlation coefficient, was found to be 0.882. This value indicates a very strong positive correlation between technical competency and the performance of IT firms. In other words, as technical competency increases, the performance of IT firms also tends to increase significantly. The R-square value was 0.778. This means that approximately 77.8% of the variance in the performance of IT firms can be explained by the technical competency. The R-square value provides a measure of how well the independent variable (technical competency) predicts the dependent variable (performance of IT firms). A high R-square value, such as 0.778, indicates that the model fits the data well and that the technical competency is a strong predictor of firm performance.

The F-statistic for the model was 317.821 with a significance level (Sig.) of 0.000. The F-statistic assesses the overall significance of the regression model. An F-statistic of 317.821 indicates that the model is statistically significant. The significance level (p-value) of 0.000 is less than the conventional threshold of 0.05, suggesting that the likelihood of the relationship between technical competency and performance of IT firms being due to chance is extremely low. Therefore, the model fit is considered excellent, confirming that the regression model reliably predicts the performance of IT firms based on their technical competency.

The results of the multiple regression analysis reveal significant insights into the impact of technical skill, innovation and creativity, and networking and collaboration on firm performance. The coefficient for technical skill is 0.2873, suggesting that for every one-unit increase in technical skill, firm performance increases by approximately 0.2873 units, holding all other variables constant. This indicates that technical skill is a critical factor in enhancing the performance of IT firms. The positive and statistically significant relationship ($p < 0.001$) underscores the importance of technical proficiency in driving operational efficiency, product quality, and overall organizational effectiveness.

Innovation and creativity also demonstrate a strong positive impact on firm performance, with a coefficient of 0.3901. This finding indicates that a one-unit increase in innovation and creativity leads to an approximate increase of 0.3901 units in firm performance, when other variables are held constant. The highly significant p-value ($p < 0.001$) highlights the crucial role that innovation and creativity play in the IT industry. Firms that foster a culture of creativity and continuous innovation are better positioned to develop unique solutions, stay competitive, and adapt to the rapidly changing technological landscape.

Networking and collaboration have a coefficient of 0.2065, indicating that a one-unit increase in networking and collaboration results in an approximate 0.2065 unit increase in firm performance, all else being equal. This relationship is also statistically significant ($p < 0.001$), underscoring the importance of effective teamwork and professional relationship-building within and outside the organization. Strong

networking and collaboration skills facilitate knowledge sharing, integrate diverse perspectives, and enhance problem-solving capabilities, which are vital for managing complex IT projects and delivering comprehensive solutions.

The multiple regression analysis confirms that technical skill, innovation and creativity, and networking and collaboration are all significant predictors of firm performance in the IT sector. These findings emphasize the need for IT firms to invest in developing these competencies to achieve and sustain high performance levels.

Discussion of Findings

The results of the multiple regression analysis provide significant insights into the effect of technical skill, innovation and creativity, and networking and collaboration on the performance of IT firms in the FCT-Abuja. The result showed that technical skill has a significant effect on firm performance. This finding underscores the critical role of technical proficiency in driving operational efficiency, product quality, and overall organizational effectiveness. The result aligns with the findings of Shwarka et al. (2015), who also reported that technical skills significantly influence the performance of building construction enterprises in North Central Nigeria. This suggests that technical competency is vital across various sectors, not just in IT. Similarly, Asghar et al. (2023) found that managerial skills and technology adaptation significantly and positively influence process and product innovation in manufacturing firms in Lahore, Pakistan. Lee (2018) also highlighted that modern management practices increase the demand for technical skills and contribute to organizational changes that leverage information technology.

Innovation and creativity demonstrated a strong positive impact on firm performance, with a coefficient of 0.3901. The highly significant p-value ($p < 0.001$) highlights the crucial role that innovation and creativity play in the IT industry. Firms that foster a culture of creativity and continuous innovation are better positioned to develop unique solutions, stay competitive, and adapt to the rapidly changing technological landscape. This is consistent with the findings of Medase and Savin (2024), who found a positive association between creativity and firm-level employment growth in sub-Saharan Africa. Rumanti et al. (2023) also reported that organizational creativity and open innovation significantly and positively influence SME performance in Indonesia. This aligns with the current study's findings, emphasizing the importance of fostering creativity and innovation to enhance firm performance. Similarly, Baghel et al. (2023) highlighted that integrating innovation and creativity enhances organizational production levels and employee engagement in family businesses in the banking sector. Networking and collaboration and firm performance relationship was also statistically significant ($p < 0.001$), underscoring the importance of effective teamwork and professional relationship-building within and outside the organization. These findings are in line with Jeje (2020), who found that networking significantly enhances the performance of SMEs in the Tanzanian bakery sector. Martínez-Alonso et al. (2022) also reported that heterogeneous collaborative networks positively influence firm performance in Spanish manufacturing firms, further supporting the significance of networking and collaboration in enhancing firm performance. Ekeh et al. (2019) also found that network structure, network governance, and network content significantly affect SME performance in Makurdi metropolis, Benue State, Nigeria.

CONCLUSIONS AND RECOMMENDATIONS

The findings of this study underscore the significant impact that technical skills, innovation and creativity, and networking and collaboration have on the performance of IT firms in the FCT-Abuja. The positive and statistically significant relationships between these variables and firm performance demonstrate that IT firms must prioritize technical competency, foster a culture of innovation, and build strong networks to enhance their operational efficiency, competitive edge, and overall effectiveness. The study contributes to the broader understanding of how these elements interact to influence firm success, providing valuable insights for IT firms in similar contexts. The study concludes that technical skills is a critical determinant of firm performance. It also concludes that innovation and creativity is a key factor to improving firm performance and networking and collaboration also significantly contributed to firm performance,

highlighting the importance of building and maintaining effective professional relationships both within and outside the organization. Based on the findings the following recommendations are made:

1. IT firms should invest in continuous training and development programs to enhance their employees' technical skills. This can be achieved through regular workshops, certification programs, and on-the-job training that keeps employees updated with the latest technological advancements and best practices in the industry.
2. To capitalize on the strong positive effect of innovation and creativity on firm performance, IT firms should create an organizational culture that encourages experimentation and out-of-the-box thinking. This can be fostered by providing employees with dedicated time for creative projects, implementing innovation labs, and rewarding innovative ideas and solutions.
3. Given the positive relationship between networking and collaboration and firm performance, IT firms should actively pursue opportunities to build and strengthen their professional networks. This includes participating in industry conferences, forming strategic alliances with other firms, and encouraging employees to join professional associations and forums. Internally, firms should promote a collaborative work culture through team-building activities, cross-departmental projects, and open communication channels that facilitate knowledge sharing and collective problem-solving.

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