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Influence of Workforce Diversity on Employee's Performance: A Mediating Effect

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Abstract

The workforce has been recognized as an essential factor that enhances productivity and leads a business to achieve growth and success. The diversity of people within a business is referred to as workforce diversity. It includes many factors such as origin, age, ethnic background, race, gender, style of reasoning, years of service learning, and organizational role. This research paper discusses workforce diversity and inclusion with reference to the Indian telecommunications sector. In contemporary trends in human resource management, workforce diversity and inclusion have played a pivotal role in organizations. This study has been undertaken to assess the impact of workforce diversity (WD) on employee performance (EP) with respect to the employees of the telecommunications sector in India. Workforce diversity enhances alliances and reduces bias, leading to enhanced productivity. The concept of WD has become popular in human resource management in the last few decades. This paper focuses on how alliances work in the organization. A survey was undertaken on telecommunications employees, and the data was collected from primary sources. Convenience sampling has been adopted to assess the relationship between workforce diversity and employee's performance in telecommunications. The data was analyzed through the Statistical Package for the Social Sciences (SPSS). The results have indicated that there is a positive influence of workforce diversity on the performance of employees through sustainable innovation. Workforce diversity and employee performance have been measured with respect to the different determinants, which were found to be positively correlated. The findings of the study have

supported the proposition related to the association between workforce diversity and the performance of employees. According to the findings of the study, efficient management of workforce diversity can result in more dedicated, contented, and productive employees.
Keywords- Employee Performance, Manpower, Sustainable Innovation, Workforce Diversity and Workforce.

1. Introduction

Diversity is the alignment of the different qualities. Age, color, ethnicity, religion, gender orientation, language, cultural background, tutoring & education, and skill set are a few examples of these. A diverse workforce adds significant value to organizations and reflects the shifting nature of the market and the globe. Increased productivity, lower employee attrition, and more creativity and innovation are some of the main benefits of a diverse workforce. Diversifying a team can increase productivity to a greater extent. Managing workforce diversity is critical to bringing and keeping top talent, increasing profitability, boosting output from employees, and offering superior customer service (Plummer & Jordan, 2007). It also calls for an inclusive workplace where each worker is treated with respect and worth.

Numerous studies have examined workforce diversity, and their findings have shown a range of effects. Studies show that diversity in the workforce includes racial and gender variances as well as differences in age, cultural background, physical ability, and disabilities among employees. Relatively small percentages of workers place a high value on diversity in their jobs, despite most workers viewing increased diversity, equity, and inclusion in the workplace as a desirable trend. The studies have indicated when organizational conditions are favorable workers can make use of cultural differences to accomplish team objectives and enhance the overall effectiveness of the workplace. Furthermore, studies indicate that having a diverse workforce can improve an organization's competitive edge, retain talent, and foster a more welcoming workplace. Different results are linked to workforce diversity, especially about race and gender. Increased market share, earnings, and sales income correlated with racial diversity. Increased earnings, a wider client base, and higher sales revenue were all linked to gender diversity. However, more group conflict may also be linked to racial and gender diversity, which could benefit the organization. A diverse workforce is necessary to create an inclusive workplace where all workers feel appreciated and respected. It encourages equitable chances for all workers and aids in the reduction of bias and discrimination in the workplace. Since workers are more inclined to stick with an organization that recognizes and respects their differences, a diverse workforce also aids in attracting and keeping outstanding talent. It is acknowledged that the telecommunications industry is a crucial tool for the growth of an economy (Chahal et al, 2016).

Over the decade, the Indian telecom industry has shown remarkable development. Establishing an inclusive and diverse organizational culture is essential to managing workforce diversity. This includes hiring skilled and competent employees, meeting each person's needs within the parameters of the work team and the company, and making sure managers and supervisors are equipped with the knowledge and abilities needed to deal with a diverse workforce.

Additionally, it calls for educating and training staff members to foster cultural sensitivity and knowledge. Creating and introducing novel goods, services, technology, or business plans with favorable influence on the society, economy and as a whole can be called sustainable innovation (Saxena, 2014). It entails coming up with innovative and practical answers to urgent problems including resource depletion, pollution, inequality, and poverty, as well as climate change. Fulfilling present requirements without compromising the ability of future generations to comply their own needs is the main objective of sustainable innovation. It varies from conventional innovation in that it takes social and environmental aspects into account in addition to economic ones. Sustainable innovation typically emphasizes long-term transformation and incremental, evolutionary changes. It falls into three main categories: systems building, organizational transformation, and operational optimization. The effectiveness and efficiency with which an employee fulfills their job obligations and responsibilities are referred to as their employee performance (Alavi et al., 2013). It has a critical role in establishing the effectiveness, profitability, and general success of an organization. A variety of factors, such as training, workplace culture, and the capacity for teamwork, impact employee performance.

Organizations that regularly evaluate employee performance are better able to pinpoint problem areas, offer assistance and training, and make sure that everyone is pursuing the same objectives. Moreover, firms in a variety of industries, including the telecommunications sector, now consider Diversity, Equity, and Inclusion (DE&I) to be vital priorities. Telecommunications firms may improve decision-making, draw in top people, and establish a great reputation by adopting DE&I. The telecommunications sector is essential to the worldwide connectivity of individuals and enterprises. Nonetheless, there has always been a problem with the condition of diversity and inclusion in this industry. Telecommunications firms need to be aware of the value of diversity and take proactive measures to establish an inclusive work environment to promote innovation, creativity, and sustainable growth. Despite recent improvements, there are still large diversity gaps in the telecommunications sector. However, the sector is progressing in DE&I, as seen by the adoption of effective DE&I strategies by businesses like Verizon, Nokia, and BT Group. There will be significant changes in the ways that telecommunications networks are constructed and managed as 5G develops into a more open, software-defined, and cloud-native network technology (Telecommunications, 2023).

Diversity and inclusion are becoming increasingly important as the workforce and technology evolve, not only because they are the moral thing to do but also because they are beneficial to businesses. Numerous studies have been conducted on workforce diversity, and the literature has highlighted the range of effects and its consequences. According to previous research, having a diverse workforce can improve an organization's adaptability, innovation, problem-solving skills, acquisition of resources, profitability, competitive edge, clientele, revenues, and cost-cutting. Diversity in the workforce has also been connected to higher decision-making, increased productivity, and a favorable reputation. According to Krome (2014) When diversity among employees is integrated into the “strategic” decision-making process, it can help maintain the benefits of strategic assets by making a diverse workforce more specific and

persistent and diverse (p.105). However, there has been debate regarding the efficacy of organizational diversity training, and it has been highlighted how important it is to have crucial initiatives like mentorship, diversity task forces, and diversity managers. The advantages of having a diverse workforce, such as increased productivity, creativity, and innovation, have been emphasized in numerous studies. A diverse workforce can result in financial improvements, underscoring the beneficial effects of diversity on organizational performance (Gomez & Bernet 2019).

Furthermore, there is a correlation between a diverse workforce and enhanced decision-making, enhanced comprehension of client requirements, and favorable effects on an organization's image and financial performance. The literature has discussed the drawbacks and difficulties that come with having a diverse workforce, such as the requirement for efficient dispute-resolution techniques and the maintenance of an inclusive workplace. It highlights how crucial it is to acknowledge and handle labor diversity as a social and moral requirement, especially as economies move from manufacturing to services and as globalization grows. The literature offers insights into management tactics to improve worker diversity, such as inclusive organizational cultures, training, and education programs, and hiring and retention procedures. It also highlights the necessity for tailored strategies that meet the requirements of various organizations. The necessity of managing diversity to help the diverse workforce realize its full potential, the recognition and effective management of workforce diversity by organizations, and the complexity of managing workforce diversity as a phenomenon. The literature also highlights the necessity to comprehend, anticipate, and manage the diverse nature of the workforce as well as the lack of a clear definition of workforce diversity. Diversity in the workforce is widely seen as improving an organization's expertise and viewpoints. The literature, however, presents contradictory findings, and most of the research has not specifically noted the issues with diversity dimensions. The literature has suggested a future research agenda to maximize the benefits of workforce diversity to overcome these obstacles. In addition to highlighting the necessity for effective management, acknowledging the complexity of workforce diversity, and the possibility for future research to further understand and utilize its benefits, the literature on workforce diversity highlights the multidimensional impact that diversity has on organizations. The literature evaluation presents contradictory results about the influence of a diverse workforce on worker productivity. Although certain research indicates a favorable impact, others present contradictory or unfavorable findings. Various factors, including industry, organizational culture, and geographic location, might have a substantial influence on the performance of an employee. The evaluation may indicate that further research is necessary to fully comprehend the subtleties of workforce diversity (Martín Alcázar et al., 2013).

In conclusion, although the literature review offers insightful information about how workforce diversity affects employee performance, it is crucial to recognize the contradictory results, lack of agreement, contextual factors, possible publication bias, and the necessity of additional research to fully understand the relationship between workforce diversity and performance. This may further exacerbate the literature's lack of agreement. Rather than considering the more general idea of workforce diversity, a large portion of the literature concentrates on diversity

dimensions, such as gender or age because it ignores the possible relationships and synergies between various diversity dimensions, which may restrict our knowledge of how diversity affects employee performance. Rather than emphasizing employee performance, the literature frequently concentrates on how workforce diversity affects organizational performance.
Prior research on worker performance has examined a range of performance-influencing elements and strategies for enhancing employees' performance. Important conclusions from these investigations include job performance, work environment, and several variables, including the physical workspace, employee incentives, and performance reviews which can affect employees' performance. Sometimes, Work-life balance and job satisfaction might have a positive impact on worker performance since an organization's financial and non-financial results are closely correlated with employee performance, high-performing workers are essential to achieving organizational objectives and gaining a competitive edge. A worker's performance can be affected by several individual elements, including quality, support from supervisors, cognitive ability, personality, leadership, and supervisor behaviors that are supportive of the family. Increased productivity can result from workforce diversity, which encompasses both differences and similarities in terms of cultural background, physical abilities, age, race, and gender among employees. The success of a business depends on the implementation of a clear framework for assessing employee performance. Evaluations of an employee's performance might affect their emotional work tasks, as well as assessments of their competence and level of dedication. A variety of elements, including the work environment, work-life balance, individual and group factors, and workforce diversity, can affect an employee's performance. To increase employee performance and accomplish their objectives, organizations should prioritize developing a welcoming and inclusive work environment, encouraging work-life balance, and putting in place efficient processes for performance management and evaluation. Numerous significant conclusions from earlier studies on the effect of workforce diversity on worker performance have been drawn. According to a conceptual framework study, age diversity significantly lowered employee performance ratings, but gender diversity significantly raised them. Workforce diversity can affect employee performance in organizations, according to an empirical study conducted in the telecom sector to better understand the impact of diversity characteristics on employee performance. Furthermore, studies have demonstrated that while higher levels of gender diversity may hurt organizational performance, moderate degrees of gender diversity can strengthen a company's competitive edge.

Additionally, different studies are linked to workforce diversity, especially about gender and ethnicity. Increased market share, earnings, and sales income were all correlated with racial diversity. Increased earnings, a wider client base, and higher sales revenue were all linked to gender diversity. However, more group conflict may also be linked to racial and gender diversity, which could be beneficial for the organization. According to the research, employee performance can be significantly impacted by workforce diversity. While racial and gender diversity have been linked to several advantageous outcomes including higher sales income and market share, gender diversity has been demonstrated to have both good and negative effects on employee performance. However, it's also critical to consider the difficulties and disputes that could result from workplace diversity (Saksena, 2014). There are differences in

the association between employee performance and workforce diversity depending on the industry and type of job.

Diversity can have a good, negative, or neutral effect on employee performance, depending on several variables, including the industry, the job responsibilities, and the leadership and culture of the organization. To optimize the advantages of having a diverse workforce, organizations should take these elements into account when putting diversity and inclusion programs into action. Diversity in the workforce may benefit sustainable development, according to earlier research. Studies have indicated that effective management and utilization of workforce diversity can result in enhanced productivity and workplace sustainability. Furthermore, a study that emphasized the connection between diversity and organizational success provided a strategy for creating a workplace diversity climate that is sustainable. Moreover, diversity in the workforce has been linked to higher production and is regarded as a crucial component in raising total output. These results imply that, when handled well, workforce diversity can enhance productivity and promote workplace sustainability in a way that is consistent with sustainable development. Kundu & Mor (2017) diversity dimensions impact employee performance in telecom companies. The performance of new ventures and organizations could benefit from a generally positive perception of workforce diversity.

2. Literature review

2.1.Workforce diversity

Diversity in the workforce is essential for businesses to thrive in the globalized world of today. Diversity in the workforce refers to the range of demographic traits (Makhdoomi & Nika 2017). It encourages diversity, creativity, innovation, productivity, and inclusivity while assisting businesses in better comprehending and serving the needs of their varied clientele (Scholtens, 2008). Research on workforce diversity's beneficial effects on worker performance is mixed; some studies highlight the difficulties and complexities of managing a diverse workforce, while others highlight its benefits. The literature research might not have sufficiently addressed the scope and contextual elements that may have an impact on the association between employee performance and workforce diversity. Managing a diverse workforce necessitates developing an organizational culture that respects and celebrates individual differences as well as offering staff education and training to foster cultural sensitivity and understanding. There has been a change in the composition of the workforce concerning the Indian service sector (Bagul, 2021) (p. 449). The body of research on workforce diversity offers a thorough grasp of the idea and information on its advantages, difficulties, and management techniques. It emphasizes how crucial a diverse staff is to a company's ability to succeed, innovate, and satisfy the demands of a clientele that is growing more and more varied. The body of research also emphasizes the necessity of proactive and customized management strategies to guarantee that workforce diversity is successfully utilized to produce favourable organizational results.

2.2.Sustainable Innovation

The goal of this survey of the literature on sustainable innovation is to offer a thorough grasp of the idea, its implications, and its applicability in the modern world. The body of research on sustainable innovation has expanded dramatically in the last several years, with countless

studies examining different facets of the subject. Boons et al., (2013) sustainability issues have become pervasive around the world to turn constraints into economic possibilities. Important conclusions and themes from the literature consist of the creation and use of novel goods, services, technology, or business plans with favorable effects on the environment, society, and economy is known as sustainable innovation. It covers a broad range of topics, such as the circular economy, renewable energy, and intentional product innovation. To solve urgent global issues including resource depletion, social inequity, and climate change, sustainable innovation is essential. It assists organizations in addressing current demands without jeopardizing the capacity of future generations to address their own needs. Corporate culture has been accepted by researchers as one of the crucial factors responsible for innovation (Khan et al., 2021). In an organizational setting, it is important to highlight each company's unique capabilities and innovation potential. Research in this area emphasizes the ability to create novel innovations as well as ways to integrate it with other business operations to create a proposition for value that people want (Boons et al., 2013).

2.3. Employees performance

The performance of employees plays a vital role in the success of a business enterprise. Employee performance relates to the output as well as the efficiency of employees in terms of the business growth in the end, how well employees perform will determine how effective the organization is (Hameed & Waheed, 2011). Diamantidis & Chatzoglou, (2018) stated that employee performance is significantly impacted by the environment of the organization (p.19). Griffin et al., (1981) found a very positive relation between perceptions of task and performance of employees. López-Cabarcos et al (2022) the organization gets valued through the behaviour of an employee. Employee performance is improved by teamwork and cooperation (Pawirosumarto et al., 2017). Positive employee relations encourage higher performance from staff members and support the organization's success (Brhane & Zewdie, 2018). Employee performance also impacted by the behavioural influence in the organization (Pradhan & Jena, 2017).

2.4. Workforce Diversity and Employee Performance

According to Makhdoomi & Nika (2018), the dimensions of workforce diversity and employee performance have positive impact towards each other. Kumar & Suresh (2018) observed that one of the key driving forces for supporting competitive advantage is the diversity among employees at workplace. Selvaraj (2015), he conducted his study in Singapore found through his study that culture that prevails in the organization and diversity concerning human resources are different in each and every organization and the differences influence employee performance with respect to the different organizations in Singapore. Gupta (2011) found through their research that top administration culpability, need evaluation, better plan, effective communication & assessment acted as mediators in the study.

2.5.Workforce diversity, Sustainable innovation, and Employee performance

Salau (2023) studied the Southwest Nigerian Small and Medium Enterprises (SMEs) relationship with respect to sustainability and workforce diversity. Through quantitative

analysis it was observed that out of the different dimensions contributing the workforce diversity, gender diversity and ethnic diversity positively impacted sustainability of Small and Medium enterprises in Nigeria. Won et al., (2021) conducted a study based on a survey among 58 companies in Singapore and they found from structural equation modelling that the highly tapped potential of the workforce leads to sustainable innovation. Varadarajan (2015) organizations that encourage progressive practices can be acknowledged to be more sustainable and innovative-oriented.

3. Hypotheses of the study:

H1: There is a significant impact of Workforce Diversity on Employee Performance

H2: There is a mediating role of Sustainable Innovation on Workforce Diversity and Employee Performance.

4. Rationale of the study

The inquisitiveness towards workforce diversity and employee performance concerning sustainable innovation in the sector of telecommunications has allowed this research to be undertaken. All three constructs have been chosen to conduct the research in human resource management. Sustainable innovation from an employee perspective has allowed many research questions in this study to be undertaken. The telecommunications industry is the pinnacle of the nation's invention, progress, and virtual development (Chahal, 2016). Since the body of current literature may not offer a thorough grasp of the topic, it has become crucial to know what impacts employee performance the most with respect to sustainable innovation

5. Research methodology

5.1.Measures

The study has adopted a five-point Likert scale to measure each construct, where 5 means strongly agree and 1 represents strongly disagree. Five factors have been selected for assessing workforce diversity. A multiple-item scale has been adopted from the structured questionnaire. For sustainable innovation, three factors namely, knowledge innovation, continuous improvement, and market innovation were chosen. For the third construct, employee performance, which is the study's dependent variable also, three factors namely contextual performance, task performance, and adaptive performance were chosen.

5.2. Data collection

The data has been obtained from two private telecommunications companies namely Airtel and Reliance, both operating in Delhi, NCR, India. The employees were given 400 questionnaires out of which only 299 were returned. A response rate of 74 percent was determined to be effective. There were 162 males and 134 females in the sample, with an average age between 20 and 40.

5.3. Control variables

The respondents' age, education, and job experience, as well as the organizational expansion, have been included as control variables since they may have an impact on the employees' performance and sustainable innovation.

5.4. Conceptual framework

The conceptual framework of the present study includes the three constructs namely workforce diversity, sustainable innovation and employee performance. All three constructs have different factors in the study which are further tested with the item statements.

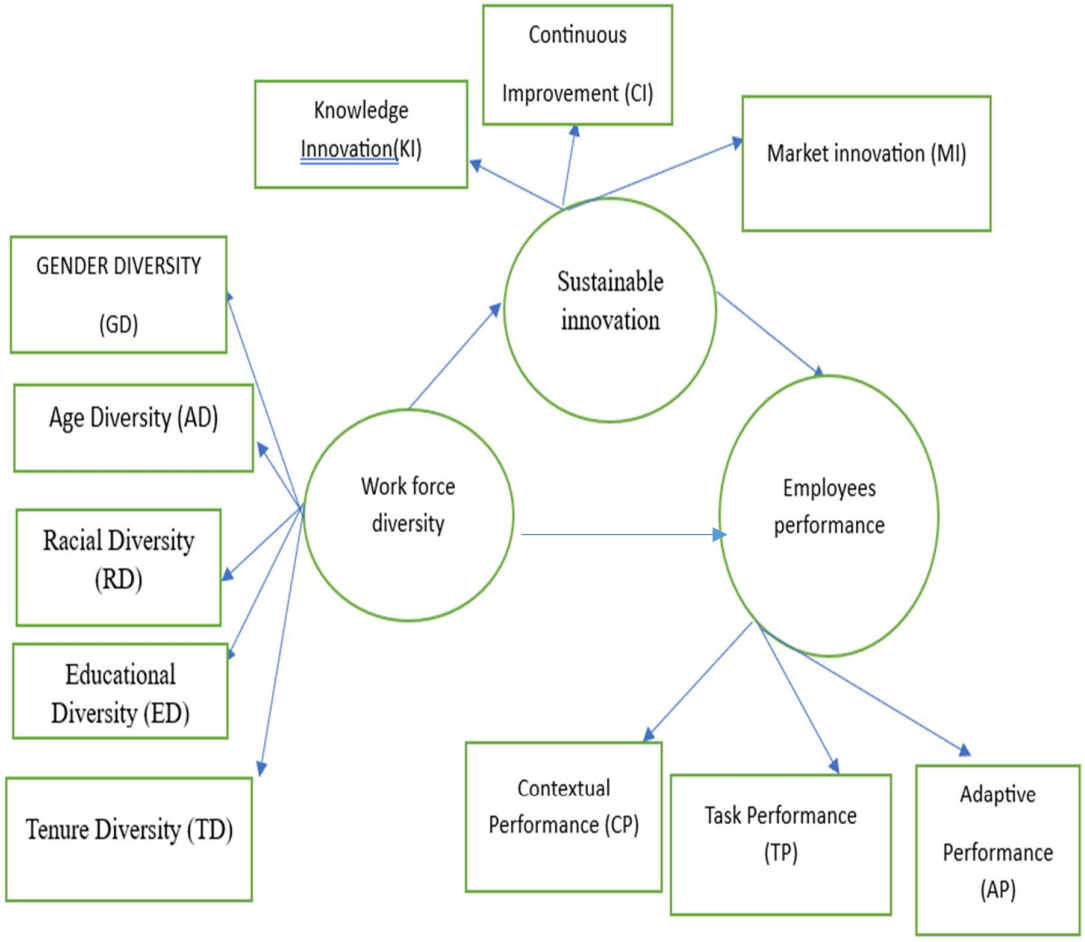

Figure 1: Conceptual framework of the research

5.5. Results and analysis

5.5.1. Exploratory factor analysis

Exploratory Factor Analysis (EFA) is a statistical technique that requires a reduction approach that uses fewer factors to represent the variance in numerous factors (Zikmund et al., 2010). EFA involves varimax rotation and further provides the rotated component matrix. The structure of loadings reveals the variables linked to each construct as well as the potential number of factors. For accurate factor analysis result interpretation, rotated component matrix solutions are under the accepted threshold limit. Every construct has a Kaiser-Meyer-Olkin (KMO) value greater than 0.50, total variance explained greater than the acceptable limits,

factor loadings, and extracted communalities found to be under the threshold limit which was more than 0.4 (Osborne et al., 2019) and eigenvalues for every construct also found to be more than 1 (Hair et al., 2010). For all independent and dependent variables, EFA was carried out using varimax rotation and principal component analysis. The percentage of the overall variance that was explained by different factors varied from four to seven percent. This study does not reveal any significant bias resulting from a common method. Additionally, the measurement model and structural model have been explained by using Smart-PLS software after exploratory factor analysis has been performed in SPSS. Table 1 displays the particulars of the EFA with Kaiser – Meyer- Olkin (KMO) and Bartlett's test of Sphericity which depicts the adequacy of sample of the research which is above the accepted limits of more than 0.6.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.792
Bartlett's Test of Sphericity	Approx. Chi-Square	4876.619
	df	820
	Sig.	.000

Table 1: Kaiser – Meyer- Olkin and Bartlett's test

Rotated Component Matrix											
	Component										
	1	2	3	4	5	6	7	8	9	10	11
TD1	.791										
TD2	.762										
TD3	.692										
TD5	.666										
TD4	.645										
AP4		.788									
AP2		.781									
AP1		.753									
AP3		.633									
AP5		.586									
MI2			.775								
MI3			.756								
MI1			.700								
RD1				.763							
RD4				.740							
RD3				.708							
RD2				.697							
TP1					.787						
TP3					.708						
TP2					.698						

KI2						.781					
KI1						.750					
KI3						.648					
KI4						.584					
ED2							.751				
ED1							.681				
ED4							.659				
ED3							.623				
CI2								.862			
CI1								.816			
CI3								.781			
GD1									.898		
GD3									.833		
GD2									.702		
AD1										.832	
AD3										.723	
AD2										.692	
CP3											.723
CP1											.646
CP4											.642
CP2											.633
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. [a]											
a. Rotation converged in 8 iterations.											

Table 2: Rotated Component Matrix

To measure exploratory factor analysis extraction method of Principal Component Analysis (PCA) has been employed. The method of rotation was varimax rotation which proves the Kaiser normalization. A total of eight iterations have been converged in the rotated component matrix as shown in Table 2 above.

5.5.2. Assessment of the measurement model

5.5.3. Factor loadings

	AD	AP	CI	CP	ED	GD	KI	MI	RD	TD	TP
AD1	0.789										
AD2	0.745										
AD3	0.87										
AP1		0.766									
AP2		0.863									
AP4		0.83									
CI1			0.846								
CI2			0.791								
CI3			0.841								
CP1				0.856							
CP2				0.855							

CP4				0.851							
ED1					0.761						
ED2					0.867						
ED3					0.783						
GD1						0.551					
GD2						0.995					
KI1							0.767				
KI2							0.807				
KI3							0.74				
KI4							0.647				
MI1								0.851			
MI2								0.868			
MI3								0.851			
RD1									0.847		
RD2									0.831		
RD3									0.849		
RD4									0.69		
TD1										0.873	
TD2										0.759	
TD3										0.699	
TD4										0.72	
TD5										0.78	
TP1											0.79
TP2											0.817
TP3											0.845

Table 3: Factor loadings

Factor loading is the extent to which every variable of the construct in the correlation matrix is associated with a certain principal component. Factors AP3, AP5, CP3, ED4, and GD3 that were unable to meet the threshold limit. Therefore, have been removed from further analysis (see Table 3).

5.5.4. Indicator multicollinearity

	VIF
AD1	1.562
AD2	1.287
AD3	1.599
AP1	1.603
AP2	1.759
AP3	1.244
AP4	1.812
AP5	1.211
CI1	1.599
CI2	1.773
CI3	1.520
CP1	1.916
CP2	1.715
CP3	1.059

CP4	1.870
ED1	1.507
ED2	1.746
ED3	1.347
ED4	1.154
GD1	2.146
GD2	1.313
GD3	1.892
KI1	1.461
KI2	1.626
KI3	1.379
KI4	1.203
MI1	1.855
MI2	1.909
MI3	1.735
RD1	1.880
RD2	1.823
RD3	1.963
RD4	1.440
TD1	2.230
TD2	1.701
TD3	1.526
TD4	1.516
TD5	1.643
TP1	1.462
TP2	1.553
TP3	1.525

Table 4: Multicollinearity

No issues of multicollinearity have been found in the model as Variance Inflation Factor (VIF) values are below the threshold limit 0.5 (Hair et al., 2017) (See above, Table 4). VIF shows if there is a strong linear connection between one construct and the other construct.

5.5.5. Construct reliability and validity analysis

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
AD	0.727	0.759	0.844	0.645
AP	0.762	0.619	0.773	0.445
CI	0.777	0.809	0.866	0.684
CP	0.718	0.818	0.813	0.558
ED	0.707	0.781	0.809	0.528
GD	0.759	0.848	0.697	0.474
KI	0.725	0.731	0.830	0.551
MI	0.819	0.820	0.892	0.734
RD	0.822	0.845	0.881	0.651

TD	0.826	0.852	0.878	0.591
TP	0.753	0.762	0.858	0.668

Table 5: construct reliability and validity

Reliability analysis has been assessed in the measurement model through Cronbach alpha for internal consistency and composite reliability (Shown in Table 5). It is an analysis through which the consistency and stability of an instrument is measured. If the composite reliability is greater than 0.6, AVE less than 0.5 can be accepted, the construct's convergent validity remains satisfactory (Fornell & Larcker, 1981). Apart from convergent validity it's important to differentiate the variables through discriminant validity. The degree to which measures of various ideas are distinct is known as discriminant validity. There shouldn't be unduly strong correlations between relevant measures of two or more distinct concepts (Bagozzi et al., 1991). Discriminant validity can be tested through three ways, namely Fornell and Larcker criterion, cross loadings, and Heterotrait -Monotrait ratio.

a) Fornell and Larcker criterion

	AD	AP	CI	CP	ED	GD	KI	MI	RD	TD	TP
AD	**0.803**										
AP	**0.200**	**0.667**									
CI	**0.045**	**0.131**	**0.827**								
CP	**0.365**	**0.258**	**0.034**	**0.747**							
ED	**-0.089**	**0.006**	**-0.098**	**-0.156**	**0.727**						
GD	**0.147**	**0.054**	**0.033**	**0.011**	**-0.048**	**0.688**					
KI	**-0.023**	**0.031**	**-0.031**	**0.050**	**0.345**	**-0.075**	**0.743**				
MI	**0.444**	**0.315**	**0.124**	**0.525**	**-0.111**	**0.086**	**0.018**	**0.857**			
RD	**-0.153**	**-0.034**	**-0.053**	**-0.088**	**0.446**	**0.037**	**0.374**	**-0.041**	**0.807**		
TD	**-0.088**	**-0.069**	**-0.124**	**-0.009**	**0.365**	**-0.098**	**0.503**	**-0.045**	**0.539**	**0.769**	
TP	**0.317**	**0.140**	**0.086**	**0.483**	**-0.215**	**0.074**	**0.027**	**0.505**	**-0.125**	**-0.047**	**0.817**

Table 6 Fornell and Larcker Criterion

This is one of the ways to assess discriminant validity. It is measured when the square root of the value of average variance extracted for an underlying given construct is more than their correlations with all other given constructs of the research as shown in Table 6.

b) Cross loadings

	AD	AP	CI	CP	ED	GD	KI	MI	RD	TD	TP
AD1	**0.789**	**0.126**	**-0.003**	**0.311**	**-0.113**	**0.055**	**-0.042**	**0.288**	**-0.097**	**-0.082**	**0.234**
AD2	**0.745**	**0.183**	**0.065**	**0.154**	**0.071**	**0.150**	**-0.017**	**0.326**	**-0.094**	**-0.071**	**0.082**
AD3	**0.870**	**0.169**	**0.040**	**0.392**	**-0.153**	**0.137**	**-0.004**	**0.432**	**-0.164**	**-0.065**	**0.404**
AP1	**0.122**	**0.766**	**0.107**	**0.225**	**0.005**	**0.058**	**0.033**	**0.184**	**0.039**	**-0.054**	**0.114**
AP2	**0.213**	**0.863**	**0.104**	**0.208**	**-0.025**	**0.081**	**0.018**	**0.273**	**-0.071**	**-0.079**	**0.096**
AP3	**0.030**	**0.216**	**0.019**	**-0.053**	**0.012**	**0.076**	**-0.086**	**-0.136**	**0.047**	**-0.070**	**-0.019**
AP4	**0.155**	**0.830**	**0.100**	**0.164**	**0.034**	**0.022**	**-0.015**	**0.220**	**-0.032**	**-0.076**	**0.145**
AP5	**-0.004**	**0.395**	**0.088**	**0.032**	**0.067**	**0.023**	**-0.014**	**0.029**	**0.110**	**0.023**	**-0.078**
CI1	**0.011**	**0.100**	**0.846**	**-0.006**	**-0.153**	**0.026**	**-0.056**	**0.037**	**-0.054**	**-0.126**	**0.069**
CI2	**0.104**	**0.108**	**0.791**	**0.024**	**-0.030**	**0.060**	**0.043**	**0.152**	**-0.053**	**0.006**	**0.063**
CI3	**0.028**	**0.118**	**0.841**	**0.065**	**-0.038**	**0.012**	**-0.034**	**0.143**	**-0.030**	**-0.140**	**0.079**
CP1	**0.292**	**0.220**	**0.032**	**0.856**	**-0.154**	**0.003**	**0.043**	**0.420**	**-0.079**	**-0.047**	**0.408**
CP2	**0.288**	**0.208**	**0.023**	**0.855**	**-0.158**	**-0.022**	**0.031**	**0.492**	**-0.105**	**0.008**	**0.394**
CP3	**0.008**	**-0.005**	**-0.090**	**0.212**	**-0.017**	**0.060**	**-0.026**	**-0.010**	**0.001**	**0.005**	**-0.058**

CP4	**0.358**	**0.235**	**0.032**	**0.851**	**-0.084**	**0.053**	**0.055**	**0.423**	**-0.037**	**0.015**	**0.435**
ED1	**-0.087**	**0.054**	**0.042**	**-0.142**	**0.761**	**-0.048**	**0.251**	**-0.070**	**0.317**	**0.221**	**-0.188**
ED2	**-0.062**	**-0.006**	**-0.092**	**-0.085**	**0.867**	**-0.047**	**0.334**	**-0.061**	**0.451**	**0.324**	**-0.138**
ED3	**-0.077**	**-0.045**	**-0.155**	**-0.160**	**0.783**	**-0.032**	**0.258**	**-0.139**	**0.299**	**0.341**	**-0.201**
ED4	**-0.011**	**0.129**	**-0.046**	**-0.064**	**0.414**	**0.027**	**0.047**	**-0.026**	**0.164**	**0.040**	**-0.092**
GD1	**0.079**	**-0.003**	**-0.076**	**-0.038**	**-0.011**	**0.551**	**-0.040**	**0.021**	**0.044**	**0.030**	**0.058**
GD2	**0.153**	**0.059**	**0.044**	**0.017**	**-0.045**	**0.995**	**-0.072**	**0.087**	**0.036**	**-0.106**	**0.079**
GD3	**0.116**	**0.018**	**-0.033**	**-0.006**	**0.033**	**0.359**	**-0.002**	**-0.005**	**0.038**	**0.013**	**0.107**
KI1	**-0.067**	**-0.007**	**-0.089**	**-0.022**	**0.290**	**-0.090**	**0.767**	**-0.046**	**0.277**	**0.387**	**0.011**
KI2	**0.061**	**0.066**	**-0.004**	**0.103**	**0.269**	**-0.007**	**0.807**	**0.051**	**0.282**	**0.368**	**0.096**
KI3	**0.019**	**0.019**	**0.076**	**0.025**	**0.264**	**0.021**	**0.740**	**0.072**	**0.297**	**0.381**	**0.019**
KI4	**-0.091**	**0.013**	**-0.082**	**0.041**	**0.195**	**-0.157**	**0.647**	**-0.029**	**0.254**	**0.358**	**-0.056**
MI1	**0.343**	**0.223**	**0.144**	**0.426**	**-0.133**	**0.125**	**0.003**	**0.851**	**-0.007**	**-0.031**	**0.428**
MI2	**0.445**	**0.265**	**0.108**	**0.446**	**-0.116**	**0.048**	**0.035**	**0.868**	**-0.035**	**-0.044**	**0.411**
MI3	**0.351**	**0.319**	**0.070**	**0.476**	**-0.038**	**0.052**	**0.007**	**0.851**	**-0.062**	**-0.040**	**0.458**
RD1	**-0.137**	**0.032**	**-0.066**	**-0.062**	**0.328**	**0.035**	**0.341**	**-0.002**	**0.847**	**0.416**	**-0.042**
RD2	**-0.100**	**-0.059**	**-0.040**	**-0.076**	**0.395**	**0.037**	**0.316**	**-0.056**	**0.831**	**0.466**	**-0.138**
RD3	**-0.142**	**-0.076**	**-0.034**	**-0.096**	**0.437**	**0.016**	**0.321**	**-0.065**	**0.849**	**0.506**	**-0.148**
RD4	**-0.117**	**-0.004**	**-0.026**	**-0.047**	**0.261**	**0.037**	**0.206**	**-0.002**	**0.690**	**0.335**	**-0.072**
TD1	**0.005**	**0.040**	**-0.089**	**0.126**	**0.329**	**-0.064**	**0.512**	**0.075**	**0.445**	**0.873**	**0.048**
TD2	**-0.144**	**-0.030**	**-0.112**	**-0.152**	**0.291**	**-0.073**	**0.304**	**-0.079**	**0.429**	**0.759**	**-0.100**
TD3	**-0.054**	**-0.075**	**-0.127**	**0.016**	**0.202**	**-0.087**	**0.290**	**-0.036**	**0.400**	**0.699**	**0.042**
TD4	**-0.099**	**-0.106**	**-0.017**	**-0.034**	**0.261**	**-0.065**	**0.366**	**-0.060**	**0.394**	**0.720**	**-0.124**
TD5	**-0.083**	**-0.122**	**-0.138**	**-0.045**	**0.301**	**-0.093**	**0.407**	**-0.109**	**0.413**	**0.780**	**-0.072**
TP1	**0.198**	**0.106**	**0.120**	**0.397**	**-0.176**	**0.114**	**0.037**	**0.374**	**-0.073**	**-0.001**	**0.790**
TP2	**0.312**	**0.068**	**0.064**	**0.362**	**-0.218**	**0.035**	**-0.001**	**0.392**	**-0.093**	**-0.028**	**0.817**
TP3	**0.266**	**0.162**	**0.036**	**0.423**	**-0.140**	**0.038**	**0.030**	**0.464**	**-0.134**	**-0.078**	**0.845**

Table 7: Cross loadings

Cross-loading assists in determining whether an item's loading is higher on its underlying construct than on the other constructs. If an indicator significantly loads on its underlying construct rather than other research constructs, discriminant validity is proven through cross-loadings. Cross-loadings of every item with every construct show that, as the table highlights, each indicator's loading exceeds that on the underlying build as shown in Table 7 above.

c) Heterotrait-Monotrait Ratio

	AD	**AP**	**CI**	**CP**	**ED**	**GD**	**KI**	**MI**	**RD**	**TD**	**TP**
AD											
AP	**0.231**										
CI	**0.079**	**0.173**									
CP	**0.452**	**0.255**	**0.090**								
ED	**0.207**	**0.131**	**0.158**	**0.220**							
GD	**0.185**	**0.073**	**0.088**	**0.065**	**0.080**						
KI	**0.126**	**0.100**	**0.123**	**0.112**	**0.430**	**0.102**					
MI	**0.561**	**0.302**	**0.173**	**0.596**	**0.153**	**0.079**	**0.108**				
RD	**0.191**	**0.115**	**0.069**	**0.104**	**0.548**	**0.080**	**0.476**	**0.060**			
TD	**0.142**	**0.126**	**0.181**	**0.143**	**0.415**	**0.103**	**0.634**	**0.113**	**0.652**		
TP	**0.417**	**0.167**	**0.131**	**0.596**	**0.294**	**0.136**	**0.100**	**0.638**	**0.157**	**0.129**	

Table 8: Heterotrait-Monotrait Ratio

To assess discriminant validity heterotrait- monotrait ratio has been employed in this study. The value of HTMT must be less than 0.85 according to Henseler et al., 2015 as shown in table 8 above.

5.5.6. Model's Predictive Capabilities

a) R square

	R-square	R-square adjusted
AP	0.109	0.100
CI	0.021	0.005
CP	0.278	0.271
KI	0.291	0.279
MI	0.207	0.193
TP	0.256	0.248

Table 9: R Square Analysis

Every structural path has a strength that is determined by the endogenous variable's R^2 value. The R2 value of AP is 0.109, CI is 0.021, CP is 0.278, KI is 0.291, MI is 0.207 and TP is 0.256 as shown in table 9 above. It shows that the percent change in the endogenous variable can be attributed to the exogenous and mediating variable of the present study.

b) F square

	f-square
AD -> CI	0.001
AD -> KI	0.003
AD -> MI	0.237
CI -> AP	0.010
CI -> CP	0.001
CI -> TP	0.001
ED -> CI	0.004
ED -> KI	0.028
ED -> MI	0.010
GD -> CI	0.000
GD -> KI	0.002
GD -> MI	0.000
KI -> AP	0.001
KI -> CP	0.002
KI -> TP	0.000
MI -> AP	0.102
MI -> CP	0.380
MI -> TP	0.333
RD -> CI	0.001
RD -> KI	0.009
RD -> MI	0.004
TD -> CI	0.010
TD -> KI	0.146
TD -> MI	0.000

Table 10: F square variables

F square is measured whenever an independent variable is eliminated from the model, the F-Square measure represents the shift in the R-Square value (see table 10, above)

5.5.7. Analysis

A structural model has been evaluated using R^2. The model's quality has been defined by the potency of every structural path as measured by the R^2 value for employee performance. R^2 value should be close to or greater than 0.1 (Falk & Miller, 1992). Analysis of mediation has been done to know the mediating role of sustainable innovation between workforce diversity and employee performance among telecommunication employees. It has been revealed that sustainable innovation partially mediated both the independent and dependent constructs. The role of the mediating variable named sustainable innovation has been examined and the study's proposition was found to be significantly impacting workforce diversity and employee performance. It has been analyzed that when knowledge innovation, continuous improvement, and market innovation are brought together they can have significant partial mediation in the study as shown in Figure 2.

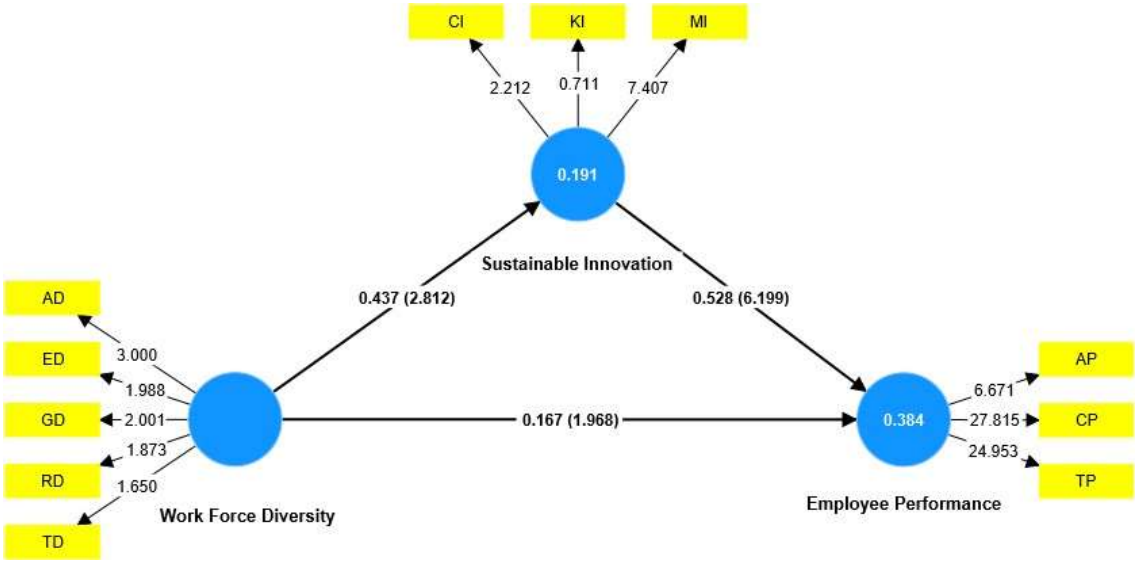

Figure 2: Mediation analysis

6. Findings and suggestions

It offers insightful conceptual and managerial implications for future research. To summarize this study, this paper covers the determinants of all three constructs of the study namely, workforce diversity, sustainable innovation, and employee performance. It offers a thorough analysis of the various facets of variety and how they can affect future theory development and research. The findings of the paper reveal that there is a partial mediation between workforce diversity and employee performance through sustainable innovation. Past studies have identified the relation between the independent construct and dependent construct namely workforce diversity and employee performance, but the present study has collectively analysed the mediating role of sustainable innovation on workforce diversity and employee performance. It has been found that when knowledge innovation, continuous improvement, and market innovation are collectively measured with the workforce diversity thereby influencing contextual performance, task performance of the employees in the Indian telecom organizations, and the adaptive performance of employees got fairly influenced by the sustainable innovation altogether. Sustainable innovation plays a crucial role in maintaining

and retaining the workforce for a long period as employees feel the growth avenues for continuous improvement which help them to adapt themselves to the challenges of the competition. It is suggested that high-involvement practices can also be studied concerning workforce diversity and sustainable innovation with other sectors as well.

Sustainable innovation helps an organization to grow. Whether there is gender diversity or educational diversity employees tend to work with an organization where they get the opportunity for continuous improvement and where more growth avenues in terms of innovation are accessed. In the current scenario, employees focus on knowledge innovation as knowledge is the key for any idea to emerge, and hence an employee can perform well as compared to where their knowledge and ideas are not welcomed. Therefore, the present study also focuses on the impact that workforce diversity has through sustainable innovation on the performance of employees.

7. Practical implications

This research focuses on the various dimensions of workforce diversity with respect to gender, age, race, education, and tenure. Every dimension focuses on the feasibility of sustainability of innovation with respect to knowledge and market innovation and continuous improvement to remain intact with the growing competition. For managers to achieve success they need to focus on the workforce where there is a harmonious interpersonal connection to adhere to the sustainable innovation and it helps employees to remain motivated and committed to the organization with respect to the career growth and advancement.

8. Future scope and limitations

Present study sheds light on the sustainable innovation which is very crucial for the organizations these days to keep pace with the changing competition. Sustainability is the need of the hour. This study will help future scholars and mangers to focus on continuous improvement with respect to sustainability. Market is changing dynamically for that it’s imperative to have continuous upgradation of knowledge and skills and keep human resources abreast with the changes.

9. Conclusions

Diversity is a wide term that encompasses a variety of characteristics, including age, gender, and race. It's critical to comprehend the relationships between and strategies for utilizing each of these aspects to the organization's benefit. This research offers a thorough summary of the various aspects of variety and possible ramifications for future study. Workforce diversity includes various aspects namely age, gender, and cultural background, and literature also provides many studies on workforce diversity but the relationship between workforce diversity and employee performance concerning sustainable innovation has been inconclusive concerning the Indian telecom sector. For the continuous growth of any organization continuous improvement and innovation concerning the services offered play a crucial role. No matter what differences an organization has by diversity in terms of age, gender, race, customs, and ethnicity but organization works, and in the present scenario with the development and advancement of any organization, innovation is required the most. This study entails that when innovative ideas are incorporated sustainably can yield better results in terms of the performance of employees. Employees can adapt, learn more, and be a competitive advantage in the industry through sustainable innovation.

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