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The Impact of IT Integration in Human Resource Management on Employee Productivity: A Study of Afghanistan's NGOs

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Abstract

This research investigates the role of Information Technology (IT) in enhancing Employee Productivity within Afghanistan's non-governmental organizations (NGOs), focusing on IT-driven HR practices, IT knowledge, IT innovation, and IT infrastructure. Using a quantitative survey research design, data were collected from HR and IT professionals in the telecom, banking, and university sectors in Afghanistan, with 206 valid responses obtained. The findings reveal a strong and positive association between IT-driven HR practices and Employee Productivity, confirming their critical role in streamlining HRM processes. IT knowledge also demonstrated a significant positive effect, emphasizing the importance of employee IT competencies in achieving productivity gains. In contrast, IT innovation and IT infrastructure had limited and statistically non-significant effects, suggesting that their influence on productivity may be indirect or context-dependent. This research highlights the importance of implementing IT-driven HR systems and enhancing IT-related knowledge to improve organizational outcomes. NGOs in Afghanistan should prioritize investments in IT-based HR practices and employee IT training to optimize productivity. Further research is recommended to discover the underlying mechanisms through which IT innovation and infrastructure may influence productivity and to investigate additional contextual factors within Afghanistan's unique organizational landscape.

Keywords: Information Technology, Employee Productivity, IT-driven HR practices, IT knowledge, Non-governmental Organizations, IT innovation, IT infrastructure, HR professionals, Afghanistan, IT-based HR systems

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Introduction

In recent years, information technology (IT) has become a crucial part of both professional environments and everyday life (Iqbal, Ahmad, & Allen, 2019). It plays an important role in driving organizational growth and long-term success (Alibekova et al., 2019). Integrating IT into Human Resource Management (HRM) is now seen as a powerful way to improve overall performance and boost employee productivity. For NGOs in Afghanistan, using IT in HR processes is increasingly viewed as a key strategy for improving workplace efficiency and outcomes. However, the exact impact of IT integration on productivity remains uncertain and continues to be an area of active research. Aligning HR practices with IT may offer one of the best ways to stay competitive in today's rapidly changing global environment (Haerani et al., 2020).

Earlier research has shown that IT tools can help streamline HR tasks, enhance communication, and improve data handling (Haque & Nishat, 2022). Yet, how effective these tools are; often depends on how employees perceive their ease of use and usefulness (Ateeq et al., 2024). Challenges such as resistance to change, lack of training, and organizational barriers can also affect how well IT is adopted and utilized (Priyashantha, 2022).

This study, titled "The Impact of IT Integration in Human Resource Management on Employee Productivity: A Study of Afghanistan's NGOs," focuses on understanding how IT use in HRM influences employee productivity. It explores how employees perceive IT tools and identifies key challenges NGOs face in adopting these technologies. The goal is to provide practical insights into how IT can be effectively integrated into HR systems to improve productivity across Afghanistan's NGO sector.

Problem Statement

In Afghanistan's NGOs, using Information Technology (IT) in Human Resource Management (HRM) is becoming increasingly important for boosting employee productivity. But its actual impact is still unclear, especially because it depends heavily on how employees perceive the usefulness of IT tools and the unique challenges within the Afghan context. Limited IT adoption, along with ongoing social, political, and organizational issues, makes it difficult to implement effective HRM systems (Ateeq et al., 2024; Samsor et al., 2021). While global research highlights the powerful role IT can play in transforming HRM (Marler & Fisher, 2013; Strohmeier, 2007), there's still very little focused on Afghanistan's NGOs. Most existing studies are based in more developed settings and don't take into account the complex realities Afghan NGOs face, such as insecurity and weak infrastructure (Ateeq et al., 2024).

This study aims to fill that gap by looking at IT integration in HRM from four angles: IT infrastructure, IT innovation, IT knowledge management, and IT-supported HR practices. By understanding how employees view and interact with IT tools, the research will offer practical insights on how Afghan NGOs can better use technology to enhance productivity, while also highlighting the real-world obstacles they need to overcome.

Research Objectives:

- Evaluate the relationship between IT integration and employee productivity.
- Investigate the impact of IT infrastructure on employee productivity.
- Examine how IT innovation is associated with employee productivity.
- Explore the role of IT knowledge management in enhancing employee productivity.
- Analyze the impact of IT-driven HR practices on employee productivity.

Research Questions:

Although limited research has been conducted on the relationship between IT adoption and employee productivity, the findings have been diverse and inconclusive. This study seeks to bridge this gap by addressing its objectives through the following research questions:

- Does IT integration impact employee productivity?
- Does IT infrastructure impact employee productivity?
- Is IT innovation positively associated with employee productivity?
- Does IT knowledge play a role in enhancing employee productivity?
- Do IT-driven HR practices impact employee productivity?

Hypotheses:

H1: There is positive relationship between IT integration and employee productivity.

H2: IT infrastructure has a notable positive impact on employee productivity.

H3: IT innovation is positively associated with employee productivity.

H4: IT knowledge management positively impact employee productivity.

H5: IT driven HR-Practices is positively associated with Employee productivity.

Literature Review

In the context of Afghanistan, the integration of Information Technology (IT) into Human Resource Management (HRM) within Non-Governmental Organizations (NGOs) remains an underexplored area. Ateeq et al. (2024) point out that Afghanistan's unique socio-economic landscape presents both opportunities and challenges for the adoption of IT in HRM practices. While digital tools have the potential to increase efficiency and productivity, several barriers need to be addressed, including limited infrastructure, cybersecurity concerns, and the low level of digital literacy among employees. Overcoming these challenges is vital for the successful implementation of IT-driven HRM systems in Afghanistan's NGOs.

Ateeq et al. (2024) emphasize the transformative role of digitalization in HRM, noting that technology has revolutionized recruitment, communication, HR information systems, training, and performance management. By leveraging digital tools, organizations can accelerate operations, enhance employee engagement, and improve data management processes. However, in Afghanistan's NGO sector, the successful integration of IT requires addressing these specific challenges to realize its full potential.

Similarly, Fenwick, Molnar, and Frangos (2023) examine the evolving role of HR in the age of artificial intelligence (AI), particularly as HR professionals navigate the integration of human workers and machines. They argue that HRM has become increasingly cross-functional and data-driven, requiring a reevaluation of traditional HR practices to effectively accommodate technological advancements. This shift requires HR professionals in Afghanistan’s NGOs to not only adopt new technologies but also develop strategies to address the infrastructural and cultural challenges specific to the region.

Productivity in Afghanistan

The annual average GDP per employee in Afghanistan has exhibited considerable volatility, largely due to persistent economic and political instability. According to a 2024 World Bank report, Afghanistan's real GDP growth has contracted by 26% in recent years, underscoring the profound economic challenges the nation confronts.

According to data from the Ministry of Economy of Afghanistan (2023), the country has a growing workforce aged 15 to 64, with a significant majority involved in agriculture. Around 70% of the rural labor force is employed in this sector, which accounts for nearly 25% of Afghanistan’s national GDP (Sarwary et al., 2023). Additionally, the Afghan Central Statistics Organization (2023) highlights the workforce distribution across various sectors: 58% in agriculture, 10.9% in trading and vehicle maintenance, and 9.9% in government roles, encompassing social security, public employees, and the military.

The World Bank (2024) highlights the potential for significant investment in Afghanistan's workforce as a human resource. Government spending on education constitutes about 4.1% of GDP. The agricultural sector, contributing 23% to GDP, is experiencing a decline. Livestock accounts for roughly 20% of agricultural GDP. Foreign exchange to finance imports is derived mainly from agriculture and remittances. Food self-sufficiency stands at approximately 60%, but the nation faces substantial challenges from climate change and ongoing economic instability.

IT Infrastructure in Afghanistan

Information technology (IT) is crucial for wealth, power, and knowledge in the 21st century, but Afghanistan faces significant challenges in developing its IT infrastructure due to ongoing conflict (World Bank, 2021). The country's infrastructure for computer use is weak, with unreliable power supplies and underdeveloped telecommunications, leading to high levels of computer illiteracy and limited access to IT (Kumar, 2021).

Afghan universities offer limited and often inadequate IT programs, struggling to recruit qualified instructors, which hinders the nation's progress towards a computerized society (World Bank, 2021). Additionally, many Afghan businessmen are unaware of the benefits of computerization, resulting in low demand for IT products and services. This often forces businesses to seek foreign technology providers, negatively impacting the local economy (Kumar, 2021).

To advance, Afghanistan must improve its IT infrastructure, establish training centers and research facilities, and encourage investment in the IT market (World Bank, 2021). The high cost of landline and mobile telephones makes them inaccessible for most of Afghanistan's poor population, resulting in low telephone usage rates. As of 2021, there were approximately 3.5 fixed-line subscribers and 13.2 mobile subscribers per 100 people (World Bank, 2021). Domestic line technology includes microwave radio relay, cable, and GSM (Kumar, 2021).

In 2003, two private companies received 15-year licenses to provide mobile phone services, extending coverage to about 70% of the population. However, internal security threats and poor consumer payment history impede further growth (World Bank, 2021). Despite government contracts to expand the mobile network, ongoing conflict and economic instability continue to pose challenges (Kumar, 2021).

The Afghanistan Telecoms Market Overview and Statistics Report highlights that Afghanistan's telecommunication density remains one of the lowest in the region, reflecting its limited economic development. Fixed-line services are primarily controlled by the incumbent operator, while efforts to modernize the national communications network include international cable network agreements and the introduction of broadband services. Since the end of a telecommunications monopoly in 2002, the market for mobile telephony and Internet services has seen significant competition, leading to rapid growth in mobile subscribers from a low starting point (World Bank, 2021). As of 2021, approximately 12.8 million people, or about 33% of Afghanistan's population, were reported to use the Internet (Kumar, 2021).

The Impact of IT on Employee Productivity

The impact of Information Technology (IT) on employee productivity has been widely studied, uncovering both positive and negative implications. Schweikl and Obermaier (2020) demonstrated that IT can enhance organizational performance by improving efficiency and enabling better decision-making. However, they also identified the "Solow Paradox," where technological advancements do not always result in increased productivity. Similarly, Parry and Battista (2023) explored the role of Human Resource (HR) functions in navigating challenges associated with emerging technologies like AI and robotics. While these innovations automate routine tasks, they can also create issues such as increased connectivity and job insecurity, negatively impacting employee well-being.

Adding to this, Stofberg, Strasheim, and Koekemoer (2021) examined technology's effect on employee engagement and creativity in digitalized workplaces. Their findings revealed that digital platforms enhance

engagement and creative self-efficacy but cautioned against the "always-on" culture, which blurs work-life boundaries and poses risks to employee well-being.

Building on this context, the current study investigates the integration of IT into Human Resource Management (HRM) and its effects on employee productivity within non-governmental organizations (NGOs) in Afghanistan. It underscores the critical role IT plays in improving organizational efficiency. Ineffective IT adoption can lead to decreased employee productivity, increased operational costs, and heavier workloads, ultimately undermining organizational performance. Conversely, successful IT integration can streamline operations, reduce costs, and save time, thereby boosting productivity. Additionally, factors such as job dissatisfaction, job insecurity, and low performance further influence employee productivity, underscoring the importance of effective IT utilization (World Bank, 2021).

IT Innovation

IT innovation refers to the development and application of new technologies and processes that drive advancements across industries. Schweikl and Obermaier (2020) highlighted its potential to enhance efficiency and decision-making but noted that productivity gains are not guaranteed, citing the "Solow Paradox."

Parry and Battista (2023) emphasized the role of HR in managing the impacts of technologies like AI and robotics, which streamline tasks but may harm employee well-being through increased connectivity and job insecurity. Similarly, Stofberg et al. (2021) found that digital platforms boost engagement and creativity but cautioned against the "always-on" culture, which can blur work-life boundaries.

IT Knowledge Management

IT Knowledge Management (KM) refers to the strategic use of technological tools and processes to manage knowledge, fostering organizational performance and innovation. Gao, Chai, and Liu (2018) reviewed KM, emphasizing the importance of knowledge representation, sharing, and performance measurement in effective KM systems. Murillo Vetroni Barros et al. (2020) explored the link between KM and technology transfer, noting that KM drives innovation, customer focus, and technological capabilities. Their research also highlighted the role of university-industry collaborations in knowledge creation and transfer. Nonaka and Ikujiro (2009) introduced the knowledge creation theory, which outlines structural models for KM processes that support organizational innovation and competitiveness.

IT-driven HR Processes

IT-driven HR processes leverage digital technologies to optimize various HR functions, such as recruitment, onboarding, performance management, and employee engagement. Wirges and Neyer (2022) emphasized the importance of a process-oriented approach and well-defined roles in HR analytics to transform data into actionable strategic insights. Similarly, Bujold et al. (2023) investigated the integration of artificial intelligence (AI) in HRM, highlighting its capacity to improve HR operations while cautioning against potential risks and ethical concerns, underscoring the need for responsible implementation. Gao, Chai, and Liu (2018) focused on IT knowledge management systems, stressing the critical roles of knowledge representation, sharing, and performance measurement in achieving effective knowledge management outcomes.

Theoretical Framework

The research model employed in this study outlines the dynamics of Information Technology (IT) integration, specifically focusing on its relationship with employee productivity in non-governmental organizations (NGOs). Grounded in the Resource-Based View (RBV) theory, this framework suggests that unique organizational resources—such as skilled human capital and advanced IT systems—provide a competitive advantage (Barney, 1991). In this model, employee productivity serves as the dependent

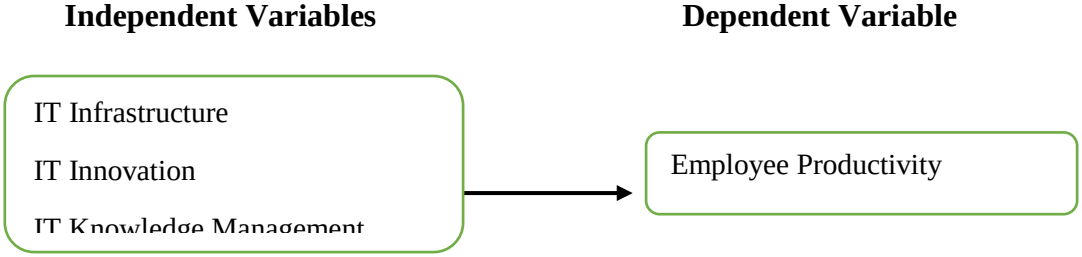
variable, influenced by the independent variables of IT infrastructure, IT innovation, IT knowledge management, and IT-driven HR practices.

Dependent Variable (Problem): The primary issue addressed in this study is the low productivity of NGOs, which stems from inefficient IT usage.

Independent Variables (Causes): The inefficient use of IT is a significant factor contributing to reduced employee productivity within NGOs. This study narrows its focus to examine the following key dimensions of IT:

No.	**Variables**
1	IT Infrastructure
2	IT Innovation
3	IT Knowledge Management
4	IT-Driven HR Practices
5	Employee Productivity

Conceptual Model



Research Methods

This research aims to enhance employee productivity by identifying factors that contribute to low productivity, with a particular focus on the role of Information Technology (IT) in areas such as IT infrastructure, IT innovation, and IT knowledge management within Afghanistan's non-governmental organizations (NGOs). By examining these aspects, the study seeks to explore how IT integration can optimize HRM processes and ultimately improve workplace productivity.

The study is anchored in the Resource-Based View (RBV) theory, which posits that organizations with superior human resources are better equipped to identify and implement distinctive strategies that are challenging for competitors to imitate (Barney, 1991).

Data were collected through survey questionnaires distributed to HR professionals working in Afghanistan's telecom, banking, and university sectors. The questionnaire was adapted from established studies, including those by Becker and Huselid (1998), Han et al. (2006), Van der Post et al. (1997), and Wang and Chen (2013), and tailored to the Afghan context. To ensure clarity and consistency, all items were measured using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Population and Sampling

To further explore the determinants affecting IT's impact in HRM, a quantitative approach was employed. For the study, 250 questionnaires were distributed to HR officers, senior HR officers, HR managers, HR executives, and IT experts from various non-governmental organizations in Afghanistan. Out of these, 206

responses were received, resulting in a response rate of 82.4%. The data was collected using a structured, close-ended questionnaire, and a random probability sampling technique was adopted to ensure unbiased participant selection.

Data Analysis

This study examines the influence of IT-related factors on employee productivity by incorporating key variables such as IT infrastructure, IT innovation, IT knowledge management, and IT-driven HR practices. The research framework is based on a single equation to capture these relationships:

$$EP=\beta0 + \beta1\ (ITI) + \beta2\ (ITN) + \beta3\ (ITK) + \beta4\ (ITH) + \epsilon$$

This equation represents the relationship between employee productivity (Y) and the independent variables, where:

- **EP** = Employee Productivity (dependent variable)
- **ITI** = IT Infrastructure
- **ITN** = IT Innovation
- **ITK** = IT Knowledge Management
- **ITH** = IT-Driven HR Processes
- β_0 = Intercept
- β_1–β_4 = Coefficients
- ϵ = Error term

By observing the coefficients of the independent variables, this study provides insights into the extent to which IT infrastructure, innovation, knowledge management, and HR practices contribute to employee productivity. The findings aim to inform decision-makers on leveraging IT for optimal workplace outcomes.

Result and Discussion

The descriptive statistics summarize five variables related to IT integration in HR practices and its impact on employee productivity, each measured on a Likert scale from 1 to 5. A higher score indicates a more favorable perception or higher degree of the measured factor.

Employee Productivity (EP): The mean score for employee productivity is 3.97, indicating that employees generally perceive themselves as moderately productive. The relatively low standard deviation (0.615) suggests that most employees' perceptions of productivity cluster near the mean. The scores range from 1 (lowest productivity perception) to 5 (highest productivity perception), highlighting some variation in responses.

IT-Driven HR Practices (ITDHRP): The average score for IT-driven HR practices is 3.892, reflecting a moderately positive perception among employees regarding the integration of IT into HR practices. The standard deviation (0.538) is relatively small, indicating consistency in employee opinions. Scores span the full range of 1 to 5, with most employees leaning toward agreement.

IT Knowledge (ITK): The mean score for IT knowledge is 3.641, suggesting that employees perceive their IT knowledge as moderate. The higher standard deviation (0.721) compared to other variables indicates greater variability in employee perceptions, ranging from 1 (low knowledge) to 5 (high knowledge).

IT Innovation (ITI): The mean score for IT innovation is 3.818, pointing to a moderately positive perception of innovation in IT practices within the organization. The standard deviation (0.631) reflects some variability, with responses ranging from 1 (low innovation) to 5 (high innovation).

IT Infrastructure (ITIN): The mean score for IT infrastructure is 3.637, indicating that employees have a moderate perception of the adequacy of IT infrastructure. The standard deviation (0.976) is the highest among the variables, reflecting substantial variability in perceptions. Scores range from 1 to 11, suggesting outliers or discrepancies that warrant further investigation.

Over all, the descriptive statistics highlight that employee perceptions are generally moderate to positive across IT-related variables, with a relatively higher agreement on IT-driven HR practices and IT innovation Table 1. Variability is most evident in IT knowledge and IT infrastructure, indicating areas where perceptions are more diverse. Understanding these differences can guide organizations in identifying areas for improvement, particularly in IT knowledge enhancement and addressing disparities in infrastructure quality, to better align with employee needs and enhance productivity.

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min.	Max.
EP	206	3.97	.615	1	5
ITDHRP	206	3.892	.538	1	5
ITK	206	3.641	.721	1	5
ITI	206	3.818	.631	1	5
ITIN	206	3.637	.976	1	11

The correlation matrix (Table 2) shows the relationships between Employee Productivity (EP), IT-Driven HR Practices, IT Knowledge, IT Innovation, and IT Infrastructure.

Employee Productivity (EP) has a moderate positive relationship with IT-Driven HR Practices (0.568) and IT Knowledge (0.539). This means that better IT-driven HR practices and higher IT knowledge are linked to improved employee productivity.

EP also has weaker positive links with IT Innovation (0.458) and IT Infrastructure (0.329), indicating that these factors support productivity but to a lesser extent.

IT-Driven HR Practices strongly correlate with IT Knowledge (0.711) and moderately with IT Innovation (0.577), showing that these factors work together to enhance HR practices.

IT Knowledge and IT Innovation both have moderate positive connections, while IT Knowledge has a weaker link with IT Infrastructure (0.365).

IT Infrastructure shows generally weak positive relationships with other variables, playing a supporting role.

These findings suggest that improving IT knowledge, HR practices, and innovation can significantly enhance employee productivity, supported by a solid IT infrastructure

Table 2. Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)

(1) EP	1.000				
(2) ITDHRP	0.568	1.000			
(3) ITK	0.539	0.711	1.000		
(4) ITI	0.458	0.577	0.613	1.000	
(5) ITIN	0.329	0.368	0.365	0.507	1.000

Normality Test

The results of the normality test, presented in Table 3, assess whether the residuals of the regression analysis follow a normal distribution. The p-value for skewness (0.000) indicates significant skewness, while the p-value for kurtosis (0.000) reflects notable deviations in the tails of the distribution. Additionally, the joint test, represented by the adjusted chi-square statistic (41.490, p = 0.000), confirms significant departures from normality. These findings suggest that the residuals do not satisfy the normality assumption, which is essential for the validity of regression analysis. As a result, the reliability of the regression outcomes may be affected, and further diagnostic tests or alternative modeling approaches may be necessary to address this limitation.

Skewness/Kurtosi stests for Normality ------ joint ------

Table 3. Indicates the output of normality test

Variable	**Obs**	**Pr(Skewness)**	**Pr(Kurtosis)**	**adj_chi2(2)**	**Prob>chi2**
Residual	206	0.000	0.000	41.490	0.000

Multicollinearity Test

The multicollinearity test results, presented in Table 4, were analyzed using the Variance Inflation Factor (VIF) for the independent variables in the regression model. The VIF values ranged from 1.363 to 2.313, well below the standard threshold of 5, indicating no significant multicollinearity concerns among the independent variables. Furthermore, the average VIF of 1.954 reinforces the conclusion that multicollinearity is not an issue. These findings contribute to the reliability and robustness of the regression analysis, enabling more accurate interpretations of the relationships between the independent variables and the dependent variable, Employee Productivity (EP).

Table 4. Variance inflation factor

	VIF	**1/VIF**
ITK	2.313	.432
ItDHRP	2.174	.46
ITI	1.967	.508
ITIN	1.363	.734
Mean VIF	1.954	.

Heteroscedasticity Test

The results of the Breusch-Pagan / Cook-Weisberg test for heteroscedasticity, as shown in Table 5, provide evidence of non-constant variance in the fitted values of Employee Productivity (EP). The test statistic, chi2(1) = 23.33, produces a p-value of 0.0000, which is well below the conventional significance level of 0.05. This leads to the rejection of the null hypothesis, indicating the presence of heteroscedasticity in the data.

To mitigate the impact of heteroscedasticity on parameter estimates, it is recommended to apply robust regression methods. These methods will help to provide more reliable and unbiased results, ensuring the accuracy and validity of the regression model despite the identified heteroscedasticity.

Breusch-Pagan / Cook-Weisberg Test for Heteroscedasticity

- **Null Hypothesis (Ho):** Constant variance
- **Variables:** Fitted values of EP
- **chi2(1):** 23.33
- **Prob > chi2:** 0.0000

Regression Output

In the context of the study, IT-Driven HR Practices emerged as the most significant predictor of Employee Productivity among the independent variables. The coefficient for IT-Driven HR Practices is 0.377 (p = 0.001), suggesting that a one-unit increase in this variable is associated with a 0.377-unit increase in Employee Productivity. This finding aligns with the research of Becker and Smidt (2016) and Marler and Fisher (2013), who highlighted the positive influence of IT-driven HR practices on organizational outcomes.

Similarly, IT Knowledge was found to have a positive and statistically significant effect on Employee Productivity. The coefficient for IT Knowledge is 0.186 (p = 0.017), indicating that a unit increase in IT Knowledge corresponds to 0.186-unit increase in Employee Productivity. This finding is consistent with the work of Shaikh et al. (2023), who also identified the positive impact of IT knowledge on employee productivity through knowledge sharing and well-being.

In contrast, IT Innovation and IT Infrastructure did not show statistically significant effects on Employee Productivity. The coefficient for IT Innovation is 0.09 (p = 0.307), with a 95% confidence interval of -0.083 to 0.263. Similarly, IT Infrastructure has a coefficient of 0.051 (p = 0.412), with a confidence interval of -0.072 to 0.174. These findings suggest that, within the scope of this study, neither IT Innovation nor IT Infrastructure has a meaningful direct impact on Employee Productivity. This could be attributed to contextual factors, the nature of the dataset, or challenges in defining and measuring these variables. These results are consistent with the findings of Yaw Obeng and Boachie (2018), who found no significant impact of IT innovation on bank employees' productivity, and Lakhwani et al. (2020), who observed mixed outcomes related to technology adoption and organizational productivity. Similarly, Anakpo et al. (2023) highlighted the varied effects of work-from-home arrangements on productivity.

The findings of this study suggest that IT-Driven HR Practices and IT Knowledge play pivotal roles in enhancing Employee Productivity, with IT-Driven HR Practices showing the most substantial effect. These results emphasize the need for organizations to prioritize HR practices that are supported by robust IT systems and to invest in improving employees' IT competencies. On the other hand, the lack of significant relationships for IT Innovation and IT Infrastructure warrants further investigation to understand their roles in the organizational context and their indirect effects, if any, on productivity.

Table 5. Linear regression

EP	Coef.	St. Err.	t-value	p-value	[95% Conf	Interval]	Sig
ITDHRP	.377	.116	3.25	.001	.148	.606	***
ITK	.186	.078	2.40	.017	.033	.339	**
ITI	.09	.088	1.03	.307	-.083	.263	
ITIn	.051	.062	0.82	.412	-.072	.174	
Constant	1.296	.424	3.06	.003	.46	2.132	***
Mean dependent var	3.970	SD dependent var	0.615				
R-squared	0.374	Number of obs	206				
F-test	12.796	Prob > F	0.000				
Akaike crit. (AIC)	296.814	Bayesian crit. (BIC)	313.454				

*** p<.01, ** p<.05, * p<.1

Conclusion

In conclusion, this study emphasizes the crucial role of IT-Driven HR Practices and IT Knowledge in improving Employee Productivity. The findings reveal that IT-Driven HR Practices are the strongest predictor of productivity, exhibiting a significant positive relationship, which is consistent with prior research. Additionally, IT Knowledge also positively impacts productivity, suggesting that well-informed employees tend to be more productive. On the other hand, IT Innovation and IT Infrastructure were not found to have a significant direct effect on Employee Productivity, implying that their impact may be more indirect or influenced by other contextual factors. These results highlight the importance of integrating IT-driven HR practices and enhancing IT knowledge within organizations to drive productivity. Future research should investigate the underlying mechanisms through which IT Innovation and IT Infrastructure may influence productivity, providing further insights into their potential roles.

Future Directions:

- Investigate indirect effects of IT Innovation and IT Infrastructure on productivity, considering contextual factors and industry specifics.
- Explore moderating factors like organizational culture and leadership styles in the IT-productivity relationship.

- Conduct industry-specific studies to understand varying outcomes of IT adoption across sectors.
- Use advanced methods like structural equation modeling (SEM) for deeper insights into variable relationships.
- Examine how employee well-being and knowledge sharing mediate the impact of IT knowledge on productivity.

Recommendations:

- Prioritize IT-driven HR practices to enhance employee productivity.
- Invest in continuous IT training programs to boost employees' technical skills.
- Ensure robust IT infrastructure, even if its direct impact is not significant.
- Foster innovation in IT to explore its potential long-term impact on productivity.
- Promote employee well-being through knowledge sharing and work-life balance initiatives.
- Adapt IT strategies to the unique needs of different industries.

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