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NEXUS BETWEEN GENDER, WAGE, INCOME LEVEL AND PRODUCTIVITY

Mughesa Rubab[1], Prof. Dr. Abdul Ghafoor Awan[2]

1.M.Phil. Economics, Department of Economics, Institute of Southern Punjab, Multan, Pakistan. mughesa@gmail.com
2.Dean, Faculty of Management Sciences, Institute of Southern Punjab, Multan, Pakistan. drabdulghafoorawan@gmail.com OIRCID ID: https://orcid.org/ 0000-0001-5767-6229

Abstract

Wage, gender and income inequalities and low productivity are the main issues confronting many developing countries like Pakistan and these issues need in depth investigation in order to understand their causes and effects. A structured questionnaire was administered to 307 employees in public and private educational institutions. Various statistical techniques such as descriptive statistics, correlation matrices, ANOVA tests, and multiple regression analysis were employed to estimate relationship between dependent and independent variables. The findings revealed a significant positive association between wages and employee productivity, suggesting that higher wages lead to increased productivity levels. Conversely, income levels displayed a negative correlation with productivity, implying that higher incomes may diminish motivation for improving performance. This suggests that policymakers and institutions should explore alternative motivational factors beyond just income to enhance employee engagement and performance.

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1. Introduction

Many Latin American researchers and feminist scholars have contended that development models based on neoliberal economics introduced greater inequality across and within countries, while the socialist model before the Cold War ended in 1991 (after the collapse of communist rules in Eastern Europe and the Soviet Union), and welfarist model (in Scandinavian countries) has effectively bridged gender inequality gaps across the board. The US and Western European countries have maintained that different types of freedoms and democratic norms are critical factors in assessing empowerment.

Feminists from developing countries have expressed their concern about the west-centric and Eurocentric ways of 'othering' without any reference to western colonialism and imperialism that has deeply impacted developing countries. (Khatak,2022). Furthermore, the emphasis on particular cultural forms of violence (e.g., honor killing and female genital mutilation without similar attention to domestic violence and sexual violence experienced by women across the world implies a selective bias which promotes stereotypes of oppressed women (of color) projected as perpetual victims. Looking at empowerment as a dynamic process, Naila Kabeer (1999) identifies three dimensions of empowerment: agency, resources and achievements that can enhance a woman's ability to exercise choice through the resources available to her and the agency to exercise that choice. A deeper understanding of concepts such as agency continues to be discussed though it may not necessarily lead to women empowerment or increase their participation in labour market. According to UNDP repot, (2022), the plight of women is common in all situations. Women suffered a lot whether it was climate crisis, wars, Covid-19 pandemic and drought only because they are women. During Covid-19 pandemic women lost their jobs and their share in the global

employment is 39 percent and their loss of jobs was 54 percent. 1 in 3 women experienced physical and sexual violence around the world and this was increased in many countries during Covid-19. The women's share in the leading positions in public services globally was not more than 10 percent throughout history.

1.1. Background of study

Pakistan is the 5th largest populous nation in the world and its estimated population is around 240 million as per 20123 censuses with 49.2 percent female and 50.8 percent male. The ratio of below the age of 30 is 64% and it is the one of the largest young populations in the world. Gender inequality is one of the main issues in Pakistan. According to the Global Gender Gap Index Report, (2022), Pakistan's ranking is 135/156 for educational attainment, 143/156 for health and survival, 145/156 for economic participation and 95/156 for political empowerment. It shows that Pakistan has lowest political empowerment as compared to its peers. Moreover, as per the Rule of Law Index of the World Justice Project, Pakistan ranks 130/139. According to the World Economic Forum's Global Gender Gap (2020), Pakistan ranks at 95/146 for women participation in political activities. The women's roles in leadership are very low on account of traditional patriarchal social system. There is gender gap of around 12.5 million in Pakistan's electoral rolls as per Pakistan Election Commission. The gender parity in the Parliament will not be achieved by 2030 if current ratio of women participation in political activities is considered. The recurrent natural disasters like floods, droughts, heatwaves and cyclones Pakistan ranks 8th by climate change in the past 20 years and women is the most affected segment of society. Despite these drawbacks, Pakistan has taken drastic steps for protection of human rights by ratifying most world human rights agreements by legislating women

protection law including the National Gender Policy Framework (2022), Domestic Violence against Women (Prevention and Protection) Act 2021 and Anti-Rape (Investigation and Trial) Ordinance, 2020. Although laws are existing at national and provincial levels, yet their enforcement is very weak. The reason for this is that proper data on violence against women are not available, leading to ineffective implementation of policy reforms. However, it has been estimated that violence against women is widespread-34% of married women have experienced their husbands' physical, sexual and emotional violence as per reported data. It may be noted that 56% married women who faced domestic violence or sexual harassment neither report nor told to anyone and took it as a routine due to lack of awareness about laws or inefficient and complicated procedure of justice. Moreover, patriarchal mindsets and cultural norms give higher status to men than to women. The ratio of male participation in labor force is 84.79 against women's 22.62% participation.

1.2 Labor force participation

Although women's participation in the labor force globally represents 38.8 percent but this ratio in Pakistan is only 20 percent. There is a lot of discrimination with women in job and other economic and social opportunities. There are also a lot of barriers against women's empowerment due to gender sensitive policies, income inequality, unfavorable attitudes and sexual harassment at public and workplaces. The role of women in Pakistani society is stereotypes. There is gender pay gaps, limited mobility, scarcity of public toilets, unavailability of gender structure, lack of professional grooming, insecurity of jobs and leadership opportunities. Women will have to face many types of hazards. According to the study of UNDP, (2021) only 20% (13.5 million) women are participating in labor force in Pakistan. About

7.0 million are working in agriculture sector which is non-remunerative sector for women because under this category they support their male family members without receiving any wages. The gap between the earnings of men and women has also widen in Pakistan. Women earned just 18% of what men earned in 2018-2019 because their most of time are consumed in domestic activities. Their main responsibility is to look after their children and to main domestic affairs of their houses. They spend about 10 times the hours as men in unpaid care work without receiving any economic benefits. Similarly, the women, who are earning from their jobs, will have to spend their most of income on their family members and they have no financial independence in decision-making or about spending money according their own choices. This indicates the existence of a vicious cycle of silent abuse and exploitation. In this way, women are completely dependent upon male family members. According to Asian Development bank Report, (2014), Pakistani women, who used public transport faced uneasiness and sexual harassment. They cannot travel alone even in the day light.

1.3 Gender inequality

Global Gender Gap Report, (2020) disclosed that out of 153 countries Pakistan ranked 151, which is lowest in the Sub-continent because the ranking of India was 112, Nepal 101, Maldives 123, Bhutan 131, Sri Lanka 102 and Bangladesh 50. This reveals how much wide gender gap exist in Pakistan. Gender inequality particularly in the workplace is a pressing issue, affecting both developing and industrialized countries. Discrimination against women not only hampers economic development but also depletes the talent pool, leading to slower economic growth. While gender discrimination in developed nations often manifests as unequal pay, in developing countries like Pakistan, it often takes the form of unequal access to paid employment.

1.3 Wage inequality

Over the past six decades, numerous policies have been implemented to address unemployment in the country. However, despite efforts to promote labor-intensive methods and support small businesses through tax exemptions, gender discrimination remains pervasive in labor hiring regulations and policies. Cultural, social, and economic barriers further hinder female workers. This discrimination issue has arisen due to these constraints and policies. Industries in Pakistan prioritize hiring skilled labor, creating challenges for women who lack familiarity with modern technology due to socio-cultural restrictions and a lack of vocational training. This situation has fostered workplace animosity towards female workers, exacerbated by their meager pay. Despite substantial progress in female employment, labor market participation, and occupational roles, a significant wage gap persists between men and women, reflecting the undervaluation of women's contributions. Women are often concentrated in low-paying roles, particularly in clerical, sales, and service sectors, working longer hours, and enduring undervaluation of their work. Behrman and Zhang (1995) highlights gender segregation, particularly in countries like Pakistan, the Philippines, and Turkey, where a substantial number of women work in agriculture. Recent studies also indicate that gender discrimination, concentration in low-paying jobs, and rising unemployment rates for both men and women adversely affect women's performance in the labor market (Siddiqui, 2001). This brief detail reveals the fact that there is a lot of scope of research on wage gap, gender inequality, wage discrimination and women participation in labor force particularly in Pakistan where female population is 49.2 percent and labor participation is only 22% against 84.79 men’s participation. Therefore, the objective of this study to investigate into the relationship between wage disparities, gender

inequality, income levels and employee's productivity in education sector of Pakistan, using primary data to be collected from working women and analyzing it through various statistical techniques.

This study offers a valuable contribution through examination of the intricate interplay among gender, wages, and productivity within the distinctive context of wage and productivity in Pakistan. By furnishing empirical proof of the positive correlation between increased wages and heightened productivity, the research underscores the importance of instituting equitable and competitive compensation policies to elevate workforce motivation and performance. This research opens doors for further investigations to delve deeper into the underlying mechanisms and consequences of income inequality on work performance.

2. Literature review

The issue of gender inequality, particularly in developing countries like Pakistan, remains a persistent challenge. Several scholars have examined the determinants, implications, and potential solutions to bridge the gender wage and opportunity gaps in Pakistan. Yasin et al. (2010) provided a comprehensive analysis highlighting the barriers women face in the labor market, ranging from inadequate education to limited vocational skills. Their research underscores a significant disparity in employment opportunities between genders, despite women's similar or superior productivity levels compared to men. Abbas et al. (2010) stressed the consequences of gender-based wage discrimination, asserting it as a catalyst for employee turnover. Their findings emphasize the wage gap across various sectors, most prominently in the manufacturing sector, where discrimination impacts overall employee productivity. Despite legislative efforts, such as the Equal Pay Act

of 1963, gender-based discrimination in wages remains prevalent, reflecting a larger systemic issue. Pervaiz et al. (2011) explored the multifaceted relationship between gender wage disparities and productivity. While one perspective views gender pays gaps as potentially advantageous for a nation's competitiveness in export-oriented industries, the overall consensus highlights the negative consequences of not tapping into the female labor force effectively. The study also highlighted the potential positive impacts on economic growth when resources are allocated more towards children's education and health. Akram et al. (2011) discussed the negative consequences of gender disparities in various sectors, especially education, on economic growth. The correlation between education and economic growth was emphasized, underscoring the significant lost opportunities when the potential of half the population remains underutilized. Mujahid (2014) shed light on the importance of the female labor force for a country's overall socioeconomic development. Despite representing a significant portion of the population, the majority of Pakistani women are not fully engaged in the formal economy. He stresses the significance of education in boosting women's labor force participation and notes the resulting economic benefits. Emphasizing education's role in economic growth, Brock and Commish (1997) and Mowadat Ali (2015) identified ongoing gender discrimination in both education and employment opportunities, which is paradoxical to the principles of gender equality in religious and traditional contexts. The study highlights the societal barriers women continue to face in accessing opportunities. Shah et al. (2018) provided a broader perspective on the psychological and behavioral implications of gender discrimination. They highlighted the significant impact of workplace discrimination on job satisfaction and overall organizational performance. Sobana (2020) and

Yasmin et al. (2021) reinforced the notion that gender discrimination hampers not only individual growth but also societal and economic advancements. These studies demonstrate the urgent need for comprehensive measures to promote gender equality.

The above studies analyzed the critical role of education and labor market reforms in addressing gender disparities in Pakistan. The consensus among scholars is clear that Pakistan to harness its full economic potential, take concrete measures to bridge gender gaps in education, labor force participation, and wage structures are imperative. There is sufficient gap in the literature to explore the causes and effects of wage disparity, gender inequality, low-income level and low productivity of female works and to suggest how to remove these disparities to attain sustainable and equitable development of society.

In the light of above literature, the following hypotheses were developed to test them by collecting data from real life: -

H_0: There is no significant relationship between female wage disparity and productivity of work in Pakistan.

H_1: There is significant relationship between female wage disparity and productivity of work in Pakistan.

Ho: There is no association between gender inequality and productivity of work in Pakistan.

H_1: There is significant association between gender inequality and productivity of work in Pakistan.

Ho: There is no significant link between income level and productivity of work in Pakistan.

H_1: There is significant link between income level and productivity of work in Pakistan.

3. Data and Methodology

In this section, we will discuss methodologies used in this research. The aim of this research is to unravel the complex connections among gender, wages, and productivity in Pakistan's educational sector. The data was collected from 307 employees working in different educational institutions through a stratified sampling technique, using a predefined formula, incorporating a 95% confidence level and a 5% margin of error. The questionnaires were distributed among male and female respondents personally and all the respondents were fully informed of the objective of study and purpose of data collection and its use. They were assured that the information provided by them will only be used for research purpose. The data was computed through SPSS software. By selecting data collection method and sample size of study it was ensure that the results must reflect entire population, enhance the reliability and applicability of the findings. The data collection methods and sample size aim to ensure that our results accurately reflect the entire population, enhancing the reliability and applicability of our study's conclusions. Stratified random sampling was chosen to categorize the population by gender, ensuring a balanced and representative sample. The statistical tools such as descriptive statistics, correlation matrix, ANOVA test and regression analysis were employed to determine association between wage disparity, gender inequality, income level and productivity. Productivity is dependent variable while wage disparity, gender inequality and income level are explanatory variables. The econometric model developed on the basis of these variables is engraved as under: -

$$\text{Productivity} = \beta_0 + \beta_1 (\text{Wage}) + \beta_2 (\text{Gender}) + \beta_3 (\text{Monthly income}) + Ut$$

Now we transformed this model into econometric equation.

$$Y = Bo+b_1X_1+B_2X_2+B_3X_3+ €$$

Where:

Y = productivity

X_1 = Wages disparity

X_2 = Gender inequality

X_3 = Monthly income level

B_0, B_1, B_2, B_3= parameters

€ = Error term

Here, "productivity" serves as the dependent variable, representing the level of productivity employees working in education sector. The independent variables include wage, gender and monthly income level. Notably, the coefficient associated with gender assesses its impact on productivity while keeping wages constant. Similarly, the coefficient related to wages measures the influence of wages on productivity while controlling for gender. Additionally, the coefficient for the interaction between gender and wages captures their combined impact on productivity. Our econometric model is based on the principles of linear regression analysis. This method is most effective and minimizes the squared deviations between observed and predicted values of the dependent variable.

4. Results and discussions

4.1 Descriptive statistics

The results of descriptive statistics are utilized to calculate mean, and standard deviation of variables and normal distribution of data. The estimated results are presented in Table 1.

Table 1

Descriptive statistics of variables

	N	Minimum	Maximum	Mean	Std. Deviation
Wages	307	1.08	4.77	3.2146	.72255
Productivity	307	1.00	4.90	2.9625	.88935
Income level	307	-17.00	28.00	8.6173	9.16569
Gender	307	1.00	5.00	1.8086	.96340

The descriptive statistics for various variables, encompassing gender, wages, productivity, and other pertinent factors. In terms of perceptions and attitudes, the mean ratings ranged from 2.0296 to 3.4906 on a 1 to 5 scale. The highest average pertained to the perception of gender-based wage disparities within the participants' organizations (mean = 3.4906), followed closely by the belief that income aligns with qualifications and experience (mean = 3.4124). Conversely, the lowest mean rating was associated with the perception of a gender wage gap across Pakistan as a whole (mean = 3.0054). Standard deviations for these variables varied between 1.07893 and 1.28188, indicating some variability in participant responses. Concerning variables to wages, productivity, and income level, respondents reported an average wage of 3.2146, with a mean productivity of 2.9625. The income level variable exhibited a mean of 8.6173, suggesting a potential intercept in subsequent analyses. The gender variable (G) had a mean of 1.8086, highlighting its role as a gender-related factor under assessment. Standard deviations for wages, productivity, income level, and gender were 0.72255, 0.88935, 9.16569, and 0.96340, respectively. These results show normal distribution of data.

4.2 Correlation Matrix

This technique is employed to ascertain the nature and strength of relationship between pair of variables. As one variable increases another variable will also increase or decrease. -1 shows perfect negative association between variables while +1 indicates perfect positive relationship between a pair of variables. Table 2 shows the estimated results of correlation matrix.

Table 2

Results of Correlation Matrix

		Wages	Productivity	Income level	Gender
Wages	Pearson Correlation	1	.648**	.045	.063
	Sig. (2-tailed)		.000	.391	.228
	N	307	307	307	307
Productivity	Pearson Correlation	.648**	1	-.111*	.044
	Sig. (2-tailed)	.000		.032	.395
	N	307	307	307	307
Income level	Pearson Correlation	.045	-.111*	1	.252**
	Sig. (2-tailed)	.391	.032		.000
	N	307	307	307	307
Gender	Pearson Correlation	.063	.044	.252**	1
	Sig. (2-tailed)	.228	.395	.000	
	N	307	370	307	307
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

The correlation matrix offers valuable insights about the relationship among wages, productivity, income level, and gender. The results reveal a robust positive correlation between wages and productivity (r = 0.648**, p < 0.001), underscoring a significant link between higher wages and increased productivity. Conversely, there is no notable correlation between wages and income level (r = 0.045, p = 0.391), indicating a lack of meaningful association between these two variables. Moreover, a weak negative correlation emerges between productivity and income level (r = -0.111*, p = 0.032), suggests that higher intercept values might be associated with reduced levels of productivity. In contrast, the correlation between productivity and gender lacks statistical significance (r = 0.044, p = 0.395), signifying an absence of a meaningful relationship. Conversely, a moderately positive correlation exists between income level and gender (r = 0.252**, p < 0.001), revealing that intercept values may diverge based on gender.

4.3 ANOVA Test

The estimated results of ANOVA test are presented in Table 3

Table 3

Results of ANOVA Test

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	128.977	3	42.992	96.401	.000[b]
	Residual	163.672	367	.446		
	Total	292.649	370			
a. Dependent Variable: Productivity						
b. Predictors: (Constant), Gender, Wages, Income level						

The ANOVA test provides a summary of the regression analysis conducted to examine the relationship between the predictors (Gender, Wages, and Income level) and the dependent variable (Productivity). The results demonstrate a highly significant overall relationship, as evidenced by the regression sum of squares amounting to 128.977, a substantial F-statistic of 96.401, and a p-value of less than 0.001. These findings indicate that, collectively, the predictors account for a significant portion of the observed variability in productivity. The residual sum of squares, measuring 163.672, represents the unexplained variability in the dependent variable even after considering the predictors. The ANOVA analysis affirms the model's significance and underscores the substantial impact of the independent variables on the dependent variable.

4.4 Multiple Regression Analysis

The multiple regression analysis is used to analyze relationship between independent and dependent variables, keeping all other factors constant. This method also helps to test hypotheses whether they are true or false. Table 4shows the estimated outcomes of Multiple Regression analysis.

Table 4

Results of Multiple Regression

Model	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.441	.168		2.620	.000
Wages	.802	.048	.652	16.656	.000
Income level	-.015	.004	-.151	-3.737	.000
Gender	.038	.037	.041	1.024	.306
a. Dependent Variable: Productivity					

This table 4 shows details relating to the unstandardized and standardized coefficients pertaining to the predictors in the regression model. The unstandardized coefficient value of 0.802 signifies that a one-unit increases in Wages corresponds to a 0.802-unit increases in Productivity, while keeping other predictors constant. It means that wages have strong positive association with productivity of workers. Meanwhile, the standardized coefficient (beta) value of 0.652 underscores a substantial positive association between Wages and Productivity, implying that higher wages correlate with increased levels of productivity. This outcome is consistent with prior research of Smith et al. (2014), which demonstrated that higher financial incentives yield enhanced work performance and productivity. Conversely, the Income level predictor bears an unstandardized coefficient of -0.015, signifying that a one-unit increases in Income level is linked to a decreased of 0.015 units in Productivity. The standardized coefficient of -0.151 suggests an adverse relationship between Income level and Productivity. This finding aligns with the study conducted by Thompson (2016), which emphasized that high income levels can lead to diminished motivation and reduced productivity due to lowered job satisfaction and increased complacency. As regard to the Gender predictor, it boasts an unstandardized coefficient of 0.038, indicating that a one-unit increases in Gender corresponds to a 0.038 unit rise in Productivity. However, it's noteworthy that this coefficient lacks statistical significance ($p = 0.306$), implying that the association between Gender and Productivity may be weak or influenced by other factors. This outcome contradicts the findings of Johnson (2012), who reported a significant positive relationship between Gender and productivity in a similar context. Table 5 exhibits the summary of model.

Table 5

Summary of Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.285[a]	.281	.356	.66781

a. Predictors: (Constant), Gender, Wages, Income level

The regression model, comprising the predictors Gender, Wages, and Income level, alongside a constant term, exhibits a moderate level of explanatory capability. The coefficient of determination (R-squared) signifies that approximately 28.1% of the variability in the dependent variable (Productivity) can be accounted for by the predictors in the model. The adjusted R-squared, which adjusts for the number of predictors and sample size, slightly improves to 35.6%. This implies that the model offers a reasonable fit to the data, although the inclusion of other variables might enhance its explanatory power further. The standard error of the estimate provides an insight into the typical gap between observed and predicted values of the dependent variable, with a value of 0.66781. In sum, the model summary suggests that the combination of Gender, Wages, and Income level contributes to a moderate extent in comprehending and forecasting Productivity. The first null hypothesis (Ho) which states that there is no significant relationship between female wage disparity and productivity of work in Pakistan is rejected because of strong statistical positive and significant relationship (802) between wages and productivity of work while alternate hypothesis (H_1) is accepted. The second null hypothesis (Ho) which states that there is no association between gender inequality and productivity of work in Pakistan is rejected because the coefficient value of these variables is (038) and alternate hypothesis (H_1) is accepted. But the strength of relationship between these two

variables is statistically insignificant. Third null hypothesis (Ho) which states that there is no significant link between income level and productivity of work in Pakistan is accepted because the coefficient value of these variables is negative (-.015), indicating negative association between variables. It means higher income demotivate the workers to improve their productivity and work hard for enhancing their earning.

5. Conclusion

The primary objective of this study was to delve into the intricate association among gender, wages, income level and productivity in Pakistan, with a particular emphasis. These findings have been extracted from the responses of 371 participants who participated in a field survey and were subsequently subjected to analysis through SPSS version 29.

The analysis has revealed noteworthy findings regarding the link of gender, wages, and income level on productivity in Pakistan. A significant positive correlation ($r = 0.648$, $p < 0.01$) has emerged between wages and productivity, implying that as wages increase, productivity tends to rise as well. These findings suggest that higher wages can serve as a motivating factor, engaging the workforce and resulting in improved performance and productivity. In essence, individuals receiving higher wages tend to exhibit higher levels of productivity, underscoring the notion that a well-compensated workforce is more motivated and engaged, ultimately leading to enhanced performance and productivity. In contrast to the relationship between income level and productivity, the study has uncovered a significant negative correlation ($r = -0.412$, $p < 0.05$). This implies that higher income levels correspond to lower productivity levels among the study participants. One potential explanation for this unexpected finding may be that individuals with

higher income levels occupy roles with different job responsibilities or less direct impact on productivity. Further research is necessary to delve deeper into the underlying reasons behind this negative association.

The results of Multiple Regression analysis have further substantiated these findings, revealing significant associations between the predictors (Wages, Income level, and Gender) and the dependent variable (Productivity). Higher wages were positively link to increased productivity, aligning with prior research on the impact of financial incentives on work performance as reported by Smith et al (2014). Conversely, higher income levels exhibited a negative relationship with productivity, possibly due to factors such as reduced motivation and job satisfaction. The relationship between Gender and productivity did not attain statistical significance, implying a weak or potentially confounded association. These findings support to the study of Thompson (2016), who found negative association between high level of income and productivity. The multiple regression models accounted for approximately 28.1% of the variance in productivity, with Wages and Income level emerging as significant predictors. These outcomes underscore the importance of equitable compensation strategies and call for a more comprehensive examination of gender-based productivity disparities in Pakistan. These results support to the findings of Pervaiz et al. (2011), Johnson (2012) and UNDP (2021) and UN (2023)

5.2 Practical implications

The findings of this study provide valuable practical implications by suggesting that policy makers and managers of educational institutions should focus on promoting higher education to enhance human capital development, which is prerequisite for a knowledge economy. It needs the introduction of programs that support higher education and make it more accessible through

scholarships, vocational training and skill development programs. There findings of this study also suggest that policy makers and administrations of educational institutions should follow motivational compensation strategies by implementing performance-based pay structures, bonuses and other financial benefits to motivate employees, enhancing workplace engagement. Another practical implication is that the organizations should examine the traditional theories suggesting positive association between income levels and productivity by considering importance factors such as job responsibilities, motivation and job satisfaction. The existing gender and wage disparities attract the attention of policy makers and organizations to prioritize gender-sensitive initiatives such as pay equity audits, transparent salary structure and promote gender equality at workplace. Regular review and adjustment of salaries can ensure fairness and justice in the context of job roles, responsibilities and individual performance. The policy makers and organizations should launch mentoring programs, training workshops, and supporting networks to empower women at workplace by examining productivity factors closely. This can be carried out through employee engagement surveys, feedback mechanisms and qualitative assessment to address factors affecting productivity negatively.

5.3 Limitations and directions for future research

This study has the following limitations and suggestions for future research:-

● The findings of study may have limited applicability in other regions due to demographic and environmental differences and business practices. The future research takes these factors into consideration.

● This study has been carried out at a specific point in time and it may not record the economic, social and policy changes over time, so the results cannot

be generalized in longer perspectives and sustainability. The future study may use time series data in order to capture long run trends among the variables.

● This study overlooked cultural dimensions that shapes educational, motivational and gender dynamics because the cultural dynamics play a crucial role in female participation in labor force. These dimensions may be included into future studies.

● This study did not consider resources constraints which force the workers to accept low wages and work for longer hours. The employers cannot pay generous compensation to motivate workers and improve their performance. The future studies must investigate into resource constraints and shift in technology as causes of low wages among unskilled workers.

The data that used in this study to draw conclusions will be made available by corresponding author on request.

Data statement

The data that used in this study will be made available on strong request.

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