
**ASSESSMENT OF FEMALE VULNERABILITY DRIVERS IN EMPLOYMENT: A CASE
STUDY OF NIGERIA**

SANUSI, GBENGA PETER

Department of Economics,
Anchor University, Lagos.
gsanusi@aul.edu.ng. +234-703 785 5635

FOLARIN, ESTHER M.

Department of Economics,
Anchor University, Lagos.
efolarin@aul.edu.ng. +234-803 917 5078

OKAFOR, VICTORIA

Department of Economics,
Covenant University, Ota.
victoria.okafor@covenantuniversity.edu.ng. +234-818 246 6026

Abstract

The share of workers in vulnerable employment is directly linked to the share of people living in poverty. Due to citizens' statuses, discriminatory or poorly enforced labour laws and obfuscated employment relations, migrant workers are often at greater risk to working in vulnerable types of employment. The study focuses on the attainment of two main sustainable development goal (goal 8: Decent work and Economic growth and Goal 5: Gender Equality) alongside some other on a secondary scale. The ultimate empowerment of women is to step up and take charge of their own futures. The study employed the use of regression estimator, employing OLS. It assesses the extent to which female vulnerability in employment is influenced by agricultural sector employment of females, manufacturing sector employment of females and service sector employment of female. Expectedly, vulnerability of female employment vulnerability in the sectors examine indicates high level of vulnerability influenced by both the agricultural sector and the service sector. Therefore it is suggested that policies geared towards female empowerment in agriculture and services alongside other concerned sectors should be promoted to decrease the venerability of female employment in agricultural and service sector in Nigeria. This will result to increase in female empowerment and nation growth and development.

JEL Classification: Q1, J5, I14, J16.

Key Words: Employment Vulnerability, Sustainable Development, Female.

• **Background**

Gender gap in employment has been a source of concern to development agencies for decades. According to the International Labour Organization (ILO) 2012, prior to the financial and economic crisis in 2009, the reduction of the gender gap in employment was strong in some regions like Middle East, Latin and Caribbean America and Africa. However, the period of the crisis led to a reversal of that trend making the gender equality gaining so much attention as Goal number 8 in the Sustainable Development Goals. Vulnerable employment as well is more widespread in women. In 2012, ILO noted that region with high gender gap in vulnerable employment were Middle East, North Africa and Sub Saharan Africa. Women happen to make the majority of workers in vulnerable form of work such as own-account work and contributing family work (Kring, 2017). Globally, the percentage of women contributing family workers make up 14.9 percent compared to men, which is 5.5 percent.

Global unemployment increased from 170 million in 2007 to nearly 202 million in 2012, of which about 75 million are young women and men. Nearly 2.2 billion people live below the US\$2 poverty line and that poverty eradication is only possible through stable and well-paid jobs. 470 million jobs are needed globally for new entrants to the labour market between 2016 and 2030. (ILO, 2018)

The economic crisis has had a major impact throughout the world on the level of employment as well as its quality. The ILO's annual report on "Global Employment Trends 2010" says the share of workers in vulnerable employment worldwide may have increased by more than 100 million in 2009, and with it global poverty. Around the world, finding a job is much tougher for women than it is for men. When women are employed, they tend to work in low-quality jobs in vulnerable conditions, and there is little improvement forecast in the near future. There are different barriers holding women back from decent work. When someone is employed or actively looking for employment, they are said to be participating in the labour force.

The current global labour force participation rate for women is close to 49%. For men, it's 75%. That's a difference of 26 percentage points, with some regions facing a gap of more than 50 percentage points. While vulnerable employment is widespread for both women and men, women tend to be overrepresented in certain types of vulnerable jobs: men are more likely to be working in own-account employment while women are more likely to be helping out in their households or in their relatives' businesses. Across the board, both women and men report that the biggest barrier for women in paid work is the struggle to balance it with family responsibilities. Work such as childcare, cleaning and cooking is necessary for a household's welfare – and therefore for the well-being of societies as a whole – but women still shoulder the brunt of this often invisible and undervalued workload.

Vulnerable employment is defined as the sum of the employment status groups of own account workers and contributing family workers. They are less likely to have formal work arrangements, and are therefore more likely to lack decent working conditions, adequate social security and 'voice' through effective representation by trade unions and similar organizations. Vulnerable employment is often characterized by inadequate earnings, low productivity and difficult conditions of work that undermine workers' fundamental rights. From an economic perspective, reducing gender gaps in labour force participation could substantially boost global GDP. The regions with the largest gender gaps would see huge growth benefits. Many developed countries would also see their average annual GDP growth increase, which is significant during times of near-zero economic growth.

In countries at all levels of economic development, a woman's personal preference is the key factor in determining whether she will seek out and engage in paid work. However, this preference is heavily influenced by socio-economic constraints and pressure to conform to traditional gender roles. For most developing and emerging countries, the lack of safe and accessible transportation is the most challenging factor for the small percentage of women who report being affected by this. All too often, women risk facing harassment and even sexual assault on their daily commute. Globally, the lack of affordable care for children or family members is an obstacle for women, both for those looking for a job and those in paid work. (ILO 2018)

There are still many people who believe it is unacceptable for a woman to have a paid job outside the home: 20% of men and 14% of women globally, to be exact. Many women reported that their immediate family disapproved of their decisions to work outside the home. To reduce these existing gaps achieve equal pay, tackle occupational segregation, eliminate discrimination, promote work-family balance, e.t.c. Most women want to be in paid employment, but a persistent set of socio-economic barriers keep them out of the workforce. Identifying and quantifying these barriers allows us to develop smarter policy responses for eliminating them. Ultimately, closing gender gaps in the labour force is not just good for women and their households, but for the global economy as a whole.

Sustainable Development Goal 8, which advances the promotion of inclusive and sustainable economic growth, employment and decent work, deals with issues at the core of the ILO's mandate. Goal 8 covers a variety of topics, including those for which there are tier I and tier II indicators, such as labour productivity, informal employment, earnings (including the gender pay gap), unemployment, youth not in education, employment or training, child labour and occupational injuries.

The unemployment rate is a major headline labour market indicator, widely used and recognized as one of the main labour market measures. It conveys information on the proportion of the labour force that is unemployed, providing insights into the underutilization of the labour supply. Yet, it is important to note that the unemployment

rate alone does not convey a full picture of labour underutilization, which can also be found among the employed (time-related underemployment) and among persons outside the labour force (the potential labour force). The unemployment rate reflects the inability of an economy to generate employment for those who are looking for a job but cannot find one despite being available to take up work. It is thus an indicator of the efficiency and effectiveness of an economy to absorb its labour force and of the performance of the labour market.

In line with goal eight which includes to promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services. Also to improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead. By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

Table 1 shows vulnerable employment, female (% of female employment) in Nigeria. It shows that this has been decreasing over the years. In the earlier years, it was over 80 percent before the decline gradual and steady decline. However, there was a shape rise in 2010, but not as high as the earlier years.

Table 1: Vulnerable employment, female (% of female employment)

Source: Authors' Computation from WDI 2018. (Modeled ILO estimate)

1.1 Objective of Study

- To assess the extent to which female vulnerability in employment is influence by the different (agricultural, manufacturing and service) sector employment of females.
- To ascertain which of the sector will help improve female vulnerability better with little deliberate efforts of the public and private institutions.
- **Literature Review**

Some literature establish that women are more vulnerable than men, Pimlott-Kubiak & Cortina, (2003), explains that, It should be established that vulnerability is not the inherent nature of women, however it escalates from continuous marginalisation, inequality and injustice towards women (Morchain, Prati, Kelsey, & Ravon, 2015). The

key driver of vulnerability among females in employment is gender discrimination in the work place.

Rahman (2013), defined vulnerability as the characteristics of a person or a group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard, (Blaikei et al, 1994). According to O'Riordan (2002), vulnerability results from poverty, exclusion, marginalization and inequities in material consumption. Vulnerability as defined by ISDR, 2007 are conditions determined by physical, social, economic and environmental factors and processes, which increase the susceptibility to a community or persons to the impact of hazards.

A vulnerability assessment carried out in Sinoe county, Liberia showed that 90 per cent of the women unemployed or self-employed and for those working there is clear reliance on informal sector as their source of income (Avery, Nelson, & Salvestrini, 2017). According to Kring (2017), women who become mothers are constrained in decent employment opportunities because they are faced with additional childcare burden. Furthermore, there exists labour market segregation both horizontally and vertically. Horizontally, that is, when women are overly represented in a particular range of jobs than men and vertically occurs when lower ranking positions are overpopulated by women with lower chances of promotion and fewer management and authority positions.

UN WOMEN (2015) The share of workers in vulnerable employment is directly linked to the share of people living in poverty. Due to their immigration status, discriminatory or poorly enforced labour laws and obfuscated employment relations, migrant workers are often at greater risk to working in vulnerable types of employment. Hence, there is a lack of information on the number of male and female migrants working in vulnerable employment.

María et al (2009) proposes that as a concept of employment vulnerability for subsistence workers in the informal sector, the condition of those who must work by day to eat at night, who have little or no ownership of assets, and who have a minimum structure of opportunities to prevent, face, and resist the critical situations that occur daily, putting at risk their subsistence and that of the persons who are their responsibility, thus making the connection between social and employment vulnerability. On the other hand, vulnerability can be seen as a process of conditions that are accumulated and vary in time and space and as a function of the subsistence mechanisms of individuals and households and the investments they can make in the medium and long term in the reproduction of their social system.

Remi et al (2014) Two of the most notable trends in labour markets in Europe are the

rise in the number of atypical job contracts (e.g. fixed-term contracts and temporary work) and the increase in job turnover. The concept of “employment vulnerability” can be used to describe these trends, which weaken the employer–employee relationship. In this article, the authors measure this employment vulnerability, for individual European countries, by creating two indices – an “employer-related vulnerability index” and a “job-related vulnerability index” – which are then aggregated to form an overall employment vulnerability index.

Haroon et al (2016) considered those who are both the most vulnerable, as these workers are significantly more likely to live in poverty than those with only one dimension of vulnerability, who in turn have a higher risk of poverty than those with no dimensions of labour market vulnerability. According to Oosthuizen (2012) it appears that low pay has affected about a third of the employed from about 2007 until 2012.

Analysis carried out using focused group discussion method revealed a significant difference across the genders is seen, with a majority of men being employed or self-employed (81%), but 51% of women being unemployed. In this regard, understanding what the current employment opportunities are for women was also deemed important. Four common occupations for women include selling farm produce 77%; 33% work as labourers; 15% are involved in petty trading; and a small number (5%) report working in restaurants (Avery et al., 2017). In the developing world, however, women are more often employed in sectors producing tradeable goods. The contraction in export-oriented manufacturing industries and tourism led to greater job losses among women in many developing countries (ILO, 2009; Seguino, 2009). Evidence from 14 countries demonstrates a wage bias toward male-dominant occupations (higher average wages in male-dominated occupations), with the wage differential ranging from 5 per cent in Thailand to 43 per cent in the Republic of Moldova.

According to Greenwood & Lippman (2010), in the USA, men are more likely than women to be shown in a paid position of labor (Glascock & Preston-Schreck, 2004; Signorielli, 2004; Signorielli & Bacue, 1999; Stern & Mastro, 2004). This is especially true of senior adults: In a content analysis of television commercials, 40.3% of senior men were shown as workers, whereas only 2.4% of senior women were (Stern & Mastro, 2004). However, the findings are more mixed for studies conducted in countries other than the USA. Although studies conducted in Germany (Döring & Pöschl, 2006), Indonesia (Furnham, Mak, & Tanidjojo, 2000), and Korea (Kim & Lowry, 2005) indicate that men are shown as paid laborers more frequently than women are, a pair of content analyses conducted in Britain and New Zealand showed a non-significant gender difference on this measure (Furnham & Farragher, 2000). Women, on the other hand, are more likely either not to work or to be in a role that does not allow their employment status to be determined (Signorielli & Kahlenberg, 2001; Stern & Mastro, 2004). Significant gender differences also emerge for job status:

Men are more likely to be depicted as bosses (Glascock, 2001) and professionals (Glascock & Preston-Schreck, 2004; Stern & Mastro, 2004; but see Signorielli & Kahlenberg, 2001, for non-significant differences), although women's representation in the latter category showed a significant increase between the 1970s and the 1990s (Signorielli & Bacue, 1999). In light of these findings, perhaps it should not come as a surprise that a content analysis of women's magazine headlines conducted in the USA showed that only 3–4% of headlines dealt with “career or finance” (Davalos et al., 2007).

- **Theoretical Framework, Data and Methodology**

Roxburgh (1996) identifies differential vulnerability hypothesis and differential exposure hypothesis as the competing explanations that have made efforts to understand the gender difference in distress.

The differential vulnerability hypothesis suggests that although employed men and women may be exposed to similar level of stress, differences in response to the social environment result in women experiencing the same environmental cues as stressful. While differential exposure explanation proposes that employed women's greater distress is a result of their higher exposure to stress, relative to employed men.

UNDAF (2017) The theory of change is a method that explains how a given intervention, or set of interventions, is expected to lead to specific development change, drawing on a causal analysis based on available evidence. A theory of change helps to identify solutions to effectively address the causes of problems that hinder progress and guide decisions on which approach should be taken, considering UN comparative advantages, effectiveness, feasibility and uncertainties that are part of any change process

Fineman's Theory of vulnerability(2008)

This theory was articulated by Martha Fineman in 2008. This theory is central on the fact that all human beings are vulnerable and prone to dependency and the state (government) has corresponding obligation to reduce, ameliorate and compensate for that vulnerability (Kohn, 2014). Fineman (2008) posits that for the state to meet its obligation in responding to human vulnerability, it has to provide equal access to the societal institutions. The theory further explains that it is the recognition and experience of human vulnerability that brings individuals into families, families into communities and communities into societies, nation, states and international organizations. On this basis, it is right to say that United Nations and SDGs is a product of the realization of vulnerabilities in human beings.

Vulnerability resonates the need to eradicate disadvantage and alter laid down institutional arrangements that create privilege. The theory recognized that formal equality approaches fail because they do not recognise group differences.

The study is hinged on the thesis of Fineman's theory of vulnerability. This theory presupposes that human beings are vulnerable and tends to be prone to dependency. As such, the government has an obligation to reduce, or compensate for the vulnerability. Applying this to employment vulnerability, suggests the tendency for groups in the population to be prone to underemployment. Thus, there is the need for institutional efforts to ameliorate the consequences of such outcome. Vulnerable employment is often characterized by poor condition of work; low productivity and as such, low remuneration.

To what extent does per capita income and foreign direct investment and employment by sectors affects employment vulnerability, is the focus of this study? The functional relationship is shown in equation 1..... (1)

Where, FVE is the female vulnerability in employment, FEA, FES, and LGDPPC are female employment in agriculture, service and per capita income respectively. FDI is the foreign direct investment and MUNE is the percentage of unemployed male.

3.1 Model Specification

Based on the theoretical framework developed above, the estimable model for this study can be specified as follows;

Where the variables are as earlier defined. ϵ = White noise or disturbance term. The linear regression analysis model is employed to empirically investigate the above functional forms.

3.2 Data requirement and sources

This study employed annual time series data that covers the period from 1988-2018 to examine the impact of income, FDI and employment in agriculture and services on female employment vulnerability. All variables were sourced from the World Bank's Development Indicators (WDI, 2017).

• EMPIRICAL RESULTS AND DISCUSSIONS

4.1 Pre-estimation Analysis: Descriptive Statistics and Correlation Analysis

Results of the descriptive characterization of the variables used in the regression analysis are reported in Table 1. There are 31 observations and the range or the variability of the averages are small. This implies that the data are normally distributed. This is shown by the standard deviation which ranges between 0.24 and 7.29. Female vulnerability in employment has the highest mean of 86.5 and 2.06 mean for the FDI.

Table 1: Descriptive Statistics

	FVE	FEA	FES	GDPPC	FDI	MUNE
Mean	86.52419	37.91581	49.86806	12.49656	2.069032	4.202581
Median	86.69000	42.10000	45.74000	12.44042	1.880000	4.100000
Maximum	88.26000	45.78000	61.62000	12.86190	5.790000	5.980000
Minimum	84.59000	26.39000	41.77000	12.21950	0.630000	3.370000
Std. Dev.	1.272603	7.218997	7.297629	0.242289	1.183583	0.647353
Skewness	0.007835	-0.452018	0.425406	0.260340	1.500257	1.537860
Kurtosis	1.335818	1.566360	1.575072	1.413387	5.146282	4.730026
Jarque-Bera	3.577591	3.710446	3.557638	3.601746	17.57908	16.08518
Probability	0.167161	0.156418	0.168837	0.165155	0.000152	0.000321
Sum	2682.250	1175.390	1545.910	387.3934	64.14000	130.2800
Sum Sq. Dev.	48.58555	1563.417	1597.662	1.761122	42.02607	12.57199
Observations	31	31	31	31	31	31

Source : Authors' computation

Table 2 presents the results of correlation analysis among the selected variables. Correlation analysis enable us to establish the level of association among the variables in the regression analysis, which has implications for their inclusion in the same models. From Table 2, the correlation among the series showed a moderate coefficient and can co-exist in the same model. However, there are indications of inverse relationship among some variables.

Table 2: Correlation Results

	FVE	FEA	FES	GDPPC	FDI	MUNE
FVE	1.000000					
FEA	0.919897	1.000000				
FES	-0.924207	-0.999460	1.000000			
GDPPC	-0.926648	-0.971889	0.971049	1.000000		
FDI	0.367724	0.439672	-0.440906	-0.447415	1.000000	
MUNE	-0.323728	-0.539832	0.545315	0.412992	-0.281186	1.000000

Source: Authors' computation

4.2 Stationarity (Unit root) and Co-integration Tests

The plotted graphs for each of the variables of interest, shows the varied trending of the variables. Thus, the need to proceed to test for the stationarity of the time series data over time. The Augmented Dickey-Fuller (ADF) unit root test was conducted for each series, and the results are as presented in Table 3. The time series properties of the variables confirm that all the series is integrated of order one, $I(1)$. In other words, the variables were not stationary at levels, but after the first differencing.

Table 3: Results of Unit Root Tests

Variable	Augmented Dickey-Fuller (ADF)		
	Level	First Difference	I(d)
FVE	-0.955	-3.227***	I(1)
FEA	0.286	-3.474***	I(1)
FES	0.863	-4.401***	I(1)
GDPPC	-0.616	-3.424***	I(1)
FDI	-2.511	-8.488***	I(1)
MUNE	-1.333	-3.087***	I(1)

Source: Authors' computation. Note: *** denote significance at 5% level.

4.3 Discussion of Results

The output of the results-- sectoral employment, income and FDI on female employment vulnerability in Nigeria is presented in Table 4.

Table 4: Regression Result: Female Employment Vulnerability.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	56.84348	20.85743	2.725335	0.0121
FVE(-1)	1.043518	0.076499	13.64085	0.0000
FEA	-0.531416	0.114921	-4.624191	0.0001
FES	-0.494664	0.112638	-4.391632	0.0002
LGDP	-6.263970	4.241973	-1.476664	0.1533
FDI	0.016731	0.015322	1.091981	0.2861
MUNE	-0.027920	0.058808	-0.474764	0.6394
R-squared	0.988537	Mean dependent var		86.46633
Adjusted R-squared	0.985546	S.D. dependent var		1.252199
F-statistic	330.5670	Durbin-Watson stat		1.871158
Prob(F-statistic)	0.000000	Wald F-statistic		2125.968
Prob(Wald F-statistic)	0.000000			

Source: Authors' computation. Note: *, ** and*** denote significance at 1%, 5% and 10% levels respectively. Also, in the diagnostic tests, figures in parenthesis are the p-value that reported the probability test.

The major outputs of interest for the simple linear regression are the R-square, the intercept (constant) and the beta (b) coefficients. The R-squared is 98.8%. This shows how well our model predicts or forecasts the future impacts of the exogenous variables on the endogenous variable. It suggests that the explanatory variables in the model predicted 98.8% of the variation in the dependent variable. An intercept of 56.8, implies that if the change in the independent variables was predicted to be zero, female employment variability would be about 56.8 percent.

Further, female employment variability is positively related to its past occurrence. As female employment variability increases over the year, its cumulative effects increases such tendency. This is also significant at 5%. While female employment in

Agriculture, Services and per capita income show an inverse relationship, foreign direct investment is positively related though insignificant. A 1 percent rise in the immediate past value of female employment variability would likely lead to 1.04 percent increase in the current female employment variability. The coefficient of -0.53 in female employment in Agriculture implies a unit increase in female employment in Agriculture will likely lead to about 0.53 falls in female employment variability. Interestingly, these were found to be significant at 5% level of significance. More specifically, the results implies that as more women are employed in Agriculture and Services, the less they are in employment vulnerability bracket. This perhaps, could be as the result of the skills they possibly bring to bear in these sectors.

Moreover, the per capita income also improved female employment vulnerability. It suggests that if income is increasing and it is evenly distributed, or a fall in income inequality, women are more empowered and employment vulnerability is low. In addition, 1.0% increase in female employment in services would result in a reduction of about 0.49% female employment variability in Nigeria. Also, 1.0% increase in per capita income and male unemployment account for a reduction of about 6.26 and 0.02 percent in female employment variability.

The Johansen test statistics was employed to detect the long run relationship among the variables. The test suggests that, there exist a long run relationship among the selected variables. There is at least a Co-integrating vector in the equation as shown in Table 5. The null hypothesis for the Trace test statistic is-- there is no long run association among the variables, against the alternative hypothesis of Co-integrating vectors. We therefore conclude that the variables are related in the long-run.

Table 5: Unrestricted Co-integration Rank Test (Trace)

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.754150	111.5537	95.75366	0.0026
At most 1 *	0.643579	70.86570	69.81889	0.0412
At most 2	0.526019	40.94808	47.85613	0.1903
At most 3	0.295215	19.29703	29.79707	0.4717
At most 4	0.268414	9.151020	15.49471	0.3516
At most 5	0.003008	0.087350	3.841466	0.7676

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level. * denotes rejection of the hypothesis at the 0.05 level. **MacKinnon-Haug-Michelis (1999) p-values

The diagnostic tests is presented in Table 6. The non-significance of the diagnostic tests also confirm that the estimated model satisfied all the required properties of a good model. The residual series has no serial correlation as indicated by the Breusch–Godfrey LM test with a probability Chi-square statistics of 0.3. The null hypothesis is thus rejected because the probability statistics is insignificant. This means

there is no serial correlation found in the result computed. The residuals are homoscedastic as suggested in the Heteroskedasticity test (ARCH) of 0.12, indicating the absence of heteroskedasticity.

Table 6: Diagnostic Test

	Breusch-Godfrey Serial Correlation LM Test	Heteroskedasticity Test: ARCH	Ramsey RESET Test	Jarque- Bera
F-statistic	1.230	2.515	0.058	1.454
Prob.	F(2,21) 0.3123	F(1,27) 0.1244	(1, 22) 0.8110	0.45

Source: Authors' Computation.

The cumulative sum of recursive residuals (CUSUM) and CUSUM of squares (CUSUMQ) tests statistics presented in Figure 1 and 2, fall within the critical bounds of 5% significance, except a marginal variation in the CUSUMQ. Thus, suggesting that the estimated parameters are on average stable over the period under consideration.

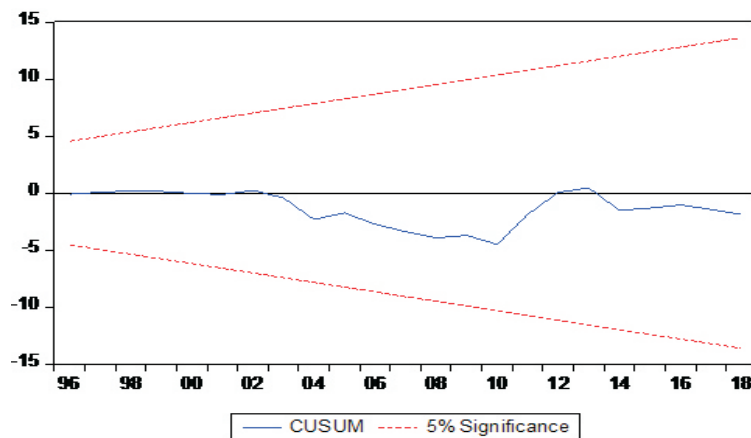


Figure 1: CUSUM Test.

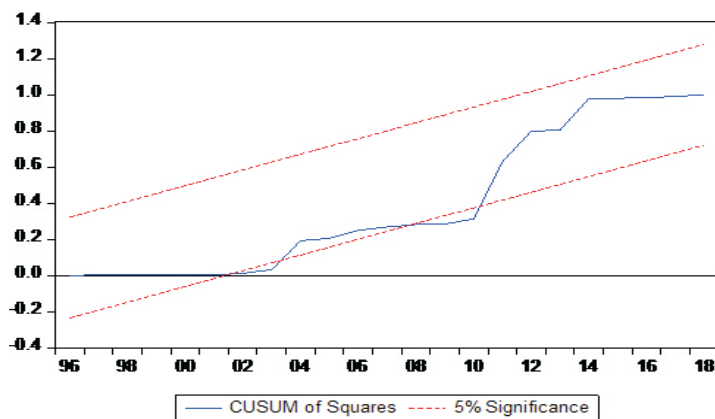


Figure 2: CUSUMQ Test.

• **Conclusion**

The main objective of this study was to underscore the relationship between female employment vulnerability in Nigeria. The major findings of the study indicated that female employment in Agriculture and Services decreases female employment vulnerability in Nigeria. Besides, as per capita income increases, female employment vulnerability in Nigeria reduces. The more female participate in productive activities, specifically in the Agriculture and Services, the less the employment vulnerability. However, previous female employment vulnerability and foreign direct investment is an increasing function of female employment vulnerability. It appears, foreign direct investment does not impact positively on reducing female employment vulnerability. The effect of male unemployment on female employment vulnerability is however, mixed.

We found that female employment vulnerability is decreasing in Nigeria. If not sustained, the cumulative effects of increase could further increase female employment vulnerability. This suggests that women are at a disadvantaged when no definite step is taken to ameliorate the current direction. Even though, per capita income reduces female employment vulnerability, the impact of income inequality could limit the extent of the positive impacts. Also, of interest from the results, is the magnitude of the impacts of the exogenous variables. A closer examination shows a small variation in female employment vulnerability when there is a change in any of the independent variables. This implies there could be other variables which influences female employment vulnerability.

We therefore, recommend that there is need for policy makers and women organisations to focus on reducing female employment vulnerability through promoting activities and efforts geared towards increasing women participation in Agriculture and Services.

In conclusion, female employment vulnerability appears to be decreasing in Nigeria and collective efforts is required if this trend would be reduced further and impactful. This is germane because of the drive towards achieving the Sustainable Development Goals of improving women participation in employment and also reducing poverty in the current decade.

DATA SOURCES

S/N	DATA	SOURCE
1.	FEA	World development index (WDI)
2.	FES	World development index (WDI)
3.	PPC	World development index (WDI)
4.	FDI	World development index (WDI)
5.	MUNC	World development

References

- Avery, J., Nelson, T., & Salvestrini, V. (2017). *An assessment of women's social and economic vulnerabilities Contents*: London.
- Greenwood, D. N., & Lippman, J. R. (2010). Handbook of Gender Research in Psychology. In J. C. Chrisler & D. R. McCreary (Eds.), *Handbook of Gender Research in Psychology* (Gender Res, pp. 643–669). Springer. <https://doi.org/10.1007/978-1-4419-1467-5>
- ILO. (2012). *Global employment trends for women*. Retrieved from http://staging2.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_elm/documents/publication/wcms_114325.pdf
- Kohn, N. A. (2014). Vulnerability Theory and the Role of Government Recommended Citation Vulnerability Theory and the Role of Government. *Yale Journal of Law & Feminism Article*, 26(1).
- Kring, S. A. (2017). *Gender in employment policies and programmes: What works for women?* (Employment No. 235). Geneva. Retrieved from www.ilo.org/publns
- Morchain, D., Prati, G., Kelsey, F., & Ravon, L. (2015). What if gender became an essential, standard element of Vulnerability Assessments? *Gender and Development*, 23(3), 481–496. <https://doi.org/10.1080/13552074.2015.1096620>
- Pimlott-Kubiak, S., & Cortina, L. M. (2003). Gender, victimization, and outcomes: Reconceptualizing risk. *Journal of Consulting and Clinical Psychology*, 71(3), 528–539. <https://doi.org/10.1037/0022-006X.71.3.528>
- Rahman, M. S. (2013). Climate Change, Disaster and Gender Vulnerability: A Study on Two Divisions of Bangladesh. *American Journal of Human Ecology*, 2(2), 72–82. <https://doi.org/10.11634/216796221302315>
- Roxburgh, S. (1996). Gender Differences in Work and Well-Being: Effects of Exposure and Vulnerability Author (s): Susan Roxburgh Source: Journal of Health and Social Behavior , Vol . 37 , No . 3 (Sep . , 1996), pp . 265-277 Published by: American Sociological Associatio. *Journal of Health and Social Behaviour*, 37(September), 265–277.
- Lilia M Cortina, Janet Malley, Abigail J Stewart. "The climate for women in academic science: The good, the bad, and the changeable", *Journal of Psychology of Women Quarterly*, 2006. https://scholar.google.com/citations?user=JyWA_U4AAAAJ&hl=en.

- J Michelle Kahlenberg, Johann E Gudjonsson. "Sex bias in autoimmunity", *Journal of Current opinion in rheumatology*, 2019. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6296774/>.
- Lippmann, Walter (1922). *Public Opinion*. New York: Harcourt, Brace and Company. Retrieved 3rd May, 2016. Archive. [https://en.wikipedia.org/wiki/Public_Opinion_\(book\)](https://en.wikipedia.org/wiki/Public_Opinion_(book)).
- Steven Stern, David Byrne, Michelle S Goeree, "Formal home health care, informal car." <https://scholar.google.com/citations?user=vng>.
- Scott Stern, "The product market and the market for "ideas": commercialization strategies for technology entrepreneurs". *Journal of Research policy*, 2003.
- Harvey L Sterns, Margaret Hellie Huyck, "The role of work in midlife." published by John Wiley and sons, 2001. (PsychINFO Database Record (c) 2016 APA, all rights reserved). <https://scholar.google.com/citations?user=qjCXTdoAAAAJ&hl=en>.
- N Signorielli, D McLeod, E Healy - *Journal of Broadcasting & Electronic Media*, 1994, "Profile: Gender stereotypes in MTV commercials: The beat goes on". *Journal of Broadcasting & Electronic Media*. <https://scholar.google.com/citations?user=a2cUyWsAAAAJ&hl=en>
- N Signorielli, "Television, the portrayal of women, and children's attitudes". *Journal of Children and television: Images in a changing sociocultural world*. <https://scholar.google.com/citations?user=a2cUyWsAAAAJ&hl=en>