

## IMPLEMENTATION OF ICT ON JOB PERFORMANCE MEDIATED BY EMPLOYEE MOTIVATION

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### ABSTRACT

**Goal-** The purpose of the study to examine how ICT (information communication and technology) adoption affects job performance by focusing on the role of employee motivation.

**Design/methodology/approach –** This paper proposes the framework of ICT on Job Performance with Employee Motivation. These are hypothesized to impact the competitiveness and job performance of the firm. Hypotheses are tested with reliability, correlation, regression, structural equation modeling using SPSS 20, Amos 21, and Sobel mediation test. 200 data were collected through online Google forms in the IT industry in Chennai.

**Findings –** The results show that ICT-information communication and technology and job performance with employee motivation are quite strongly correlated and have a statistically significant influence of ICT on job performance by employee motivation. And also, found that employee motivation mediates the relationship between ICT and job performance.

**Research limitations/implications –** Future research should address the adoption of ICT is necessary for every organization for a long-term process for better decision making. The data are limited to Chennai companies.

**Originality/value –** This study contributes to the initiation of knowledge-based organizing by empirically analyzing employee motivation on job performance with ICT. The findings also indicate that ICT practices improve job performance only when employee motivation enlargements.

**Keywords-** Employee Motivation, Information Communication and Technology, Job Performance.

### INTRODUCTION

Today, with the increasing use of technology and the industrial revolution, ICT is important to every facet of contemporary civilization. ICT has changed how we communicate, access information, work to do business engage with the government, and organize our social lives. Information and communication technologies (ICT) cover a wide range of technology tools and resources that used to produce, transmit, store, share, and exchange information. The ease of

sending communications has been facilitated by four key forms of communication technology: the telephone, radio, television, and the internet. Communication has become quicker and more efficient. People can call, facetime, and text anyone at any time. Information communication and technology develop the employees inside the organization by motivating the easy way to generate and accumulate information and exchange it with each other. It mechanically increases their positive relationship with each employee, collects information about technology, and leads to an increase in the job performance of the employees. Assists the team members with unexpected difficulties, effortlessly, cheerful and successful with the employees to pick up the new knowledge and abilities of work with challenges emerge with determines a confident approach. Information communication and technology increase employee motivation and endure job performance in an organization. The main objectives of the study are

- To identify the relationship between ICT adoption on Job Performance with employee motivation.
- To examine the relationship between ICT adoption, employee motivation, and job performance
- To explore employee motivation significantly mediates the relationship between ICT adoption and job performance

### **INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT)**

ICT initiates higher spatial fragmentation Individually, e-work leads to a greater willingness to perform (Aldo Arranz-Lopez et al.,2022) ICT and transport infrastructure gages, port connectivity and traffic enhance the indication of broadband, the internet, and mobile phone penetration of human development (Alex O. Acheampong et al.,2022) ICT facilities are favourable to the substantial roles maintained by renewable energy, education, and political organisations in maintaining the quality of the environment (Atif Awad., 2022) The potential impact of ICT, green energy, and economic activities on environmental quality associated with electricity consumption and technology trade (Bassem Kahouli et al.,2022) ICT and digital services of the business project aspects great tasks in financially sustainable farming practices (DING Ji-ping et al.,2022) the constant training and teaching association applies to ICT, increasing the positive impact of their personal, professional, and pedagogical use (El Mustapha Baytar et al.,2022) ICT positively mediates the students' economic ability and reading performance; their attitude (Eri Sarimanah et al.,2022) ICT (information and communication technology) plays a critical role in increasing energy efficiency and lowering emissions, Socioeconomic parameters have important links with the likelihood of modal shift from public transportation, taxis, and private cars to ride in the urban transportation sector (Hamid Mostofi, 2022) ICT usage and frugal innovation play a noteworthy partial mediating part in the bond between ICT usage and small- and medium-sized firms (Hector Cuevas-Vargas et al.,2022) Learning was promoted and learning outcomes were directed with assessments of cooperative activities in information and communication technology in COVID-19 usage (Juan Ignacio Pozo et al.,2022)

Usability, feasibility, acceptability, and appropriateness are all important factors in successfully gadgets ICT-EMS systems. (Jungju Lee et al.,2022) ICT-perceived usefulness positively influenced the ICT-workers' intention of information systems for future design and extension of ICT (Khondokar H. Kabir et al.,2022) Information communication and technology infrastructure generate the growth in rural areas of the emerging opportunities of continental free trade (Mamello A. Nchake et al.,2022) Consumer electronics, data centres, and communication network infrastructure, all experience increased energy consumption as a result of ICT development. (Peng Wang et al.,2022) The impact of ICT and the sustainability of PSM were discovered to have a positive effect on purchasing performance, suggesting a novel framework for integrating PSM. (Pietro Evangelista et al.,2022) Adoption of ICT with good management practices, farm productivity, and farmer's income supports the promotion and application of future projects (Prosper Ntiri et al.,2022) technological advances in communication, the business environment develops with computational advances in the regulatory environment of network industries of integration, bundling and trying the competition law of innovation and strategies (Subhashish Gupta., 2022) Excellence of learning objectives, motivation, and efficiency are more effective with professional experience with the usage of ICT in substantial effect (Tina Bohak Adam et al.,2022) alternative measure estimation techniques in ICT. It has had various healthcare programs and policies of technology with less infrastructure in ICT (Viorela Ligia Vaidean et al.,2022) HRM practices and knowledge exploration has a significant relationship between ICT knowledge and knowledge exploitation that reflects the organizational culture and the strategic knowledge (Gabriele Santoro et al, 2018) employee perception of knowledge management practices with knowledge-intensive organization with the effect of human science research council C. Steyn et al., 2008)

### **EMPLOYEE MOTIVATION**

Motivating the employees into public firms is related to the highest quality of overall customers' utility (Alessandro De Chiara et al.,2022) The favourable and strong correlation between CSR activities and employee commitment behaviour serves to manage the intrinsic motivation of employees and the motivation of work in organisations. (Halder YandryLoor-Zambrano et al.,2022) effective work time mediates the intrinsic motivation to aid employees' interest and effort satisfaction in organization conclusions (Laura M. Giurge et al.,2022) collectivistic and individualistic culture of prolific data collected in the service sector of employees' job performance and work engagement via intrinsic motivation (Saira Yousaf et al.,2022) organization and team culture influence employee perception and behavioral intention of information security culture (Shwadhin Sharma et al.,2022) operative inner crisis Self-determination theory, motivational language theory, transactional model, coping, and organisational engagement effects of leader communication are all stated. (Weiting Tao et al.,2022)Public relations and strategic internal communication are promoting employee safety behaviour in COVID-19, and dialogic internal communication encourages in the workplace have an impact onthe organization's overall relationship with employees. (Yeunjae Lee, 2022)

Job motivation plays a major role in the workplace that indicates the job security of the employee's intention to take risk-behavior as an interpreter of job satisfaction (DunjaDemirovićBajrami et al.,2021) knowledge of the industry, creativity, work experience, directly motivating employees toward rewards, and perception of a positive working environment (Tamara Gonzalez-Gonzalez et al.,2021)The main study examined the moderating effects of communication transparency and safety climate, including safety, motivation and safety behaviours. (Seontaik Kim et al.,2021) the mode of organizational identity of the employee sustains the relationship between affective commitment and turnover intention (Cen April Yue, 2021) the employee's background, optimism in job work, motivation for the work-related, psychological state of mind, family commitment, the performance of employees, and job satisfaction data will assist in the responsiveness of the workplace in an organization (Mahfoudh Hussein Mgammal et al.,2020) constructive and substantial moderating the outcome of intrinsic motivation between transformational leadership and employee creativity leads to the innovation of developing the organization (Mohsin Shaf et al.,2020) Social media has a favourable relationship with employees and satisfaction with intrinsic job motivation, according to research on government employees utilising the self-determination theory. (Mehmet Akif Demircioglu et al.,2019) motivating employees toward employee fit and innovative work behaviour in the person-organization fit theory in distributive justice and organisational support (Erik Andreas Saether, 2019) intrinsic rewards have a positive relationship between employee motivation and employee performance (IrumShahzadi et al., 2014)

## **JOB PERFORMANCE**

Life satisfaction, perceived job instability, and job contentment are all important factors in keeping an employee's job performance in an organisation (Heesup Han et al.,2022) progressing the job of the pilot on grid sites and the number of jobs managed to satisfy the job performance of the employee (Alexandre F. Boyer et al.,2022) the constructive relationship between job autonomy and job performance in daily work, task performance, and contextual performance of the individual in person-organization fit and job demands is measured (Henrik O. Sørli et al.,2022) transformational leadership and social support influence positive guidance to achieve employee empowerment and human resource task outcomes, which leads to employee job performance (M. Angeles ´ Lopez-Cabarcos et al.,2022) when comparing permanent versus temporary organizations, organizational temporariness has a major impact on employee commitment and job satisfaction (antecedents of employee performance). Employee behavior and organizational results both encourage organizational temporariness. (Nicolas Goetz et al.,2022) authentic leadership has advantages for preceptorship and nursing students' self-efficacy, performance, as well as job satisfaction, which could significantly raise nurse retention (Venise Bryan et al.,2022)

Organizational commitment features have a substantial effect on job performance and job satisfaction (Deny SetiawanWayoi et al.,2021) individual project managers must demonstrate leadership and adaptive abilities to work in increasingly complex and energetic environments (Ellen Mc Loughlin et al., 2021) improving employee productivity and management by giving them the choice to work remotely under COVID-19 constraints and use their information and

communication technology, while their work is still being done. (Jana Prodanova et al.,2021) in a straightforward threshold job, information communication and technology save employee waiting times in order to the predictors' system performance (JosuDoncel et al.,2021) associating job performance between the individual and team will differ in information communication and technology to attain aims and responsibilities. Reflexivity will be high, with assembly performance associated with individual reflexivity (Na Fu et al.,2021) anxiety and depression will not affect the employee's task performance and job insecurity. Employee resilience plays a vital role in reducing the negative aspects of depression (Teresa Aguiar-Quintana et al.,2021) Job analysis, job performance, and procedural justice of an employee's perception within an organization of support and knowledge in a developing country (Mohamed Mahmoud Khtatbeh et al.,2020) perceived environmental support, knowledge sharing, self-efficacy positively influenced the job performance (Khahan Na-Nan et al., 2019)

The following assumptions are presented:

- H1: There is a significant relationship between ICT, Job performance, and employee motivation.  
H2: There is a significant relationship influence the ICT, employee motivation, and job performance.  
H3: There is a significant relationship that mediates employee motivation between ICT adoption and job performance.

## RESEARCH METHODOLOGY

This study evaluates the effect of employee motivation and ICT (information communication and technology) on job performance in the Chennai city. Given this, we adapt the ICT from the empirical model (Gabriele Santoro, et al, 2018, C. Steyn et al., 2008), employee motivation from (IrumShahzadi et al., 2014), and job performance from (Khahan Na Nan et al., 2019). We have implemented a descriptive research design which means describing, explaining specific enlightenment to analyze the pattern of motivating the employees towards their work in an organization to improve their job performance. The descriptive research deals with the description of the recent situation rather than giving judgment retention of the present study (Creswell, 1994, Williams, C. 2007).A non-probability convenience sampling was performed, and data were gathered via online google forms. 200 data in total have been gathered from various IT firms using a well-crafted questionnaire and a 5-point Likert scale as primary and secondary data. Reliability analysis is used to check whether all constructs are reliable or not. The researchers checked the reliability test communal, a Cronbach Alpha value for (ICT) Information communication and technology (0.919), Employee Motivation (0.889), Job Performance (0.917), and the overall reliability (0.945), hence all items are proved to be reliable in SPSS 20 and AMOS 21 are used analysis. The tools used for analysis are Karl Pearson's Correlation, to find out the relationship between the information communication and technology of employee motivation on job performance. Regression is used to find out whether the independent constructs influence dependent and mediating variables, CFA-confirmatory factor analysis, and mediation analysis

using the Sobel test. A review of literature aids in identifying variables and adopting a 5-point Likert scale to estimate and measure the constructs. We have evaluated our constructs using a reliability test and factor analysis. The total number of items is 30, classified under each construct as information communication and technology (10 items), employee motivation (10 items), and job performance (10 Items).

### RELIABILITY

Reliability is a property or state of being, and reliability analysis is performed to determine whether the measurement scale accurately reflects the construct values. The Cronbach's Alpha value for the 5-point Likert scale questionnaire's internal consistency (Hair et al 2016). Cronbach's alpha values were obtained in order to evaluate the instrument's dependability.

**Table-1 Reliability Analysis**

Factors	Items	Cronbach Alpha
Information Communication Technology	10	.919
Employee Motivation	10	.889
Job Performance	10	.917
<b>Overall Reliability</b>	30	<b>.945</b>

Source: C. Keith Conners et al (1998)

From the table, we infer that all the internal consistency values are high. The overall consistency value is 0.945. An independent variable of information communication technology with 10 items is .919, the dependent variable of Job performance with 10 items is .917, and the mediating variable of employee motivation with 10 items is .889. All the data proved to be internally consistent with the objective of the study.

### CORRELATION

The statistical concept of correlation describes how closely two variables are connected linearly. Without explicitly asserting cause and effect, it serves as a standard tool for depicting straightforward interactions.

H1: There is a significant relationship between Information Communication and Technology, Job performance, and employee motivation.

**Table-2 Correlation Analysis**

		ICT	EM	JP
ICT	Pearson Correlation	1	.820**	.993**
	Sig. (2-tailed)		.000	.000
	N	200	200	200

EM	Pearson Correlation	.820**	1	.832**
	Sig. (2-tailed)	.000		.000
	N	200	200	200
JP	Pearson Correlation	.993**	.832**	1
	Sig. (2-tailed)	.000	.000	
	N	200	200	200

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The Pearson correlation effect the relationship between origin’s information communication and technology, employee motivation, and job performance. There is a strong and positive correlation between the origins of information communication and technology, employee motivation, and job performance, which is statistically significant ( $r = 0.820$  and  $r = 0.993$ ,  $n = 200$ ,  $p = .000$ ).

## REGRESSION

A statistical method called regression analysis is used to assess the relationship between two or more independent variables. Regression analysis is a tool that organizations use to determine the significance of their data, and points and apply analytical methods to improve their decisions. Regression is a method for predicting a consequence variable from one or more interpreter variables. The regression model's predictor has a coefficient, and the value indicates how much the predictor's value affects the outcome.

H2: There is a significant relationship influence the ICT, employee motivation, and job performance.

**Table-3 Regression Analysis**

### Model Summary

Mode	R	R Square	Adjusted R Square	Std. The error of the Estimate	Durbin-Watson
1	.883 <sup>a</sup>	.776	.765	.36703	2.000

a. Predictors: (Constant), Employee Motivation, Information Communication Technology

b. Dependent Variable: Job Performance

### ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	64.656	2	32.328	294.566	.000 <sup>b</sup>
1 Residual	63.885	297	.094		
Total	65.542	299			

- a. Dependent Variable: Job Performance
- b. Predictors: (Constant), Employee Motivation, Information Communication Technology

**Coefficients**

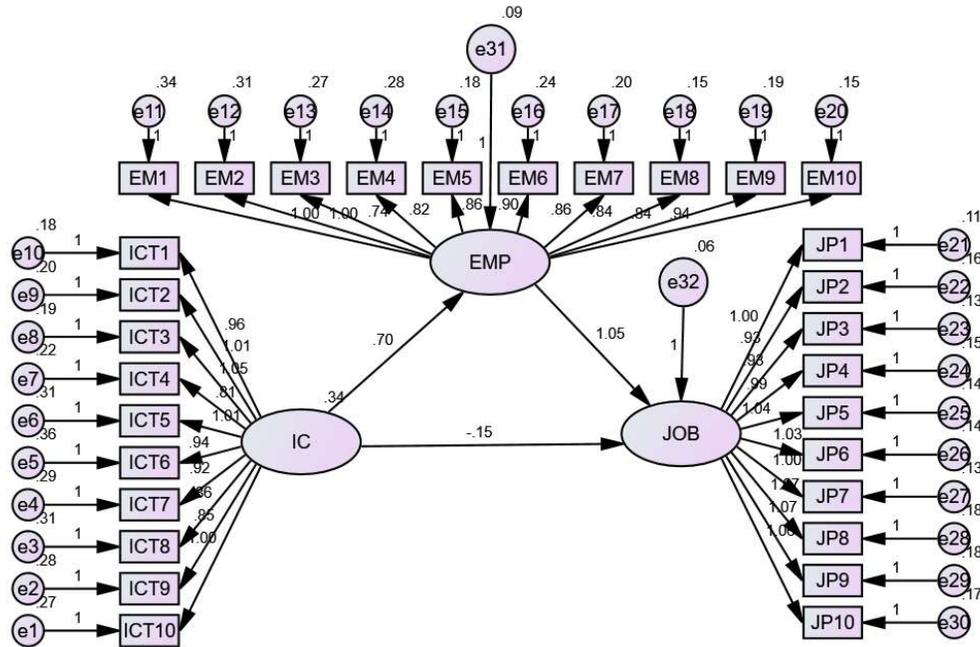
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.798	.145		4.447	.000
1 ICT	.560	.050	.948	8.554	.000
EM	.467	.048	.055	7.809	.000

- a. Dependent Variable: Job Performance

The degree of correlation between variables is shown by the R-value of 0.883 or 88%. The research's dependent variable explains more than 50% of the independent variable, as indicated by the R square 0.776, or 77%. Adjusted R square value is 0.765, the significance value of F is 0.000, which less than 0.05, and F value is 294.566, which is more than 2, indicating that the model is well-fitted and strong. These results demonstrate that the model is acceptable and that the deviation it indicates is not merely accidental. The T-value indicates a positive result, and the significance level of p is  $0.000 < 0.05$ , indicating that the impact of information, communication, and technology on employee motivation will improve. Therefore, H2 is approved because this study demonstrates that employee motivation, information communication and technology, and both have a good and significant influence on job performance.

**CONFIRMATORY FACTOR ANALYSIS (CFA)**

Confirmatory factor analysis has long played a significant role in social and behavioral science research and is essential to run the SEM models in CFA and measure the quality of all latent constructs. It is a component of the group structural equation modeling methods to enable investigate the fundamental relationships between latent besides observable variables in prior-specified, theory-derived models. Finding a gap between theory and observation, bridging the ability of the researcher, gives valuable information regarding the estimated values and the model fit, through theory-derived measurement models, and finds specific substances. It is preferable to think about CFA as a process, starting with model conceptualization, identification, and parameter estimate and ending with an evaluation of how well the data fit the model and any necessary model adjustment. Regression is a grazing concept for a variety of statistical techniques.CFA is a statistical technique for verifying a group of observed data's factor structure. With the aid of CFA, the researcher can examine the relationship between observable variables and underlying latent components.



**Table-4 Results of Model Fit**

INDICES	VALUES	SUGGESTED VALUE
Chi-square/df	3.670	<5.00 (Hair et al., 1998)
p-value	0.645	>0.05 (Hair et al., 1998)
GFI	0.932	>0.90 (Hu and Bentler, 1999)
AGFI	0.945	>0.90 (Hair et al., 2006)
NFI	0.965	>0.90 (Hu and Bentler, 1999)
CFI	0.936	>0.90 (Daire et al., 2008)
RMSEA	0.038	<0.08 (Hair et al., 2006)

Source: Carmines and McIver (1981); Anwar, M et al. (2018)

This study illustrates that the model is suitable and appropriate for further investigation. The findings show that the Chi-square/df = 3.670 (Carmines and McIver, 1981; Anwar, M. et al., 2018) and the additional indices GFI = 0.932, AGFI-0.945, NFI = 0.965, CFI = 0.936, RMSEA = 0.038, and P-value-0.064 fulfilled the necessary level. All pointers attain the minimal level. These findings indicate that the constructs' absolute fit indexes are at the required level, demonstrating the success of the model fit indices.

**DATA ANALYSIS**

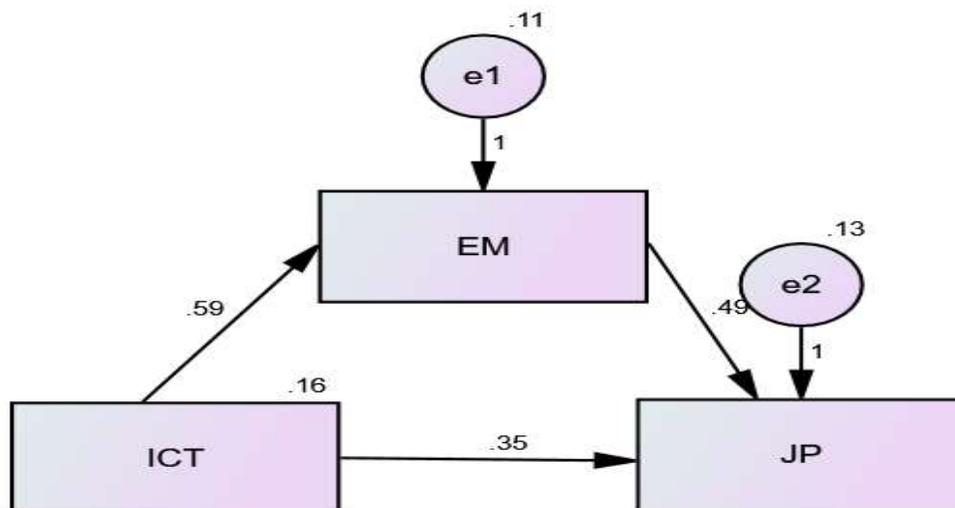
Data analysis is a progression of cleansing, converting, and exhibiting data produce relevant data for marketable decision-making. The aims of data analysis used to excerpt useful information a data to make decisions based on that analysis. A sample of inadequate numerical data of the entire set is completed using descriptive analysis. For continuous data, it displays mean and deviation; for categorical data, percentage and frequency are displayed. The basic objective of data analytics is to apply statistical analysis and technical data to discover characteristics and address problems.

Qualitative and quantitative data analysis techniques are two main approaches for analyzing data. Businesses are relying on data analytics more and more to assess and modify company processes, improve decision-making, and improve the capital structure. Data analysis focused on statistical tools to discover reliability analysis, correlation, regression, CFA, and to find out the mediation effect. Data analysis practices can be used self-sufficiently or in conjunction with one another support professional leaders and decision-makers get commercial perceptions from diverse facts.

### MEDIATION ANALYSIS

The mediation model is one that makes use of the presence of a third instructive variable, called a mediator variable, to identify and explain the mechanism or sequence that results in an observable link between an independent variable and a dependent variable. Through the use of ANOVA or linear regression assessments, mediation analysis can statistically determine if a variable is a mediator. An explanation of the link between independent and dependent variables is provided in full mediation. In the model, there is no relationship without the mediator. Mediation analysis stays between an independent variable and dependent variable and is together connected with all the constructs and gives a sound connotation to the organization for future betterment. Here, employee motivation plays a mediating variable connecting information communication technology, and job performance.

H3: There is a significant relationship that mediates employee motivation between ICT adoption and job performance



**Table-5 RESULT OF MEDIATION MODEL**

	<b>Standardized Estimation</b>	<b>P-value</b>	<b>Result</b>
<b>Total Effect</b>	.553	0.019	Significant Impact
<b>Direct Effect</b>	.299	0.016	Significant Impact
<b>Indirect Effect</b>	.254	0.007	Significant Impact

Source: Sobel, (1982)

The result of the total effect between information, communication, and technology and job performance is .553, the impact of the direct effect between information, communication, and technology and employee motivation is .299, and the indirect effect of employee motivation mediating between information, communication, and technology and job performance is .254. This demonstrates that variable employee motivation fully mediates the relationship between information communication and technology, and job performance, and the p-values are significant.

### **RESULTS AND DISCUSSIONS**

This study's findings reveal the significant effect of (ICT) information communication and technology on Job performance with the mediating effect of employee motivation, this segment compares the obtained results with previous research on all the reviewed empirical studies. The result of the study shows that the reliability values are set to standards and all the constructs met the reliable value. Pearson's correlation determines that there is a substantial connection among ICT information communication and technology on Job performance with employee motivation. There is a constructive and robustise correlation between the constructs of origin, which is statistically significant ( $r = 0.820$  and  $r = 0.993$ ,  $n=200$ ,  $p=.000$ ). Therefore, there is a good relationship between the constructs to perform better for future development. Motivating employees to perform well by connecting information communication and technology to increase their knowledge and skills towards job performance to attain the goals. A significant relationship influences ICT, employee motivation, and job performance with a good fit, the regression value of R is 0.883 or 88%. The dependent variable enlightens 50% of information communication and technology, showing the R square is 0.776, or 77%. The adjusted R square 0.765, significance value F is  $0.000 < 0.05$ , and F value is 294.566, which is more than 2, indicating that the model is well-fitted and strong. The T-value specifies the positive results and the P value is significant which is less than 0.05. The model is acceptable and both have a reputable and significant influence on job performance.

Computing the mediating constructs, the significant relationship between employee motivation between ICT adoption and job performance. The observed relationship between two variables independent and dependent and the third interpret variable called mediating variable, which shows the direct effect and an indirect effect of the constructs and measures the total effect between all the information communication and technology with the mediating effect of employee motivation on job performance. P-values are met the significant impact of the total effect is 0.019 which is less than 0.050, the direct effect of the P-value is  $0.016 < 0.050$  and the results met the significant value and the indirect effect of the P-value is 0.007 which is comparatively less than the 0.050 and met the significant impact. And the results revealed as employee motivation strongly fits with information communication and technology and job performance, this approach is used in this study to analyze the data and estimate the results to be combined with the mediating role of employee motivation significant relationship between the two constructs ICT and job performance. This study's results showed that granting the region witnessed the remarkable growth for the future development of an "organizations".

## CONCLUSIONS

The principal objective of study was to analyse the impact of employee motivation through adoption (ICT) information communication and technology on job performance. Encouraging and motivating employees to adopt the information communication and technology for future development to an organization and to improve their performance level to current affairs. Adopting the ICT in an organization assists employees and top management in a positive gratitude for the long-term objective in a gratefulness, technology keeps on improvising up to date and new updation will also be available within six months or one later. Learning a new technology will help to update the knowledge for the latest version and to be promoted in an organization. The findings show that there is a substantial relationship amid Information Communication and Technology, Job performance, and employee motivation. The positive energy of improving the employee performance by motivating them to satisfied their work with providing a good source of training, educating to the new adoption technology, clearing all the doubts to adapt the new technology, storing the data for future reference and easily to take decision making. Adoption of information communication and technology to an organization will support the employees to work better and to improve their job performance in advance level, encouraging the employees in their personal space and professional space to develop their mental strength. Employee motivation plays a major role between the adoption of information communication and technology and job performance for the future development of an organization.

There is an imperative relationship influenced by ICT, employee motivation, and job performance. It shows the R-value, R square value, and the adjusted R-value are attained. The model is good fit and strong. This shows that the F value is more than 2, which indicates that the model accepts and the deviation is not simply unintentional. The significant level of p is 05, which indicates that the T-value is positive. It shows the level of advancing employee motivation will lead to the development of information communication and technology on job performance. There is a significant relationship that mediates employee motivation between ICT adoption and job

performance. Mediation is used to find the affiliation between observed independent variable, observed dependent variable in the occurrence of third variable called a mediator. Here, the results illustrate employee motivation fully mediates between the information communication and technology on job performance. Thus, the researcher found that ICT is positively correlated with job performance and employee motivation. These results, indicates that the increase level of adoption of information communication and technology (ICT) will run for a long term with openness, positivity and the significant influences of the constructs correlated, influences the ICT on job performance and the mediating effect employee motivation between the ICT and job performance will lead to improve the organization in a long term. And also, the researcher discovered that the variable employee motivation, which measures the mediating activity, has a constructive and significant consequence of information communication and technology on job performance. These empirical results show that the employee motivation will not only help in short term goals, but also to the long-term process.

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