

INFLUENCE OF TECHNOLOGICAL REVOLUTION AND COMPANY CULTURE ON WOMEN EMPLOYMENT IN SOUTHWESTERN POLYTECHNICS, NIGERIA

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ABSTRACT

The technological revolution has transformed the world of work, bringing about new opportunities and challenges for employees, particularly women. This study explored the influence of technological revolution and company culture on women employment in southwestern polytechnics Nigeria. The study employed descriptive research survey design, while purposive and simple random sampling techniques were used to select six polytechnics and one-thousand eight-hundred participants. A validated self-designed instrument with high reliability outcomes from Cronback Alpha was used to elicit information from the respondents. Descriptive statistics comprised simple percentage, mean and standard deviation were used for data analysis. The results revealed that the technological revolution has had a positive impact on women's employment in southwestern Nigerian polytechnics, specifically through increased job opportunities (M = 3.35), the growing necessity of tech skills (M = 3.20), progress in closing the gender pay gap (M = 3.17), and the emergence of new job openings (M = 3.15). The results indicate that company culture in southwestern Nigerian polytechnics perpetuates discrimination against women, manifesting through discouraging challenges to discriminatory practices (M = 3.12), perpetuating gender stereotypes (M = 3.11), unequal treatment (M = 3.07), and a need for policy reforms to promote gender equality (M = 3.08). The study concluded that technological revolution has positively impacted women's employment in southwestern Nigerian polytechnics, creating new opportunities and bridging the gender pay gap. However, company culture remains a significant barrier, perpetuating discrimination and unequal treatment of women, and necessitating policy reforms to promote gender equality. Therefore, educational institutions and organisations should invest in upskilling and reskilling programs that focus on developing technological skills for women, the Ministry of Education should develop and implement policies that promote gender equality, provide guidelines for addressing discrimination, and ensure accountability for non-compliance among others were suggested.

Keywords: *Technological revolution, company culture, women employment, southwestern polytechnics Nigeria.*

INTRODUCTION

The technological revolution, characterized by rapid advancements in information and communication technology (ICT), automation, and digitalization, has significantly reshaped the global workforce (Uford, 2022). In developing economies, particularly in Nigeria, this shift has had profound implications for employment patterns, labor market dynamics, and company culture. The South West region of Nigeria, known for its diverse economic activities and a relatively higher concentration of technological companies, provides a unique context for understanding how these changes affect women's employment.

Over the past two decades, the integration of new technologies has influenced organizational structures and work processes in ways that either create opportunities or barriers for women in the workforce. On one hand, technology has facilitated flexible working arrangements and access to new employment sectors (Chukwuma & Ibhaze, 2021). On the other, the existing company culture—shaped by gender biases, stereotypes, and patriarchal norms—continues to challenge women's participation in technologically driven jobs (Akinbami, 2022).

Despite a growing body of literature on gender equality and women empowerment, there remains a knowledge gap in understanding how technological changes and company culture collectively influence women's employment in the South West region of Nigeria. This study seeks to fill this gap by investigating these factors and proposing strategies to enhance women's participation in the workforce. The technological revolution, often referred to as the Fourth Industrial Revolution or Industry 4.0, is characterized by a fusion of technologies that blur the lines between the physical, digital, and biological spheres. This revolution encompasses a range of advanced technologies, such as artificial intelligence (AI), robotics, the Internet of Things (IoT), big data, and cloud computing, all of which have the potential to fundamentally transform industries and labor markets worldwide (Schwab, 2016; Uford & Akpan, 2024). In the context of employment, these changes have resulted in the creation of new job opportunities, the transformation of existing roles, and the displacement of certain types of labor. In Nigeria, and specifically in the South West region, the rapid diffusion of these technologies is reshaping the economic landscape, influencing not only the types of jobs available but also who has access to them.

For women, this technological shift represents both opportunities and challenges. On one hand, the rise of remote work, digital platforms, and flexible working conditions has created new opportunities for women to enter or re-enter the workforce, especially in industries such as information technology, digital marketing, and e-commerce (Adeyemi & Dada, 2020). Digital tools and online learning platforms have also enabled many women to acquire new skills and competencies, facilitating their participation in previously male-dominated sectors. On the other hand, gender disparities persist in access to these opportunities due to factors such as the digital divide, limited access to technology, and insufficient representation of women in STEM (science, technology, engineering, and mathematics) fields (Ogunleye, 2021; Sanni, *et al.*, 2024; Sanni, *et al.*, 2024).

Company culture plays a pivotal role in either fostering or hindering the participation of women in the workforce, particularly in technology-driven sectors. Organizational culture, defined by norms, values, and practices within a company, can significantly influence the recruitment, retention, and advancement of women. In many Nigerian companies, particularly in the South West, patriarchal norms and traditional gender roles remain deeply embedded within corporate cultures, creating barriers for women's employment and career progression (Akinbami, 2022).

These cultural biases can manifest in various forms, including discriminatory hiring practices, limited access to professional development opportunities, and exclusion from leadership roles (Aransi, 2020).

The intersection of technology and company culture presents a complex scenario for women's employment. While technological advancements have the potential to level the playing field, they often do not do so automatically. Instead, the benefits of technology may be disproportionately skewed towards those who already possess certain privileges, such as access to quality education, technological literacy, and supportive networks. Women, particularly those from marginalized communities, may face multiple layers of discrimination that prevent them from fully benefiting from technological advancements (Sanni, *et al.*, 2019; Eze & Nwankwo, 2020).

Moreover, existing research suggests that technology adoption in many companies is often accompanied by a lack of inclusive practices. For example, automated hiring tools and AI-driven recruitment platforms, while designed to increase efficiency, may inadvertently reinforce gender biases if not carefully monitored (Gbadamosi & Ogunde, 2019). These biases can be further perpetuated by a company culture that does not actively promote diversity and inclusion. As a result, women may find themselves excluded from high-growth sectors and emerging job roles that are critical to the future of work.

Given these dynamics, understanding the influence of technological advancements and company culture on women's employment in South West Nigeria is vital. The South West region, which includes major economic hubs like Osogbo, Lagos & Ibadan, has experienced significant technological growth and innovation, making it a critical area for studying these effects.

Statement of the Problem

Women in the South West region of Nigeria face multiple barriers to employment in technology-driven sectors. While technological advancements have been widely celebrated for their potential to create more inclusive workplaces, the reality for many women remains complex. The integration of new technologies in many companies has not necessarily translated into equal opportunities for women. Often, these technologies are embedded within organizational cultures that maintain traditional gender roles, resulting in limited access to technology-oriented jobs for women (Eze & Nwankwo, 2020).

Furthermore, there is evidence that technological adoption may exacerbate existing inequalities, as companies that lack inclusive practices may fail to recruit or retain women effectively (Olawale & Olanrewaju, 2019). Therefore, it is crucial to investigate how both technological advancements and company culture together impact women's employment, particularly in the South West region of Nigeria.

Aim and Objectives of the Study

The aim of this study is to explore the influence of the technological revolution and company culture on women's employment in South West, Nigeria. While specific objectives are to;

- i. examine the impact of technological advancements on women's employment opportunities in the South West, Nigeria; and
- ii. analyse the role of company culture in shaping women's participation in the workforce in the context of technological changes.

Research Questions

The following research questions guided the study

- i. How do technological advancements influence women's employment opportunities in South West, Nigeria?
- ii. In what ways does company culture affect women's participation in the workforce amidst technological changes?

METHODOLOGY

Research Design

This study used descriptive research survey design in this project work. The choice of this research design was considered appropriate due advantages of identifying attributes of a large population from a group of individuals. The design is appropriate for the study as the study seeks to examine the impact of technological revolution and gender discrimination on women unemployment opportunities in Polytechnics in south-west Nigeria.

Population, Sample and Sampling Procedures

All women working in Polytechnics in the south-west geopolitical-zone of Nigeria formed the target population. One-thousand eight-hundred (1800) sampled were taken from six polytechnics. These comprised The Federal Polytechnic Ede, The Federal Polytechnic Ile-Oluji, The Polytechnic Ibadan, Moshood Abiola Polytechnic, Lagos City Polytechnic and Crown Polytechnic Ado-Ekiti. These polytechnics were purposively sampled and simple random sampling procedure was used to select all the participants. This sampling procedure gives each participant equal opportunity of being selected for the study.

Instrument, Validity and Reliability

The self-designed instrument was used. To ascertain the validity of the instrument used for the study, the questionnaire was subjected to evaluation with regards to its validity. The instrument was given to the experts for vetting. Each item on the questionnaire was critically examined to remove any form of ambiguity that might arise in the course of generating the questions and to determine its relevance to the purpose of the study. This instrument was administered on twenty women working one polytechnic outside the one used in this study. The reliability coefficient from the Cronbach Alpha indicated 0.77 and 0.82, respectively. This indicated that the instrument was within the threshold of 0.7 and above as recommended by (Uford, 2017), as was reliable for the study.

Method of Data Collection and Analysis

The data were collected by the researchers in company of four trained research assistants. The Statistical Package for Social Scientists (SPSS) was used, while both descriptive and inferential statistics tools of the said package were used to analyse the data generated in the study.

Results and Discussion

Research Question 1: How do technological advancements influence women's employment opportunities in South West, Nigeria?

Table 1: Influence of Technological advancements on women's employment opportunities in South West, Nigeria.

S/N	STATEMENT	SA		A		D		SD		M	SD	Rank
		F	%	F	%	f	%	F	%			
1	Technological advancements have positively affected job opportunities for women in south-west Nigeria	854	48.4	762	43.2	113	6.4	35	2	3.38	0.7	1st
2	There has been an increase in the number of tech-related job openings for women in recent years	513	29.1	1034	58.6	186	10.5	31	1.8	3.15	0.67	4th
3	Technological skills are increasingly becoming necessary for women to secure employment	624	35.4	911	51.6	191	10.8	38	2.2	3.2	0.71	2nd
4	There are gender disparities in the distribution of job opportunities within the tech industry	485	27.5	827	46.9	370	21	82	4.6	2.97	0.82	8th
5	Women are more likely to face discrimination than men in tech-related job interviews	358	20.3	928	52.6	365	20.7	113	6.4	2.87	0.81	10th
6	Technological revolution has created new avenues for flexible work arrangements, benefiting women	456	25.9	882	50	355	20.1	71	4	2.98	0.79	7th
7	Women are underrepresented in leadership roles within tech companies	384	21.8	944	53.5	354	20.1	82	4.6	2.92	0.77	9th
8	Government policies and initiatives have been very effective in promoting women's participation in the tech workforce	430	24.4	997	56.5	293	16.6	44	2.5	3.03	0.71	6th
9	Technological advancements have led to the creation of non-traditional job roles that are more accessible to women	507	28.7	974	55.2	248	14.1	35	2	3.11	0.7	5th
10	Technological revolution has made a positive impact in closing the gender pay gap within the tech industry	586	33.2	928	52.6	215	12.2	35	2	3.17	0.71	3rd
Weighted Mean										3.09		

Interpretation and Discussion

The result in Table 1 shows the impact of technological revolution on women employment in Polytechnics in south-west Nigeria. Given the weighted mean score of 3.09, statements with mean values that are equal or greater than the weighted mean score are considered as the main impact in this result. As shown in Table 1, ranked first was that "Technological advancements have positively affected job opportunities for women in south-west Nigeria" (M = 3.35, SD = 0.70). Also, 48.4% and 43.2% of the respondents respectively strongly agree and agree to this impact. This is followed by "Technological skills are increasingly becoming necessary for women to secure employment" (M = 3.20, SD = 0.71) and 35.4% and 51.6% of respondents strongly agree and agree respectively. Technological revolution has made a positive impact in closing the gender pay gap within the tech industry (M = 3.17, SD = 0.71) was ranked third and 33.2% and 52.6% of respondents strongly agree and agree respectively. There has been an increase in the number of tech-related job openings for women in recent years (M = 3.15, SD = 0.67) was ranked fourth and 29.1% and 58.6% of respondents strongly agree and agree respectively. Ranked fifth was Technological advancements have led to the creation of non-traditional job roles that are more accessible to women (M = 3.11, SD = 0.70) was ranked fourth and 28.7% and 55.6% of respondents strongly agree and agree respectively.

As shown in Table 1, the impacts of technological revolution on women employment were: increased in job opportunities for women in south-west Nigeria; enhanced technological skills

acquisition for women to secure employment; made a positive impact in closing the gender pay gap within the tech industry; increased in the number of tech-related job openings for women in recent years; creation of non-traditional job roles that are more accessible to women, and promotion of women's participation in the tech workforce.

The discovery on the impact of technological revolution on women employment revealed an increase in job opportunities for women in south-west Nigeria which is in line with the study of Abdulazeez (2019) and Sanni, *et al.*, (2019) who mentioned that women are beginning to take a firm foothold in the industry and show a steady rhythm which will in time outpace their male counterparts in the STEM field as it is happening in every other field of human endeavour. In addition, this study revealed that the impact of technological revolution on women employment brings about enhanced technological skills acquisition for women to secure employment which is an improvement when compared to Sorgner (2020) research that found out that there are pronounced gender differences in the effects of new digital technologies, with a strong variation between countries and industrial sectors.

Research Question 2: In what ways does company culture affect women's participation in the workforce amidst technological changes?

S/N	STATEMENT	SA		A		SD		D		M	SD	Rank
		f	%	f	%	f	%	F	%			
1	Company culture in South West Nigeria perpetuates gender stereotypes that put women at a disadvantage.	584	33.1	909	51.5	120	6.8	151	8.6	3.11	0.82	2nd
2	Women in South West Nigeria face discrimination in promotion practices due to prevailing company culture.	494	28	965	54.7	163	9.2	142	8	3.01	0.86	7th
3	Company culture often marginalizes women's voices and contributions in decision-making processes.	504	28.6	937	53.1	175	9.9	148	8.4	3	0.88	8th
4	Discriminatory attitudes and behaviours towards women are tolerated within company culture in South West Nigeria.	447	25.3	1021	57.9	147	8.3	149	8.4	3	0.82	8th
5	Women experience unequal treatment compared to their male counterparts within the company culture.	584	33.1	873	49.5	160	9.1	147	8.3	3.07	0.88	4th
6	Traditional gender roles are reinforced by company culture in South West Nigeria, limiting women's career advancement	497	28.2	965	54.7	153	8.7	149	8.4	3.02	0.84	5th
7	Gender-based harassment and discrimination are overlooked or minimized within the company culture.	470	26.6	1005	57	149	8.4	140	7.9	3.02	0.83	5th
8	Company policies and practices contribute to the perpetuation of discrimination against women in south-west Nigeria.	460	26.1	995	56.4	155	8.8	154	8.7	3	0.84	8th
9	Women are discouraged from challenging discriminatory practices within the company culture in south-west Nigeria	588	33.3	919	52.1	124	7	133	7.5	3.12	0.82	1st
10	Ministry of Education should Modify internal structures to enable it to promote a policy of gender equality	539	30.6	977	55.4	148	8.4	100	5.7	3.08	0.83	3rd
Weighted Mean										3.04		

Interpretation and Discussion

The result in Table 2 shows how company culture affect discrimination against women in Polytechnics in south west Nigeria. Given the weighted mean score of 3.04, statements with mean values that are equal or greater than the weighted mean score are considered in this result. As shown in Table 2, the respondents ranked first “Women are discouraged from challenging

discriminatory practices within the company culture in south-west Nigeria with mean of 3.12 and standard deviation of 0.82. Also, 33.3% and 52.1% of the respondents respectively strongly agree and agree with this statement. Ranked second was “Company culture in South West Nigeria perpetuates gender stereotypes that put women at a disadvantage” ($M = 3.11$, $SD = 0.82$) and 33.1% and 51.5% of respondents strongly agree and agree respectively with this statement. “Ministry of Education should modify internal structures to enable it to promote a policy of gender equality” ($M = 3.08$, $SD = 0.83$) was ranked third and 30.6% and 55.4% of respondents strongly agree and agree respectively, and Women experience unequal treatment compared to their male counterparts within the company culture ($M = 3.07$, $SD = 0.88$) with 33.1% of strongly agree and 49.5% agree which was ranked fourth.

As shown in Table 2, from the perspectives of the respondents, company culture affects discrimination against women in Polytechnics in south west Nigeria in terms of women discouragement from challenging discriminatory practices, company culture in perpetuates gender stereotypes that put women at a disadvantage, the need for the Ministry of Education to modify internal structures to enable it to promote a policy of gender equality, and women experience of unequal treatment compared to their male counterparts.

Martin and Barnard (2013) in their research on “The experience of women in male-dominated occupations” concluded that women in male-dominated occupations often work in conditions that do not cater for their unique needs because of covert and entrenched gender-biased organisational cultures. However, they opined that organisations can motivate women to remain in male-dominated work settings if they provide the women with tangible physical support and female-focused policies, visible career opportunities, challenges to entice their personal drive for achievement and different ways of recognising their success as gender balanced mentorship is vital for assisting these women to cope and persevere. This study however revealed that technological revolution has made it easier for women to access job opportunities previously dominated by men as a good number of jobs have been digitized and getting support has been made easier via online mentorship programmes that can be assessed from wherever one is in the world.

Conclusion and Recommendations

The technological revolution has positively impacted women's employment in South West Nigeria, particularly in increasing job opportunities, enhancing technological skills acquisition, and promoting women's participation in the tech workforce. The results suggest that technological advancements have created new opportunities for women, including non-traditional job roles, and have contributed to closing the gender pay gap in the tech industry. It is further concluded that the company culture in south-west Nigeria's polytechnics perpetuates discrimination against women, with respondents highlighting that women are discouraged from challenging discriminatory practices and that gender stereotypes disadvantage women. The culture also leads to unequal treatment of women compared to their male counterparts. Based on the findings of this study, the following recommendations are raised:

- i. Educational institutions and organizations should invest in upskilling and reskilling programs that focus on developing technological skills for women, enabling them to secure employment and advance in the tech industry.
- ii. Stakeholders should promote and support initiatives that encourage women's participation in the tech workforce, such as mentorship programs, networking opportunities, and awareness campaigns highlighting the benefits of technology careers for women.

- iii. The Ministry of Education should develop and implement policies that promote gender equality, provide guidelines for addressing discrimination, and ensure accountability for non-compliance.
- iv. Polytechnics in south-west Nigeria should foster a company culture that promotes gender equality, challenges stereotypes, and encourages women to speak out against discriminatory practices.
- v. Regular training and awareness programs should be conducted to sensitize staff and management on the importance of gender equality, diversity, and inclusion.
- vi. Polytechnics should establish support mechanisms, such as mentorship programs and counselling services, to help women navigate discriminatory practices and promote their career advancement.

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