

Article

# Human resource practices and performance in information technology projects

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https://creativecommons.org/licenses/ by/4.0/ Abstract: This quantitative survey was non-experimental and had two goals. An evaluation of predictor variables of empowerment, motivation, teamwork, interpersonal skills, and training and development in project environments was one goal to help explain the industry's high project failure rate. Second, this research tested Bandura's social learning theory and tested the hypothesis that empowerment and motivation boost performance. Using a survey-based questionnaire, the data was collected from 212 employees working in different IT companies in Pakistan. The results revealed that empowerment, motivation, teamwork, and training and development have a significant impact on project performance. Using the results, this study proposes theoretical implications for the researchers and managerial implications for the organizations.

Keywords: empowerment; motivation; teamwork; training and development; IT industry; Pakistan

## 1. Introduction

A widely acknowledged and continuing study by Standish Group International found that 32% of projects succeeded, 44% failed, and 24% were terminated or never delivered. Over 70,000 information technology projects were analyzed over 15 years and showed a consistent tendency toward chronic cost and schedule overruns. Despite its high cost, overruns are typical. Whelan-Berry and Somerville (2010) suggested that organizational change projects have even higher failure rates, 33%–80%, and that academic and practitioner concern for these projects is widespread.

Shepherd and Cardon (2009) stated that only one in 10,000 new product initiatives is delivered, and the cancellation of new product endeavors reduces commitment and effort thereafter (Fu et al., 2009), which harms companies. Murugesan (2012) said this erosion hurts companies' future commercial potential. These project failures persist despite the use of well-known and acknowledged project management strategies to synchronize stakeholder activities, which do not always improve project success rates. Despite 40 years of good methods, Al-Ahmad et al. (2009) report that project failure has persisted into the 21st century. Project failure may result from not delegating decision-making to team members (Cao and Swierczek, 2010; Hwang et al., 2020). This study examined the countering approach of individual and team empowerment to promote skill growth and mastery, which Bandura's (1977) Social Cognitive Theory (SCT) identified as key to higher performance, a claim supported by literature in the US and worldwide.

Project management best practices or success factors are well-understood methods for managing projects to achieve objectives within limits (Kerzner, 2019), which Yazici (2011) called project efficiency. Yazici (2009) and Kuen and Zailani (2012) found that over 75% of organizational capacity programs fail and 84% overshoot time or budget. Whelan-Berry and Somerville (2010) estimated that 80% of change projects fail, while Shepherd and Cardon (2009) said fewer than one in ten thousand new product projects deliver, which reduces employee commitment to organizational goals and future business prospects.

Due to this high failure rate, project management is shifting from best practices to behavioral variables like individual and team motivation (Kerzner, 2019). Wuestewald and Steinheider (2012) identified this tendency as the natural convergence of scientific management and humanist psychology methods when firms realize the competitive benefit of adaptive learning. Previous project studies that found employee empowerment improves motivation and project performance have limited sample sizes and restricted sample populations (Biron and Bamberger, 2011; Garegano et al., 2022). Addressing these limitations may improve the external validity of study results and lead to more generalizable conclusions about how HRM practices like employee empowerment, motivation, teamwork, training and development, and interpersonal skills affect project performance, potentially improving practitioner project implementations across industries.

This quantitative survey was non-experimental and had two goals. An evaluation of predictor variables of empowerment, motivation, teamwork, interpersonal skills, and training and development in project environments was one goal to help explain the industry's high project failure rate. Second, this research tested Bandura's (1977) social learning hypothesis that empowerment and motivation boost performance. The study examined a significant and costly phenomenon of high project failure rates despite the use of proven and generally successful management strategies to align stakeholder efforts (Al-Ahmad et al., 2009; Bhatti et al., 2021). This same topic is important for academics studying project management practices and organizational success factors because it adds to the body of knowledge on the validity of applying motivational theory like Bandura's (1977) social learning theory in organizational project environments, a relatively new field of study.

## 2. Literature review

#### 2.1. Stakeholder theory

The initial topic for this research was stakeholder theory, which was defined by a broad review of management methods across sectors (Freeman, 1984). In an interpretative tradition, Freeman (1984) used industrial anecdotes to make arguments and support theoretical debate in his qualitative, elaborative research. The ontological assumption was that individuals define multiple realities, the epistemological assumption was that knowledge comes from understanding experiences and processes, and the axiological assumption was that researcher intuition and biases are important (Dasi et al., 2021).

Although secondary in scope, this pioneering work was nevertheless significant and foundational. This research showed the importance and implications of stakeholder interactions, showing that empowering stakeholders is smart business (Freeman, 1984). Bandura (1977) and the author both concluded that flexibility to make choices boosts intrinsic motivation, whereas Chandra et al. (2012) showed that stakeholder motivation directly improves project performance. Cross-industry sampling backed this study's sample strategy since it showed highly generalizable outcomes.

### 2.2. Motivation theory

Motivation theory, the second arena of this study, was pioneered by Bandura (1977), who presented a social learning theory subsequently renamed the social cognitive theory. This tertiary but fundamental book sought a "unified theoretical framework for analyzing human thought and behavior" (Bandura, 1977, p. 6). The hundreds of citations since publication established the book as a motivational basis, regardless of whether the ambitious aim was accomplished. The idea that freedom to make choices, external incentives, and performance feedback stimulate inherent forces driving performance was crucial to this research.

Bandura's (1977) social learning theory focused on self-efficacy, or personal beliefs, and the ability to achieve objectives. A person with strong self-efficacy believes in and is motivated to achieve a goal. Self-efficacy affects self-perception, which lessens worries and other self-limiting thoughts that restrict goal accomplishment, according to Bandura (Dayaram, 2010; Duden, 2012). Webb et al. (2010) found that failures can limit future goal-setting, which is supported by Sitkin et al. (2011) in their study on the impact of stretch goals on organizations (Ordóñez et al., 2009; Munir et al., 2017).

#### 2.3. Project management

According to Chandra et al. (2012) and Stare (2011), Freeman's (1984) stakeholder theory in review endorsed empowerment as inclusive of stakeholder interests, fostering their engagement, motivation, and performance. Harold Kerzner's tertiary work defining project management, widely published and respected, fits nicely with this. Kerzner's (1987) positivistic perspective of an ontological assumption of one knowable world, an axiological focus on an objective observer, and an epistemological assumption of objective and measurable knowledge was a positivist stance. Despite this positive search for project management success factors, the author employed organizational ethnography, literature studies, interviews, and survey instruments to support the data (Malik et al., 2020). Although sampling covered hundreds of companies in dozens of industries, supporting generalizability, the study lacked data and evidence of even elementary statistical analysis, threatening reliability and limiting subsequent evaluation or replication.

In his many publications on inquiry, Kerzner (1987) revised the success criteria and stressed the necessity of delegation (empowerment) as intervening factors that allow project success (Kerzner, 2019). This study's claim that empowerment increases project success was validated by subsequent secondary work more than 1987 domaindefining tertiary work. The positivistic beliefs of Kerzner supported the use of a quantitative technique in this work, while the absence of data and statistical assessment prompted more precise reporting to reduce validity concerns (Aslam and Bilal, 2021).

#### 2.4. Human resource management practices

An influential paper by Conger and Kanungo (1988) defined empowerment in this field. This tertiary essay used interpretivist qualitative, grounded theory to solidify "growing interest in the concept of empowerment" as a platform for future research (p. 471). This study combined Bandura's (1977) key work with working reality. Epistemology was knowledge gained from processes and experience, ontology was multiple socially constructed realities, and axiology was intuition and values.

Dessinger et al. (2012) called the diagram they created a procedural model since it used words and images to guide a method or activity. Shin et al. (2019) welcomed this approach and cited environmental empowerment hurdles. His theoretical presentation also addressed the structural construct of empowerment as an organizational viewpoint on the problem, which fit well with Conger and Kanungo, suggesting a continuation of support for this key work over 25 years.

Conger and Kanungo (1988) concurred with literature review judgments that Bandura's (1977) foundational motivational work was limited by problematic participant selection and clinical research settings. They recommended further study on these constraints and other factors including empowerment impacts on initiation and persistence behaviors and leadership style on empowerment practices. Conger and Kanungo's focus on addressing motivation studies' limitations toward a broader study participation pool influenced this study's sample frame, and their acceptance of multiple potential realities influenced their decision to collect data to control for leadership style and participant level in an organization on study variables, which was supported by the literature.

Laura (2011) states that every person's success depends on their basic abilities and attributes, which affect how they communicate technical skills. Any person's outputs rely on their interpersonal abilities, which express technical outcomes. Soft skills are increasingly valued above technical abilities in the IT business (Ali et al., 2018; Otoo, 2019). To evaluate a person's technical talents, consider their interpersonal skills (Ashiem et al., 2009).

Sardi et al. (2021) argue that project managers' qualifications and contributions should include interpersonal abilities as well as technical skills. As many organizations only evaluate project managers based on technical skills, Li et al. (2019) suggest taking a closer look at interpersonal skills and how a mismatch in them can make or break a project and team. Technical talents will not help the organisation without a solid foundation of interpersonal skills and a clear understanding of how an individual thinks, responds, and contributes (Yan and Wu, 2022). Aasheim et al. (2009) add that interpersonal skills should be considered equally to technical abilities when assessing a project manager's qualifications.

Due to global and technological development, organizations are now facing new challenges. Technological advancements in industries have molded the needs of competencies and capabilities required to perform a particular task (Yan and Wu, 2022). To cope with these changes and challenges, more effective and improved training sessions are required by all corporates. Few studies have already been able to

explore the effect of mutual dependence between productivity, profitability, and training. It is important for organizations to design helpful training programs very effectively and carefully (Michael Armstrong, 2000; Jong et al., 2019). Muhammad et al. (2021) mentioned that training and development improved employee performance, which ultimately caused project success in organizations. Those firms that improve the training designs according to the needs of their employees achieve the firms' performance very easily (Lin et al., 2022).

Many researchers have analyzed and investigated the main causes of imperfections and quality defects, one of which Kim et al. (2019) identified as poor workmanship and another of which Atkinson (1999) described as a human error. So, training and development are a necessary part of the organization because giving training is time-saving and cost-effective. Dearden et al. (2000) employed the first difference, fixed effect model to examine the UK, and the result reported that there is a significant relationship between training and productivity. Hansson (2001) used the OLS difference approach to find the relationship between profitability and training. The result of the study suggested that training is positively related to project success. Many studies found that training and development have a positive impact on the different dimensions of a firm's performance: product development, product quality, growth in sales, and market share (Elahi et al., 2022; Ren, 2023).

Up to now, there have been many theories of teamwork available. All of them claim that appropriate coordination between project team members can benefit project success and meet the goals and objectives (Lee et al., 2021). The subject of teamwork has been examined by organizational psychologists or social psychologists and by different schools (system dynamics, behaviorism, human relations). The empirical literature on the importance of teamwork is abundant. From the literature review, it is found that coordination is rarely considered the critical success factor of the project (Zhang et al., 2021). Teamwork between the employees of the organizations helps to improve deep learning that results through problem-solving, interaction, communication, collaboration, and cooperation (Johnson and Johnson, 1995; Mani et al., 2022).

Assaad et al. (2014) collected data from 13 different teams of large buildings in Saudia to determine the relationship between project success and teamwork. Analysis of data obtained by teams showed a very strong relationship between team effectiveness and project success. Park and Huh (2018) did planned and scheduled research on the benefits of teamwork and its linkage with team performance. They argued that teamwork had a significant influence on team performance in many projects. Froebel and Marchington, (2005) concluded that teamwork not only provides a comfortable working environment but also helps to increase the chances of project success and achievement. Teamwork has become a characteristic of all industries where projects are delivered by various experts and professionals as a team. These professionals include contractors, architects, specialists, material suppliers, and other government planners and engineers (Devi et al., 2018; Zhu and Cheung, 2023).

Morcov et al. (2020) found that the characteristics of effective teams included trust, a high degree of cooperation, open and timely effective communication, and ethical behavior. Hoegl and Parboteeah (2003) collected the data of managers and leaders of 145 teams specializing in software development companies. He reported

that an open exchange of pertinent information and good coordination during the task enhance the team's effectiveness. Ensley et al. (2000) identified that teamwork promotes high understanding and fewer conflicts when members of a project team openly communicate with each other. Previous studies of teamwork indicated that the success of every project is heavily dependent on effective communication, establishing good trusting relationships within the team, appropriate management of internal conflicts, and setting and agreeing on comprehensible goals (Kerzner and Saladis, 2013; Dalal, 2011; Zheng et al., 2023).

Based on the above literature, the following hypotheses were proposed:

H1: Empowerment positively influences project performance in the IT industry.

H2: Motivation positively influences project performance in the IT industry.

H3: Teamwork positively influences project performance in the IT industry.

H4: Interpersonal skills positively influence project performance in the IT industry.

H5: Training and development positively influence project performance in the IT industry.

## 3. Research methodology

#### 3.1. Research design

This study used a non-experimental survey design. Quantitative research describes trends or explains variable relationships, according to Creswell (2005). This research should use a quantitative technique to examine variable connections. This study's research question—quantifiable metrics and changeable associations—fits this idea. Thus, the quantitative approach is best for answering the research question and achieving this study's goal, according to Swanson and Holton (2005). Creswell (2009) states that survey research investigates a single time point and is adaptable, efficient, and generalizable, making it beneficial in descriptive and correlational investigations. For this research, respondents were surveyed using two previously used and field-tested survey tools integrated into one structured questionnaire.

#### 3.2. Sample

This research targets all Pakistani project managers working on significant IT systems development projects. Anyone who did not meet these criteria was excluded from the research. Demographic, lifestyle, occupational, and geographical aspects are considered in the sampling frame, which accurately represents the population. The study's target population, confidence level, and confidence interval must be specified before determining its size. This study's goal sample size is 200 using random convenience sampling, a 95% confidence level, and a  $\pm/-5\%$  confidence interval, assuming a normal distribution.

For this study, convenience sampling was used. Contact with prospective respondents begins with a random convenience sample. This research used recruitment and selection for sampling. As this was a web-based survey, everyone who fit the requirements and made it to the website and decided to participate was picked, and questionnaires were begun and finished. Returning questionnaires anonymously to the researcher counts as study participation. The questionnaires were sent to 400 potential respondents. After waiting for four weeks, a friendly reminder was given to the participants. In a two-month span, we received 224 questionnaires, of which 12 were eliminated for not meeting the minimum criteria. Hence, a total of 212 questionnaires were used for further analysis.

#### 3.3. Instruments/measurements

This research collected data using two validated survey questionnaires. Demographics, senior leader experience, and IT program/project manager or team/task leader experience comprise the instrument. The demographics section covers respondent demographics. The senior leader experience section asks how the project leader views success based on his or her experiences. The IT program/project manager or team/task leader experience section asks how the project manager or team/task leader experiences. All questions were scored on a 5-point Likert scale, with 1 = strongly disagree and 5 = strongly agree.

## 4. Results

## 4.1. Demographic statistics

The demographic profiles of the respondents are displayed in **Table 1**. The results indicate that 116 respondents are male, whereas 96 are female. Of the 212 respondents, 70% of employees are single, whereas married employees account for only 30%. For educational background, 103 employees (49%) have graduation degrees, followed by 73 master's degree holders (34%), 29 diploma holders (14%), and only 3% have different certifications. For age category, 19% of employees belong to the age group of less than 25 years, whereas 29% of employees are 26–30 years, 28% of employees are 31–35 years, 17% of employees are between 36–40 years old and 7% employees are more than 40 years old. The majority of the respondents have 1–2 years (74) of experience, followed by 68 respondents who have 3–4 years; more than 4 years of experience accounted for 19%; and only 14% have less than one year of experience. Of the 212 respondents, 139 employees are working in non-managerial positions and 73 employees have managerial positions, in their respective organizations.

Demographic variable		Frequency	Percentage
Gender			
	Male	116	55
	Female	96	45
Marital status			
	Married	63	30
	Single	149	70
Education			
	Graduation degree	103	49
	Master's degree	73	34

Table 1. Demographic	profile of the re	espondents (	N = 212).
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Demographic variable		Frequency	Percentage
	Diplomas	29	14
	Others	7	3
Age			
	Less than 25 years	41	19
	26-30 years	62	29
	31–35 years	59	28
	36–40 years	35	17
	More than 40 years	15	7
Experience			
	Less than 1 year	29	14
	1-2 years	74	35
	3–4 years	68	32
	More than 4 years	41	19
Position			
	Managerial	73	34
	Non-managerial	139	66

Table 1. (Continued).

#### 4.2. Descriptive analyses

The descriptive statistics are available in **Table 2**. All the means and standard deviations indicate that the respondents mainly agreed with all the questions.

	Ν	Minimum	Maximum	Mean	Std. Deviation
Teamwork	212	1.00	5.00	4.2726	0.71742
Interpersonal skills	212	1.00	5.00	4.2934	0.74181
Empowerment	212	1.00	5.00	3.2634	0.90981
Training & development	212	1.00	5.00	4.2677	0.79206
Motivation	212	1.00	5.00	4.2962	0.78890
Project success	212	1.00	5.00	4.3632	0.75188

**Table 2.** Descriptive results (N = 212).

#### 4.3. Reliability

Saunders et al. (2009) define dependability as data gathering analysis or approaches' consistency. Cronbach's alpha measures internal stability. Garson (2008) discovered that higher alpha values are preferable. Alpha ( $\alpha$ ) over 0.7 is adequate (Teo, 2009). According to Pedersen and Nysveen (2003), alpha  $\alpha$  should exceed 0.7. At least 0.7 is suggested by Sekaran (2010). Good reliability requires a coefficient estimate of 0.70, according to Pallant (2001). It may range from 0 to 1.

Cronbach's alpha  $\alpha$  reliability coefficient of 5 independent variables and a dependent variable is shown in the study. It demonstrates that all independent and dependent variables were reliable. Motivation (0.834) had the greatest  $\alpha$  reliability coefficient, while training and development (0.732) had the lowest. The reliability ( $\alpha$ ) coefficient ranges in values from zero to 1, and it is also used to describe the factor's

reliability on questionnaires or scales (rating scale, 1 = poor, 5 = excellent) and/or dichotomous. If the alpha score is high, the more reliable the given scale is. Construct validity was used to measure the scale. The estimation should indicate discriminant and convergent validity to achieve construct validity. Things demonstrating that measuring and quantifying the identical build connects decidedly with each other are known as convergent validity. The relationship between building connections was broken down for discriminant and united legitimacy. The study meets the model and makes the tool sufficiently and adequately legitimate to be used as a part of the main study (Malhotra, 1999). The results are given in **Table 3**.

Variables	Cronbach's α
Project success	0.777
Motivation	0.834
Training and development	0.732
Interpersonal skills	0.800
Teamwork	0.768
Empowerment	0.813

**Table 3.** Reliability analyses.

## 4.4. Correlations

The correlation analysis among independent and dependent variables is displayed in **Table 4**. Pearson's statistics may be 0 to 1, they may be positive or negative. When r is close to 1, it means there is a strong correlation between two variables. When r is close to zero, there is a weak association between the two variables. When r is (+), it means that when one variable increases, the second variable also increases or vice versa. This is known as a positive correlation between variables. When r is negative (-), it means that with the increase of one variable, the other variable decreases. This is known as a negative correlation between variables. Sig (2-tailed) is also found in the correlations box. If its value is greater than 0.05, it shows that there is no correlation between the two variables. If its value is less than or equal to 0.05, it shows significant correlations between two variables.

The relation between training and development and project performance is 0.845, which shows a significant positive relationship between these two variables. The relation between training and development and teamwork is 0.741, which shows a significant positive relationship between these two variables. Its relation with trust is 0.807, empowerment is 0.108, and motivation is 0.841. Therefore, the relationship between training and development and project performance, teamwork, trust, employee participation, and human capital is significantly positive. The relationship between teamwork and project success is 0.814, showing a significant positive relationship between these two variables. The relationship between teamwork and project success is 0.814, showing a significant positive relationship between these two variables. The relationship between teamwork and training and development is 0.741, showing a significant positive relationship between these two variables. Its relation to interpersonal skills is 0.824, employee participation is 0.047, and motivation is 0.794. Therefore, the relationship of teamwork with project performance, training and development, interpersonal skills, empowerment, and motivation is significantly positive. However, its relationship with empowerment is

not strong.

	1	2	3	4	5	6
Project performance	1.000					
Teamwork	0.614*	1.000				
Interpersonal skills	0.514*	0.245*	1.000			
Empowerment	0.092	0.047	0.113	1.000		
T&D	0.492*	0.411*	0.207*	0.108*	1.000	
Motivation	0.530.6*	0.334*	0.384*	0.138*	0.401*	1.000

Table 4. Correlational results.

\* Significance at 0.01 level.

#### 4.5. Structural equation modeling

"SEM is a multivariate statistical process that allows testing of theoretical models using latent variables and multiple indicators" (Testa, 2001). SEM is crucial for testing theories, not developing them. Byrne (2001) defined SEM as "a statistical technique for testing and estimating causal relationships using a combination of statistical data and qualitative causal assumptions." For this, use AMOS 20. SEM is "based on two components, a measurement model and a structural model." Measurement models link observable responses, or 'indicators', to latent variables and occasionally covariates. The structural model describes latent variable relationships and regressions on observable variables.

The first step of SEM application is to apply confirmatory factor analyses to independent and dependent variables. CFA is performed in order to find out the factor structure adopted from various valid measuring instruments. Kline (2010) claimed that CFA helps to find out the fitness of data on a hypothesized model based on previous theory or empirical studies. Before proceeding further, it is necessary to discuss fit indexes, upon which criteria of model acceptance are based.

In this study, we use the type three approach because it is a combination of structural and measurement parameters to complete the tests. According to Byrne (2001), SEM is an important quantitative data analytical technique and approach that identifies, estimates, and then tests the theoretical relationship between latent unobserved exogenous variables and observed endogenous variables. SEM includes path analysis, confirmatory factor analysis, partial least squares path analysis, latent growth modeling, and AMOS. SEM does not consist of a single statistical procedure, but it combines factor analysis and regression as well. Even though each technique of Structural Equation Modeling is different, the following features are the same in many SEM models: This SEM technique starts with the model specification. Kline (2005) found that it links the variables that affect each other, and after that, the directionalities of those effects. All items for empowerment, interpersonal skills, motivation, project performance, teamwork, and training and development are greater than 0.70, whereas all the fit indices are showing adequate for all scales.

In order to find out the impact of independent variables (teamwork, motivation, training and development, interpersonal skills, and empowerment) on the dependent variable (project performance), a path analysis is run while using AMOS 20. **Table 5** 

indicated that teamwork (0.185), training and development (0.217), motivation (0.389), and interpersonal skills (0.164) have a significant impact on project performance.

			Estimate	S.E.	C.R.	Р
Project_Performance	<	Team_Work	0.185	0.052	3.557	***
Project_Performance	<	T&D	0.217	0.051	4.282	***
Project_Performance	<	motivation	0.389	0.055	7.011	***
Project_Performance	<	interpersonal skills	0.164	0.049	3.349	***
Project_Performance	<	empowerment	0.415	0.019	9.791	***

Table 5. Path analysis (measurement model).

## 5. Discussion and conclusion

## 5.1. Implications

In recent years, project management (PM), communication factors, and technological factors are supposed to be the critical success factors (CSF), necessary for the success of the projects. At that time, the scholars put less emphasis on the impact of HC practices on project success. So, the main purpose of this study is to highlight the role of effective HC practices as the CSF that proves to be important for the project's success. By building on empirical studies and existing theories, this study is developed to demonstrate to what extent variables of training and development, interpersonal skills, teamwork, and empowerment play a role in project performance. The evidence provided by the analysis indicates that organizations are interested in development and success. HC has become a crucial element in the IT sector of Pakistan. Many organizations implement HC to meet the needs of their employees and customers. This paper has made its presence and importance in the field of HC by targeting all IT sectors of Pakistan. The objective of this study is to explore the relationship between training and development (T&D), motivation, interpersonal skills, teamwork, empowerment, and project performance. It is proved by the study that all the projects are not delivered by methodologies or techniques but by people. Hence, the success of the project depends on how to utilize project resources more adequately.

Likewise, cooperation and collaboration among employees and teamwork must be confirmed for the success of project activities. The current study provides an understanding of the workplace situation in the IT sector of Pakistan. For this, a wellstructured questionnaire was used to collect the responses to learn about the relationship between human capital and project success. This paper used quantitative data analysis to conduct the research and test all hypotheses. A linear regression analysis and CFA were used for this paper. Moreover, the present study developed to make an addition to the existing literature on project success by measuring the role of human capital practices. It is noted that HC has a higher impact on project success as compared to all other variables. Similarly, coordinated teamwork among the employees and employee participation positively affects project success among IT sector employees in Pakistan. It also suggests that project managers, project sponsors, and all the employees should work coordinately to enhance the outcomes of the firm. Interestingly, training and development as an IV and its influence on project success as a dependent variable led to the conclusion that it has an insignificant impact. This finding is also found in the study of Pinto and Prescott (1988). The absence of the impact of training and development on project performance also confirms the unique and temporary nature of projects (PMI, 2008), so we should neglect long-term activities.

## 5.2. Recommendation

Based on the above analysis, the researcher can make these recommendations.

- Motivation must be recognized as a crucial factor for the project's success.
- Organizations should invest in motivation for greater profitability.
- For better collaboration, it is confirmed that all employees share their experience, skills, and knowledge.
- The organization must provide a healthy and safe environment for its members where innovative ideas and creative thinking can take place.
- Training and development cause extra expenditures and costs that organizations want to save because of limited budgets.

## 5.3. Limitations

We want to recognize the limitations of our study. The current study was done in the context of the IT sector in Pakistan. The paper studies the impact of human capital on project success and the performance of organizations, which is a broad topic. However, due to a shortage of our budget, the sample size of the paper was kept low, and the number of questionnaires was limited. The results obtained from this research paper are also limited to the IT sectors of Pakistan, so the ability to generalize is limited for this paper. Low-level workers were not included in the research. For future research, we will find and establish several opportunities that are important to strengthen the concept of project success. The body of research is weak as it lacks other organizations that explain project success. The present study mainly focused on the IT sector of Pakistan. For future studies, the researcher should consider other industries like pharmaceuticals, software companies, airlines, etc. The researcher has investigated the concept of motivation in Pakistan. In the future, the researcher can test human capital in other countries. For further study, the researcher can take more variables to explain the impact of motivation on project performance.

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