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EDITORIAL
Ferhat Topbas

ARTICLE(S)

VOLUME 4   ISSUE 2

EDITORIAL

The Editor-in-Chief and the Editorial Board are proud to present the first issue of the fourth volume of Focus on Research in Contemporary Economics (FORCE). We are driven to establish FORCE which is dedicated to create a well-established venue for high quality research in contemporary Economics. Its content mirrors widespread scholarly approaches and interests within the dimensions of Economics, Finance, Accounting, Banking, Business Administration, Marketing, Management, and other related areas in Social Sciences. Therefore, FORCE's contributions are not limited to a specific disciplinary philosophy or a particular approach.

This issue features five research articles that report essential findings and implications in Contemporary Economics. In the first article Musa (2023) investigates the effect of insecurity on youth unemployment in Nigeria from 1990 to 2020 using the ordinary least squares estimation technique (OLS).

In the second article, Gandhi & Manek (2023) aims to understand how inflation affects economic activities and how consumers cope with these effects. In this context, it focuses on understanding consumers' behavioral patterns.

In the third article, Aronu & Arhovwon & Bilesanmi & Okafo (2023) aimed to analyze the unemployment rate in Nigeria by investigating the impacts of population growth rate, population size, Gross Domestic Product per capita, and Gross Fixed Capital Formation, utilizing various statistical tests to assess short- and long-term effects and suggesting significant investments in small and medium-sized businesses as a solution to alleviate unemployment issues.

In the fourth article, Swati (2023) examines the role of effective participation of women in decision-making processes and income-generating opportunities in tribal households in reducing food insecurity, thereby highlighting the relationship between food security and gender.

In the fifth article, Duman (2023) rewieved the book titled "Identity Phenomenon In Women's Non-Governmental Organizations In Türkiye.
I would like to thank our authors, reviewers, and readers for their continuous support.

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ANALYSIS OF THE IMPACT OF INSECURITY ON YOUTH UNEMPLOYMENT (1990-2020)

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ANALYSIS OF THE IMPACT OF INSECURITY ON YOUTH UNEMPLOYMENT (1990-2020)

Ibrahim Musa*

ABSTRACT

Using the ordinary least square estimation technique (OLS), this study investigates the effect of insecurity on youth unemployment in Nigeria from 1990 to 2020. The dependent variable in this study is unemployment (UNE), and the independent variables are National Terrorism Index (NTI) and Crime Rate (CR). The study's findings show that NTI has a positive and significant impact on UNE; a unit increase in NTI results in a 0.000827 increase in unemployment. The influence of Nigerian CR on UNE is both favourable and large; an increase in Nigerian CR results in a 0.005653 increase in unemployment. Because heightened insecurity is a direct outcome of unemployment, the study suggests the government should cut interest rates in commercial banks to make loans more available to small business owners so they can hire more people. Government should also fight corruption in both public and private offices, kidnappings and create more skill acquisition centres

KEY WORDS: Youth Unemployment, National Terrorism Index, Crime Rate and OLS

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1. INTRODUCTION

According to the International Labor Organization (ILO), the number of economically active people who are unemployed but available and looking for work in 2017 includes both those who were fired and those who willingly left their jobs. Youth unemployment is thus defined as the collection of young individuals from various backgrounds who are eager and qualified to work but are unable to do so. Youth unemployment was classified as occurring among individuals between the ages of 15 and 24 by the ILO's ILOSTAT Database in 2022. In Nigeria, this rate is roughly 27.3%, which is greater than adult unemployment (NBS, 2020).

The inability of a country's eligible workforce to get a paid job is a worldwide problem known as unemployment. It has social ramifications as well as major economic ones that influence practically every nation and every person, either directly or indirectly. It generates social unrest and is a sign of the recent crime wave, ongoing youth discontent, and shaky socioeconomic framework that have plagued many countries. The recent unrest seen in the Middle East, North Africa, and even the 2011 riots in the United Kingdom, among other places, may be directly linked to the rising unemployment rates in those countries (Olubukola, 2013). The present global employment crisis and widespread shortages of quality jobs are especially acute in emerging countries like Nigeria, which has the potential to widen the poverty gap.

A significant cause of worry is the nation's unemployment rate's sharp increase. Many school dropouts and employable people are having trouble obtaining a job or are being laid off for a variety of reasons. It is now more important to understand how to deal with the realities of graduating from college and entering the ranks of the jobless with little hope for the future rather than focusing on going to school, graduating, or acquiring a skill. In Nigeria, there is no social security system in place to support the jobless, in contrast to what is the case in the majority of affluent nations. Therefore, the majority, if not all, of the jobless are unable to fend for themselves since they do not get unemployment benefits from the government. As a result, many have turned to participate in actions that pose security risks to Nigeria (Olubukola, 2013).

Following the country's restoration to democratic government in 1999, there has

been an upsurge in terrorism, which has made people in Nigeria more fearful of being attacked (Ali, 2013). Nigeria has a long history of violent crime that may be linked to the years 1960 to 1970. Nigeria was forced to adopt a federal system by the British after its independence in 1960.

Different ethnic nations in Nigeria have continued to call for real federalism, economic reform, and political restructuring ever since the country gained its independence. Affected ethnic groups in the nation have reacted violently in rebellious ways as a result of these agitations, affecting Nigeria's security, unity, and corporate survival. Federalism that threatens the autonomy and independence of its constituent parts would only lead to conflict, a danger to national security, and eventual collapse (Ali, 2013; Adamu, 2005).

Youth unemployment is one of the most significant socioeconomic problems Nigeria is now confronting. It has even gotten a lot worse in recent years. However, if specific information on the number of unemployed youths roaming the streets of towns and cities around the country could be gathered from the National Bureau of Statistics, the scale of this might be recognized. Over 60% of Nigeria's population, or 80 million people, are under 24 years old, according to the National Manpower Board and National Bureau of Statistics (2009). There are 64 million unemployed Nigerians and 1.6 million underemployed Nigerians, according to Awogbenle and Iwuamadi (2010).

Additionally, the NBS (2009)'s analysis of Nigeria's national unemployment rates between 2000 and 2009 revealed that the country's unemployment rate was 31.1% in 2000; 13.6% in 2001; 12.6% in 2002; 14.8% in 2003, 13.4% in 2004; 11.9% in 2005; 13.7% in 2006; 4.6% in 2007; 14.9% in 2008; 19.7% in 2009 and 37.7% of Nigerians aged 15-24 and 22.4% of those between ages 25-44 that are willing to work cannot find work. In Nigeria, the average rate of young employment in 2011 was 46.5% (BGL Research and Intelligence 2011:4). This is a reference to the high unemployment rates in Nigeria, which foretell grave social unrest and peril for the nation.

The problem of unemployment has severely disrupted the lives of many young people in Nigeria, leaving them dependent on friends and family members who are also dealing with issues of their own. According to Akwara, Akwara, Enwuchola, Adekunle, and Udaw (2021), the epidemic of unemployment has destroyed almost all of the world's countries in various ways. Similarly, Adebayo

(2013) agrees that one of the main social concerns that have significantly impeded Nigeria's and other developing nations' economic growth and development for a very long time is young unemployment and the consequent rise in crime and insecurity. Notably, it is simple to conclude that the high rate of youth unemployment in Nigeria has had a considerable impact on the country's high rate of poverty and insecurity (Jacob, Goshi, and Jonathan, 2019).

Therefore, this study aims to examine the impact of insecurity on youth unemployment in Nigeria from 1990 to 2022 and the question of interest is to what extent does insecurity impact youth unemployment? This forms the basis of this research.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1. Conceptual Review

2.1.1. Concept of Insecurity

We must take a quick look at what security is to be able to define insecurity in its entirety. The demand for security drives the social compact, in which the populace voluntarily cedes its rights to the state, which is responsible for ensuring everyone's existence. Nwanegbo and Odigbo (2013) claim that since the end of the cold war, efforts have been made to conceptualize security in a way that puts more emphasis on people rather than static objects. Human security, which embodies aspects of national security, human rights, and national development, is still a major barometer for defining the concept. The endeavour to broaden and extend the idea of security from the level of government to societies to people and from military to non-military challenges is at the core of this discussion (Krahmann, 2003). According to McGrew (1988), the maintenance and protection of socioeconomic order in the face of internal and external threats, as well as the promotion of a preferred international order, which lessens the threat to core values and interests and domestic order, are two crucial pillars that support national security. Security is an all-encompassing condition that suggests that territory must be protected by a network of armed forces; that the sovereignty of the state must be ensured by a democratic and patriotic government; that the military police and the populace themselves must protect the populace; and that the populace must be protected not only from external attacks but also from the devastating effects of internal upheavals such as unemployment, hunger, starvation, and diseases. The viewpoint described above was expanded upon by Dike (2010) and Omede (2011), who argued that Nigeria's security should be founded on an all-encompassing perspective that

views the people as the main beneficiaries of every security and developmental deliverable that the state can provide. According to Nwanegbo and Odigbo (2013), efforts to increase the Federal Republic of Nigeria's capacity will be necessary to advance its interests and objectives in containing internal and external aggression, controlling crime, eradicating corruption, fostering real development, progress, and growth, and enhancing the welfare and quality of life of every citizen. Insecurity, which is defined as the lack of security as previously said, is the polar opposite of security. Uncertainty, hazard, danger, lack of safety, lack of confidence, state of doubt, insufficient guarding and protection, lack of protection and being dangerous, instability, and other words are often used to describe insecurity. The frequent characteristics mentioned above, according to Achumba, Ighomereho and Akpor-Robaro. (2013), refer to a situation in which there is a risk of injury, loss of life, property, or means of subsistence. For them, insecurity entails a condition of ignorance, a lack of control, and the incapacity to defend oneself against forces that could endanger a person or a group, injure them, or leave them defenceless.

Insecurity is a reality for the underprivileged urban residents of numerous nations. He asserts that it could be a symptom of intense personal insecurity brought on by police harassment, maltreatment at the hands of bureaucrats, or a breakdown in neighbourhood public safety. It could also be caused by a lack of secure housing tenure, which leads to living in continual fear of eviction. Insecurity, therefore, indicates a lack of security. It is the antithesis of security. It is the absence of safeguards against illegal action for individuals, nations, or institutions (Magaji, Musa and Salisu 2022).

2.1.2. Unemployment

Regarding the idea, there appears to be a consensus on the definition of unemployment. In its simplest form, the term "unemployment" refers to a person's lack of employment. The unemployed, both those who have lost their jobs and those who have voluntarily left their positions, are individuals who are not working but are still looking for employment, according to the International Labor Organization (ILO, 2017) (World Bank, 1998). Additionally, this happens when people are looking for work but are unable to find it, claims Adebayo (1999).

Unemployment and joblessness result when the supply of labour exceeds the demand for it (Okafor 2011). Young people may be forced to participate in

temporary labour and other unconventional means of subsistence due to the dearth of job prospects in the official sector, which might result in underemployment (Magaji, Musa and Salisu, 2022). The literature has outlined and recognized many types of unemployment. There are several of them, including seasonal, frictional, cyclical, and structural unemployment (Adebayo, 1999). The people whose unemployment is evaluated are those who hold jobs (Obadan and Odusola, 2001; NBS, 2010). People who don't have a job but are actively looking for one at the time of any study are considered to be unemployed. The National Bureau of Statistics (NBS) (2009) defines the labour force of a nation as a collection of persons or citizens of a nation who are willing and able to make their efforts available for gainful employment at any given point in time. The inability of an active person between the ages of 15 and above who are prepared for work but unable to swiftly find a job is known as youth unemployment. Unemployed young people come in a variety of forms, starting with those who lack formal schooling and are looking for work as labourers, cleaners, and other positions. People with elementary education, secondary education, and tertiary education (graduates) fall into different categories of labour in this place depending on their degrees of education.

2.2 Theoretical Review

2.2.1. Classical Theory of Unemployment

The traditional idea of unemployment is used as the foundation for this work. The conventional perspective holds that the labour market is made up of supply and demand for labour, as analyzed by Pigou (1933) and McDonald and Solow (1981). The demand for labour is estimated using the declining percentage of the marginal product of labour. The demand curve predicts that the quantity demand for labour will fall as real wages increase, even if the opposite is true. The labour supply is impacted by a worker's choice to work part-time or not (engage in leisure activities). Because rising real earnings motivate workers to put in more hours, there is a positive correlation between the real pay and the number of hours worked. In an equilibrium economy, demand and supply for labour converge at a clearing point, which establishes the equilibrium real wage rate and full employment. According to Sweezy (1940), the premise of Pigou's Theory of Unemployment is that "apart from frictional obstructions," unemployment "would not exist if wage-earners habitually stipulate for a rate of wages higher than the 'equilibrium' level." Full employment is not always implied by the absence of unemployment. At the current real wage rate, frictional unemployment still exists. A worker might decide not to work, for example, if

they think that working is more inutile than working or earning money is useful. Voluntary unemployment is the name given to this sort of unemployment. The dynamic structure of the labour markets, the accessibility of information, the pursuit of better work opportunities, and sporadic variations in labour demand, such as the closure and opening of new plants, all contribute to frictional unemployment. Benefits from unemployment insurance and the pace of information flow affect how long someone will experience frictional unemployment. According to Wicksell, a drop in wages may sustain full employment provided they are sufficiently flexible in the downward direction (Jonung 1989). The best way to combat unemployment is to provide company owners with more affordable loans. He even believed that the government needed to encourage private investment in land and houses. The introduction of different innovations may also get government help. The funding of government assistance should come from taxes. Wicksell also examines the impact of technological progress on technical unemployment. The introduction of equipment would result in unemployment, but those without work would look for new positions, which would drive down salaries. As a result, full employment is once again achieved. Wicksell believes that ads and employment agencies may lower the typical rate of unemployment for the usual (frictional) unemployment. Another form of unemployment is cyclical unemployment, which results from insufficient demand. He believed that raising wages would be a good idea so that employees could purchase more. However, because of the increased salaries, this move can result in people losing their employment. For Wicksell, incorrect capital investment was the main cause of cyclical unemployment. Investments were made in fields with poor rates of return. He concluded that the greatest strategy for battling cyclical unemployment is public works. Wicksell believes that the boom and price increases brought on by World War I would stop after the conflict. Decreased employment would result. Low pay would have to be accepted by the workforce. Additionally, he believed that the government needed to help out financially those who were out of work. Wicksell goes to Malthus after 1921. According to him, there are too many people in the workforce, there is a capital shortage due to the conflict, and the monetary system is disorderly. Regarding the third factor, manufacturers opted to create less because they anticipated receiving lower prices for their goods when prices fell following the war. As a result, employees lost their jobs and they allowed their money to sit dormant in banks. These reasons imply that one of the key strategies for combating unemployment was emigration. Reducing wages is not an effective strategy to boost employment. Most likely, higher labour productivity is what has driven up wages; lowering wages will result in

lower work-related productivity and intensity. Some capital-intensive businesses won't be forced to move to labour-intensive strategies in the near term by wage reductions. More robots being used for labour should encourage the substitution effect as salaries rise. And over time, this substitution will raise employment and labour productivity. According to (Nishhiyama and Leube, 2011), unemployment results from "a discrepancy between the distribution of labour between industries...and the distribution of demand among their producers." This distortion of the system of relative prices and wages is what causes this difference. The unemployment rate, in other words, is brought on by "a deviation from the equilibrium prices and wages which would establish themselves with a free market and stable money." This is essentially a labour market imbalance, which is often brought on by expansionary monetary and fiscal policies as well as strong trade unions. These policies disrupt the economy and alter its fundamental components, diverting labour and other economic resources to unproductive uses. Additionally, unions have the power to establish salaries that are higher than market rates, creating unemployment, especially in sectors of the economy that are losing money. In summary, Hayek believes that if wages and prices are set by the equilibrium of supply and demand, the issue of unemployment may be solved since resources were allocated to the wrong locations at the wrong times.

2.3. Empirical Review

T Magaji, Musa and Salisu (2022), examine the impact of insecurity on youth unemployment in Nigeria using the OLS estimation technique. Findings reveal that insecurity has a positive impact on youth unemployment in Nigeria. A unit decrease in the security index is likely to cause an average increase of about 1.16 units in youth unemployment. The level of youth unemployment in Nigeria is negatively impacted by domestic private investment and the perception of corruption. Government capital spending, however, significantly reduces the rate of youth unemployment. Therefore, the study suggests that to support rural enterprises, the government should adequately equip its security services to prevent security issues not only in urban regions but also in rural areas. However, this analysis is limited to the years 1996 through 2019.

But, Obona and Nweke (2018) employ deprivation theory and a qualitative research design through the survey to obtain data. Using the Likert scale, they measure the magnitude of responses. This is analyzed through the percentage method and hypothesis tested using Chi-square. The results show that the

causes of insecurity in Nigeria are youth unemployment combined with a lack of employable skills as well as the status of Nigeria. According to the document, the government should teach young people useful skills to include them in some constructive activities.

Ali, Qingshi, Memon, Baz and Ali. (2017) check how different terrorist attacks affect stocks in stocks in Pakistan Stock Exchange. They have applied a model that allows new news and good news about changing volatility effects. Their conclusions show that news about terrorist attacks has adversely affected the return of stocks. Although the volatility of the KSE 100 index has increased by these events, Pakistani Stock Exchange has been affected negatively by terrorist attacks. The effectiveness of the attack depends on the attack type, location, and target type. The more severe the attack, the greater the number of people killed, and the greater the adverse effect on the performance of the KSE 100 Index. Very interestingly, capital markets include news about future attacks. In general, different strategies of terrorists have different effects on capital markets, from which terrorist attacks can be predicted. This study looks at the effect of insecurity only on the capital market in Pakistan.

Resolving Insecurity in Nigeria through Youth Employment and Skills Building: Ebonyi State Case Study is the subject of a 2018 study by Obona and Nweke. The study's goal was to determine whether or not youth unemployment and the proportion of unskilled youth in the nation, particularly in Ebonyi State, are to blame for the country's ongoing instability. To accomplish its goals, the research employs a qualitative research design that relies on the survey method. Focus group talks and standardized questionnaire items were used to gather data for the study. 400 respondents from the study region were specifically chosen. The responses were measured using a five-point Likert scale, which was also utilized to collect data. Percentages were used to examine the collected data. Using the Chi-square test, three formulation hypotheses were examined. The findings indicate that the primary drivers of insecurity in Nigeria are youth unemployment, a lack of learning abilities, and the nature of the Nigerian state. Additionally, it demonstrates that the government has not made significant attempts to address unemployment and skill gaps, particularly among young people. Data for this study came from primary sources, therefore there might have been mistakes when collecting questionnaires and other data.

Monday, Akinola, Olobeni and Aladeraji (2015) look into the relationship

between insecurity and youth unemployment in Nigeria, with a focus on the Niger Delta. The study relied primarily on secondary data and employed a survey design. According to the study, one of the challenges to company survival and Nigeria's long-term peace and security is young unemployment. The report makes several recommendations in light of this, including the availability of employment opportunities and hiring based on merit. The second is the social security program, which offers unemployed graduates N30,000 for first-degree holders, N20,000 for those with an ND or NCE, and N10,000 for those with an FSLC or SSCE as unemployment compensation. The government should implement the ALASKA model as soon as feasible to pay the residents of the Niger Delta and to provide for human security in a country where all forms of poverty have been eradicated. The only geographical region of Nigeria covered by the study is the Niger Delta.

However, Ajibola (2016) investigated Nigeria's economic expansion despite the unrest. An explanation of how security affects economic development was provided. To demonstrate the association experimentally using the multiple regressions [OLS] approach, time series data on the Real Gross Domestic Product, Total Expenditure on Security, Gross Fixed Capital Formation, Total Labor Force, Corruption Perception Index, and Poverty Index were gathered from the 1981 to 2014. It was discovered that variations in the total labour force, total security spending, corruption perception index, poverty index, unemployment rate, inflation rate, and gross fixed capital creation account for 90% of the systematic variation in real GDP. The research demonstrated that security and other associated factors not only support economic development in Nigeria but also have a major and statistically significant influence on it. Based on the findings, we conclude that the structure and trend of allocation to security are still insufficient to meet the challenges of Boko Haram. Furthermore, Nigeria's potential GDP growth rate is 11% while its actual growth rate is 6%, implying that Nigeria's economy is inefficient due to the country's level of insecurity, corruption, unemployment, and poverty. In Nigeria, increasing security spending and lowering the unemployment rate are urgent issues that must be addressed; doing so would boost the nation's economy. Therefore, the research suggests. To lower the degree of corruption in the nation, the government should put the EFCC's strategy into action right now. Funding for the security sector should also be promoted by donor organizations like the World Bank, UNDP, UNESCO, and so on.

However, due to the gaps identified in the previous reviews, there is a need to

find a study that covers more periods and more areas of the study which this research intends to fill.

3. METHODOLOGY

3.1. Research Design

Based on the objective of this study, time series data is sourced via secondary. The data utilised in this study was obtained over time and intends to look at the impact of insecurity on youth unemployment in Nigeria between 1990 and 2020. The factors influencing insecurity in Nigeria were investigated using ordinary least square regression (OLS). The National Terrorism Index and crime rate were the study's independent or explanatory variables while youth unemployment is a dependent variable. Data on the variables were sourced from the Central Bank of Nigeria and the World Development Index.

3.2. Model Specification

The study aims to examine how insecurity affects youth unemployment in Nigeria and the nature of the relationship between insecurity and youth unemployment.

The model of (Magaji, Musa and Salisu, 2022) was modified for this investigation. Thus, the relationship is specified as follows;

YUNM = f(IN, DPI, GCE, CPI, µt) …………………………...(3.1)

The econometric form is specified as follows:

YUM = α + β_1IN + β_2DPI + β_3GCE + β_4CPI + µt…………… (3.2)

Where;

YUM = Youth Unemployment
IN = Insecurity (measured by Global Terrorism Index)
DPI = Domestic Private Investment
GCE = Government Capital Expenditure
CPI = Corruption Perception Index
µt = Error Term

Variables like insecurity, domestic private investment, government capital expenditure and corruption perception index were removed and replaced with crime rate, and National terrorism index (NTI) to achieve a significant result and these are also variables that determine the level of unemployment.

The new model is stated as

$$YUNP = \beta_0 + \beta_1 NTI + \beta_2 CR + \mu t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.3)$$

Where:

YUNP = youth unemployment
NTI = National Terrorism Index
CR = Crime Rate
β_1 and β_2 = coefficients to be estimated
μt = Error term.

3.3. Sources and Type of Data

The data source for this study is secondary data from the Central Bank of Nigeria Statistical Bulletin, National Bureau of Statistics (NBS) and World Bank. The information gathered spans the years 1990 to 2020.

3.4. Method of Data Analysis

Secondary data for this study was provided by the National Bureau of Statistics (NBS) and the Central Bank of Nigeria (CBN). The method used to examine data from CBN and NBS E-view 9.0. Using the Ordinary Least Square method, the reliability of the data is evaluated when performing a regression analysis.

3.5. Technique of Data Analysis

In this research, descriptive statistics, trend analysis, unit root test, regression analysis and cointegration test. Additionally, the research will apply the regression analysis method of ordinary least squares. This method will be used since it has the BLUE qualities of best linear unbiased estimators.

The value of our coefficient of determination R^2 and its modified version would be used to analyse how much variation in the dependent would be explained by the independent variable. Similarly to this, the F-test would be used to determine

the model's overall significance, while the T-test would be used to determine each independent variable's significance.

3.6. Data Presentation, Analysis and Discussion of Result

3.6.1. Data Presentation

To examine the impact of insecurity on youth unemployment, the study presents data used in estimating the model. The data were sourced mainly from the Central Bank of Nigeria (CBN) and World Development Index (WDI) publications from 1990-2020.

3.6.2. Data Analysis

Summary Statistics

Table 1: Descriptive Summary Statistics

	UNP	NTI	CR
Mean	4.437074	166.7618	15.01678
Median	3.980000	76.32437	12.21778
Maximum	6.481000	447.4500	72.83550
Minimum	3.424000	4.206067	5.382224
Std. Dev.	1.007255	156.3596	12.57757
Skewness	1.053177	0.623842	3.792073
Kurtosis	2.411809	1.825062	17.94825
Jarque-Bera	5.380529	3.304348	316.0906
Probability	0.067863	0.191633	0.000000
Sum	119.8010	4502.568	405.4530
Sum Sq. Dev.	26.37861	635656.1	4113.079
Observations	27	27	27

Source: Author's Computation using E-views 9.0, 2023

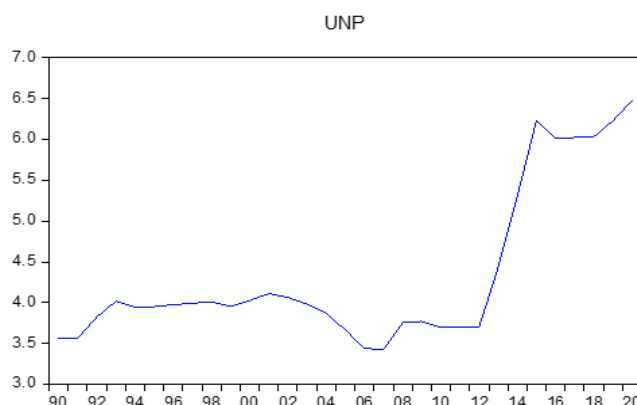### Trend Analysis

Figure 1. Trend Analysis

UNP

Figure 4.1 shows the trend analysis of unemployment, and the minimum value was recorded in the year 2006 while the maximum was recorded in the year 2020.
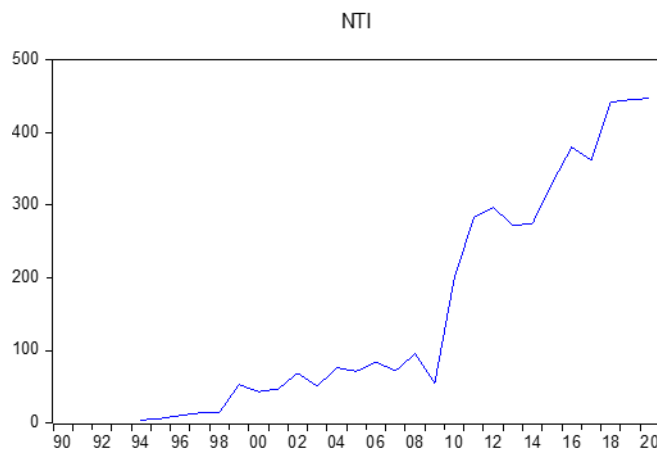
Figure 2 Trend Analysis

NTI

Figure 4.2 shows the trend Analysis of the national terrorism index (NTI) from 1990 to 2020. The minimum value of the national terrorism index was recorded in 1994 while the maximum value was recorded in the year 2020.

Unit Root Test Result

The majority of time series variables are not stationary, according to the literature. Since spurious regression cannot be utilized for exact prediction, incorporating non-stationary variables in the model may have this effect (Gujarati, 2003). To ascertain whether the variables have unit roots or not, we must first investigate the characteristics of the time series data utilized for model estimation. To do this, the Augmented Dickey-Fuller test is used.

Table 2. Unit root test (ADF-TEST)

Variables	ADF-Statistic	Critical value 5%	Order of integration	Interpretation
UNP	-3.038499	-2.967767	I(1)	Stationary at 1st difference
NTI	-5.138950	-2.986225	I(1)	Stationary at 1st difference
CR	-5.354148	-2.967767	I(1)	Stationary at 1st difference

Source: Author's Computation using E-views 9.0, 2023

Table 4.2 above shows the summary of the Augmented Dickey-Fuller Unit root test result. It presents the level of integration of the variables. The individual unit

root test is computed for stationarity using the Nigerian data from 1990-2020. The table indicates that all the variables are stationary at first difference.

Regression Analysis

Each variable is incorporated in the model requirements because it passed the unit root test of stationary at the level, first difference, and second difference. At a 5% level of probability, the ADF test statistics have an absolute value larger than the critical value. Now that stationarity has been established, we may carry out the Ordinary Least Square test to see whether the regressed and the given regressor(s) have a long-term equilibrium relationship. This is the OLS result which was carried out by E-view 11 computer program.

Cointegration Test

Summary of Regression Results;

Table 3.

Dependent Variable: D(UNP)
Method: Least Squares
Date: 15/05/2023 Time: 20:35
Sample (adjusted): 1990-2020
Included observations: 26 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.123645	0.068201	1.812956	0.0229
D(NTI)	0.000827	0.000328	2.524802	0.0007
D(CR)	0.005653	0.001925	2 .936052	0.0000
R-squared	0.844250	Mean dependent var		0.097462
Adjusted R-squared	0.838859	S.D. dependent var		0.304087
S.E. of regression	0.309939	Akaike info criterion		0.603284
Sum squared resid	2.209429	Schwarz criterion		0.748449
Log-likelihood	4.842690	Hannan-Quinn criter.		0.645086
F-statistic	33.532434	Durbin-Watson stat		1.911303
Prob(F-statistic)	0.000038			

Source: Author's Computation using E-views 9.0, 2023

3.6.3. Interpretation of Results

follows: The intercept's value of 0.123645 indicates that, when all other factors are kept constant, the UNP will suffer a rise of 0.123645. The findings indicate that Nigeria's national terrorism index (NTI) has a positive and substantial effect on unemployment; a rise in NTI would cause an increase in UNP of 0.000827. Additionally, the findings showed that Nigeria's crime rate had a positive and

substantial effect on unemployment, with each rise in CR translating into a 0.005653 increase in UNP. R2 is the determination coefficient, and it is 84.4%. This illustrates a decent fit as the independent (explanatory) factors account for around 84.4% of the entire variance in the dependent variable UNP. The Durbin-Watson statistic score of 1.911303 indicates that the model does not include first-order positive autocorrelation. This suggests that the estimated model's predicting ability is accurate. The f-statistic has a value of 33.532434. This shows that the model's parameters are jointly important and that the model is well-specified. This suggests that the estimated model is effective for predicting and forecasting goals.

4. CONCLUSION AND RECOMMENDATIONS

The effect of insecurity on young unemployment in Nigeria between 1990 and 2020 has been determined by this research. Unemployment is a significant issue that has plagued the lives of many Nigerian adolescents, leading to dissatisfaction, hopelessness, and reliance on family and friends who also have to deal with their issues. The study demonstrates that the amount of unemployment in Nigeria is significantly influenced by crime and insecurity.

Government should lower interest rates via the central bank to make loans more accessible to small company owners so they can increase employment and decrease national insecurity. Increased insecurity is a direct result of rising unemployment. To decrease insecurity, the government should increase jobs. To increase foreign direct investment and lower crime, the government should invest in its infrastructure and make doing business easier.

DISCLOSURE OF CONFLICT
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A STUDY ON BEHAVIOURAL PATTERN OF CONSUMERS OF GUJARAT STATE DURING INFLATION

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FOCUS ON RESEARCH IN CONTEMPORARY ECONOMICS

A STUDY ON BEHAVIOURAL PATTERN OF CONSUMERS OF GUJARAT STATE DURING INFLATION

Kalpesh P. Gandhi *, Sameer S. Manek

ABSTRACT

Economic activities of people have been affected by inflation. With the increase of price of commodities of their consumption either they decrease consumption or shift with other commodities or try to increase their earning for maintaining previous consumption level. All these alternatives are treated as behavioural pattern of consumers and this is the main core of the present study. During the inflation people may react differently as higher income group and lower income group also different age group and other different demographic factors may have variation. So researchers have collected primary data with the use of questionnaire with convenient sampling across the Gujarat state and 407 responses have been collected. One way ANOVA has been used to test the hypotheses and it has been found that gander, location, age, education and occupation have significant differences in behavioural pattern during inflation but monthly income have not been found significant differences...

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1. INTRODUCTION

Inflation is a common word for the developing country like India. In general developing economy needs more financial resources to bring development which increases the money supply in the economy by various means. Now if the money supply increases in the economy, it will increase income in the country, with the increase in income, purchasing power increases as a whole which inspire people to buy more and more goods and services. In short the demand in the economy will increase continuously but in comparison to that the supply cannot be increase to match the increasing demand and the result will be rise in prices of the goods and services in the economy which is nothing but Inflation. Since independence of India, inflation has been a pertinent problem. Due to inflation, the inequality of income increases and thereby rich becomes richer and poor becomes poorer. Inflation can also result into region imbalance in the country. States which are good in terms of natural resources and in infrastructural development will gather momentum for development which causes inflation in the economy. To combat the problem of inflation in the economy, monetary policy by the RBI and Fiscal policy by the GOI play an important role.

Monetary policy is continuously monitoring the situation of the economy so that the inflation cannot go up to the mark level so that the economy can be protected from the devastating effect of inflation and for this purpose 6 members Monetary Policy Committee (MPC) had been constituted with Governor of RBI is a chairperson. MPC is continuously monitoring the inflation rate and tries to control it by using various instruments available with it like Repo Rate, Reverse Repo Rate, CRR, SLR, LAF, MSF, OMO etc. MPC is now working with the sole objective of bringing price stability in the economy. On the other hand, Fiscal Policy by the GOI is also consciously working to control inflation by discretionary stabilizer and non-discretionary (Automatic) stabilizer. Under Automatic stabilizer GOI decrease government expenditure and increases tax to control inflation to control inflation in the economy. In with this, the inflation cannot get controlled then discretionary action can also be taken by the GOI.

Consumer behavioural pattern is affected by various internal and external factors and inflation is one of the important factors among external factors. Any change occurs in internal or external factors then alteration has been observed

in consumer behavioural pattern. Consumer behavioural pattern consists of various aspects like spending whether consumers consume more or less, whether they spend more or save more, the next aspect is time like whether they purchase on specific occasion like festival or routine buying etc. Many economists have established various theories regarding consumption pattern during inflation like either they go with Geffen goods or consume same goods with lesser quantity or accept any alternatives.

2. LITERATURE REVIEW

Beckmann E. and Kiesl-Reiter S. (2023) have conducted a study financial literacy and financial wellbeing: evidence from Eastern Europe in a high inflation environment. Researchers have collected data by adopting survey method in nine Europe countries. They have mentioned that inflation has been known at highest ratio compared with other variables. They have found that, in Eastern Europe, less than 50 percent of adults had a good understanding of basic financial concepts like interest rates, risk diversification, and inflation and the level of financial literacy varies between and within countries.

Gbadmosi A. (2016) mentioned consumer behaviour in developing nations. In his study researcher has mentioned that irrespective with the differences among people and society, one thing is common that all are consumers. It is also stated that consumer in these nations is influenced by personal, social and cultural factors, and the marketing stimuli and their awareness and state are changing, and consumers are all different in various ways and this could be demographically, emotionally, culturally or in various other contexts. Researcher has also emphasised various topics for selecting developing nation as 70% of young population are in developing nation and chances of growth also exist etc.

Parvathamma G. (2014) has carried out a study on a review on inflation in India-causes, its impacts, trends and measures to control. Researcher has mentioned four causes of inflation as increasing supply of money, decreasing or lack of supply of goods decreasing demand for money demand for goods goes up. Researcher has also mentioned the impact of inflation and also measures for inflation and five year bracket data from 1958 to 2014 have been analysed. It has been concluded by researcher as inflation was affected badly the life of middle and poor class.

Recky R. et.al. (2023) have made a study on changes in consumer behaviour in

the food market in a crisis. Researchers have mentioned three major factors Covid-19, Ukraine war and high inflation rate which have been affected consumer behaviour. Researchers have collected primary data through questionnaire from 565 respondents. they have used Mann-Whitney test, Kruskal-Wallis test, Friedman test, Principal component analysis (PCA) and Divisive hierarchical cluster analysis and found that demographic factors as age, gender, place of residence significantly influenced the importance of factors when buying online food in times of crisis.

Sharma N. Sahu P. (2022) have conducted a study on understanding the performance of core inflation in India. Researchers have stated that a measure of core inflation is developed, and it is estimated for the time period of January 2012–December 2019 based on consumer price index data. They have used Autoregressive distributed lag model, and bound test approach. They have found that both in the short run as well as in the long run core inflation significantly responds to macroeconomic variables.

Tevin-Anyali et. al. (2023) have mentioned in their study Nigeria's standard of living in the face of inflation as the country consumes more than it produced which create cost of living high. Researchers have covered period from 1999 to 2022. They have used autoregressive distributed lag model and found that in long run Manufacturing Capacity Utilization (MCU) and exchange rate (EXCR) have a negative impact on the standard of living, while the Consumer Price Index (CPI) and unemployment rate (UNEM) have a positive impact.

Wanag Y. (2023) has carried a study on inflation surge: impact of covid-19 pandemic and Ukraine conflict. Researcher has stated that there are major two global factors Covid-19 and Ukraine war which affect the inflation all over the world. He has mentioned the causes and consequences of inflation. Researcher has studied global consumer price index (CPI) and the economic trade between the three major economies as US economy, EU economy and China economy. Researcher has concluded that tighten monetary and fiscal policy will curb the inflation.

3. RESEARCH OBJECTIVE
Objective of the study indicates the core of the research, the purpose for which study has been conducted. The objective of present study is to find out and evaluate the behavioural pattern of consumers of Gujarat state during inflation.

Various steps or measures can be taken by the people to beat inflation, so the study tries to find out those measures and also comparing them with demographic profiles of respondents.

4. DATA COLLECTION

The present study is based on primary data as main source of data and secondary data have been used for review purpose. The primary data have been collected through structured questionnaire. Convenient sampling has been used for data collection and for that Google form has been circulated. Total 407 respondents have submitted their answers in the said form. The data have been collected during July, 2022 to September 2022. The present study analysed the statements regarding what should be done during inflation to identify the behavioural pattern of the consumers during inflation.

5. TOOLS AND TECHNIQUES

The research which is based on any assumptions requires proving them by adopting scientific or statistical or other method as the subject of study. The present study also follows the hypotheses to check any differences exist between behavioural pattern of respondents and demographic factors of respondents. To test the hypotheses, researcher has used one way ANOVA.

6. SIGNIFICANCE OF THE STUDY

The consumer behaviour is the main consideration of any business. How consumers behave, whether they repurchase of product or shift with other company or only casual buying etc. During the period of inflation, it is utmost important that how consumers react or behave regarding their buying. This study analyses the consumer behavioural pattern during inflation. Various statements have been asked in the questionnaire to measure the behavioural pattern.

7. DATA ANALYSIS AND DISCUSSION

Table 1 the result of one way ANOVA between behavioural pattern during inflation and gender of the respondents

Table 1. the result of one way ANOVA: 1

Statements : During inflation	F	Df1	Df2	P
Do economise by reducing expenditure	1.15	1	407	0.284
Try to find new/additional source of income	4.84	1	407	0.028
Do more savings and investment for future	4.31	1	407	0.038
Increase the use of public transport	6.56	1	407	0.011

Source: Primary data

Table no.1 shows the one way ANOVA result of hypotheses of four statements and gender of the respondents. The null hypotheses have been set as there is no significant difference between behavioural pattern of consumers and gender of the respondents. Except first statement in all three statement the p value are lower than 0.05 at 5% level if significance which states null hypotheses have been rejected and alternate hypotheses have been accepted which means there is significant differences. In the first case result is higher than 0.05 so it is accepted as there is no significant difference. In precise analysis in mean differences then it is found that the mean difference is highest in fourth statement while it is lowest in first statement. Thus it can be said that behavioural pattern of male and female have different during inflationary period except in the point of economise activities.

Table 2 the result of one way ANOVA between behavioural pattern during inflation and location of the respondents

Table2. the result of one way ANOVA: 2

Statements : During inflation	F	Df1	Df2	P
Do economise by reducing expenditure	5.23	2	406	0.006
Try to find new/additional source of income	6.54	2	406	0.002
Do more savings and investment for future	10.60	2	406	<.001
Increase the use of public transport	4.54	2	406	0.011

Source: Primary data

The second demographic variable is place or location of the respondents which have been bifurcated into rural, semi-urban and urban category. The null hypotheses have been set as there is no significant difference between behavioural pattern of consumers during inflation and place of respondents. The result of one way ANOVA states that all the four null hypotheses have been

rejected as the p value is lower than 0.05 at 5% level of significance. The statistical reason is that mean difference between semi-urban is higher with rest of two. The mean difference between urban and rural is lower which is quite unusual but then also semi-urban mean is differing. In general, place of the respondents have significant impact like transportation cost is high for rural and semi-urban for majority of goods and on the contrary milk and vegetables are cheaper in that regions, so for one category rural people have to pay higher transportation cost while for other urban people have to suffer, so place has its own factor. In the present case there is significant difference between behavioural pattern during inflation and place of the respondents.

Table 3 the result of one way ANOVA between behavioural pattern during inflation and age of the respondents

Table 3. The result of one way ANOVA: 3

Statements : During inflation	F	Df1	Df2	P
Do economise by reducing expenditure	6.16	3	405	<0.001
Try to find new/additional source of income	7.59	3	405	<0.001
Do more savings and investment for future	13.26	3	405	<0.001
Increase the use of public transport	6.44	3	405	<0.001

Source: Primary data

Age is the one of the strongest factor which affect the behaviour of the people as in early age maturity is comparative low due to experience and many other reasons but highest level of passion and behavioural pattern of older people towards spending and savings are quite differ with younger people. Contrary null hypotheses have been set as there is no significant difference between behavioural patterns of consumer during inflation and age of the respondents, in all the statements the null hypotheses of have been rejected and alternate hypotheses have been accepted as the p value is lower than 0.05 at 5% level of significance. The result indicates that there is significant difference in behavioural pattern and age of respondents. In the further analysis it has been found that the mean difference of the age group of 46 and above has highest difference with other, in some cases mean difference of age group of 36 to 45 also found variance with other. Thus it can be said that younger age people behave differently with older age people specifically during inflation.

Table 4 the result of one way ANOVA between behavioural pattern during inflation and monthly income of the respondents

Table 4. The result of one way ANOVA: 4

Statements : During inflation	F	Df1	Df2	P
Do economise by reducing expenditure	3.757	3	405	0.011
Try to find new/additional source of income	0.560	3	405	0.642
Do more savings and investment for future	2.349	3	405	0.072
Increase the use of public transport	1.936	3	405	0.123

Source: Primary data

Table no.4 shows the result of one way ANOVA of the test of four statement hypotheses, null hypotheses have been set as there is no significant difference between behavioural patterns of consumer during inflation and monthly income of the respondents. The result of the test has comes first time where three null hypotheses have been accepted and only in one case alternate has been accepted as the p value is lower than 0.05 at 5% level of significance. The statement regarding do economise by reducing expenditure where null hypotheses has been rejected. The monthly income of lower group is affected by inflation more as compared to higher income group, in that way they have to think more about additional source of income to beat inflation and at the same time they have concern for future so they want to save for future. The mean difference between all the categories has been less different, in the first statement the income of upto 10,000 have very highest mean than others, so differences have been observed

8. CONCLUSION

Inflation has been factor which affects all the members of the society, the variation has been observed in its impact, some have higher while some have lower and same variation in knowing the inflation and its impact have been observed in the study of Beckmann, Elisabeth and Kiesl-Reiter, Sarah (2023). Various factors are responsible for higher inflation and its impact varies in short and long run. For one category of customer behavioural pattern have been changed on the other hand for second category their behavioural pattern may remain constant, so to measure this theory present study focuses on this topic and it has been found that income variable is the most non affecting by inflation in the present study which means whatever be the income group association

with behavioural pattern have not been observed which become contrast with the study of Parvathamma G. (2014), while the gender, occupation, education and location have significant differences in the behavioural pattern of consumer. Although here in tabular data gender, location, age and income have been presented apart from those education and occupation have also analysed and it is found that they have also differences in behavioural pattern due to inflation

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THE NEXUS BETWEEN UNEMPLOYMENT RATE AND SOME MACROECONOMIC VARIABLES IN NIGERIA

Charles Okechukwu Aronu* & Lucky Arhovwon & Abdulazeez Ọlásúnkànmí Bilesanmi, Patrick Nnaemeka Okafor

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THE NEXUS BETWEEN UNEMPLOYMENT RATE AND SOME MACROECONOMIC VARIABLES IN NIGERIA

Charles Okechukwu Aronu [*] & Lucky Arhovwon & Abdulazeez Ọlásúnkànmí Bilesanmi & Patrick Nnaemeka Okafor

ABSTRACT

In a world grappling with unemployment issues, this study focused on the unemployment rate in Nigeria, examining the impact of population growth rate (PGR), population size, Gross Domestic Product per capita (GDPC), and Gross Fixed Capital Formation (GFCF). Unemployment is a widespread problem, leading to disparities in labor markets, deepening poverty, and substandard living conditions. The study aimed to determine the order of integration for these variables and assess both short-term and long-term effects on the unemployment rate. Key tools used for analysis included the Augmented Dickey-Fuller (ADF) test, the Jarque-Bera test, and the Co-integration test. The Eviews 9.0 Software was employed to analyze the data. Results showed that PGR, GDPC, and GFCF were integrated of order 1 (I(1)), while Population was integrated of order 0 (I(0)). Over the study period, all series exhibited trends but remained stationary. The co-integration ARDL bound test revealed a long-term link between the variables. Based on the error correction coefficient, the system's prior period disequilibrium should be corrected at a rate of 12.1% every year. The long-term effects of both gross fixed capital formation (GFCF) and gross domestic product per capita (GDPC) on the unemployment rate were shown to be substantial. The study suggests making significant investments in small and medium-sized businesses in order to increase GDPC and GFCF, which will have a favourable long- and short-term impact on unemployment rates.crucial.

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1. INTRODUCTION

Nigeria is the most populous country in Africa and the ninth most populous worldwide, home to around 200 million people. Although the nation's economy is mostly dependent on the oil sector, which makes substantial contributions to export profits and government income, a persistent problem while unemployment casts a shadow over this promising environment (Reed and Mberu, 2014). Indeed, one of the biggest obstacles to Nigeria's social and economic development is unemployment. In addition to being a significant underutilization of the country's human potential, it causes a significant loss in welfare because of decreased output, which lowers income and has a negative effect on living standards generally. Nigeria is thus faced with the grim reality of ongoing unemployment, a problem that has its roots in a past tainted by corruption, military control, incompetence, and civil unrest.

Nigeria has a wealth of natural and human resources, but they haven't been used to their full potential to generate profits. As a result, there is a chronic and growing unemployment problem, which is made worse by population increase and the steady stream of recent college graduates vying for few available jobs (Aliyu and Amadu, 2017). The national unemployment rate has fluctuated over the years due to a variety of economic variables and policy choices (Egunjobi, 2014). Due to the economic unrest that occurred throughout the 1970s, there was a rise from 4.3% in 1970 to 6.4% in 1980 (National Bureau of Statistics (NBS), 2018). The late 1970s recession forced the implementation of stabilization policies, such export controls, which ironically increased the reliance of many industrial companies on imports, resulting in decreased operating capacity and, occasionally, plant closures. Increased unemployment was a result of these economic difficulties.

The Nigerian government also imposed job embargoes in the early 1980s, which made the country's unemployment problem worse. Thus, in addition to other economic reform initiatives like the National Economic Empowerment and Development Strategy (NEEDS) and the seven-point agenda, the government launched the Structural Adjustment Program (SAP) in 1986 (Odusola and Obadan, 2018). The goal of all of these initiatives was to increase the creation of jobs. Nonetheless, there has been disagreement on these measures' effectiveness (Ogujiuba and Mngometulu, 2022). The data presents a dismal

image, demonstrating that not only did unemployment rise sharply when different policies and initiatives were put into place, but it has also continued and become worse due to factors like population growth and an ongoing flood of recent graduates looking for work. The national unemployment rate increased throughout time, reaching a record of 21.2% in 2010 from 4.3% in 1970 (Yusuf and Mohd, 2023). Before the global economic crisis struck, Nigeria's industrial industry struggled and several of its factories shuttered. Moreover, a time of worldwide economic slump accompanied Nigeria's political transition. While globalization benefited highly developed countries, it presented rising nations like Nigeria with economic and sociopolitical issues (Akintoye, 2008). Obstacles included concerns about poverty, health, and equitable employment for women.

The aim of this study was to investigate the complex relationships that exist between several macroeconomic factors and Nigeria's unemployment rate. This study seeks to provide light on this complicated problem and insights into possible solutions by analyzing the effects of variables including population growth rate (PGR), population size, Gross Domestic Product per capita (GDPC), and Gross Fixed Capital Formation (GFCF) on unemployment. Comprehending the fundamental principles of unemployment is important in order to devise efficacious measures to tackle this pressing issue, promote social and fiscal advancement for Nigeria. The purpose of this study is to look at the connections between macroeconomic factors and Nigeria's unemployment rate between 1970 and 2021. To achieve this aim, the study seeks to accomplish the following specific objectives includes to: Determine the order of integration of the variables considered in the study; Ascertain the short-run and long-run effects of selected macroeconomic variables on the unemployment rate in Nigeria; and Identify the macroeconomic variable(s) that most significantly impact the unemployment rate in Nigeria.

2.   LITERATURE REVIEW

Researchers have looked into the complex web of relationships between unemployment and numerous economic issues in Nigeria as well as other nations since it is a complicated problem with broad-reaching effects. These studies clarify the complexity of unemployment and offer insightful information to policymakers.

The International Labor Organization (ILO) agrees that unemployment is a worldwide problem. The ILO (2016) defines unemployment as include those who

are economically active, jobless, and actively looking for work. This definition encompasses all inhabitants of Nigeria aged 15 to 64 who are not housewives, students, retirees, or otherwise unemployed. It's an essential indicator for comprehending the labor dynamics of a country. Nigeria has a horrifying unemployment problem in 2018. According to data from the National Bureau of Statistics (NBS), there were 20.9 million officially jobless people in Q3 2018 compared to 17.6 million in Q4 2017. The unemployment rate increased dramatically as a result of this worrying rise, jumping from 18.8% in Q3 2017 to 23.1% in Q3 2018 (NBS, 2018). This startling data suggests that more than 50% of Nigeria's population might be unemployed, a crisis with significant socio-economic implications.

There is no one definition of unemployment. Different types of unemployment are recognized by economists, and each has its own problems. These include cyclical, frictional, and structural unemployment, which are all frequently entangled and difficult to separate. As a result, economists struggle to determine the scope of each kind and how it affects the labor market. An important economic link is the relationship between unemployment and Gross Domestic Product (GDP). An economy's strength, which is sometimes gauged by its GDP, depends on how productive its labor is. According to Okun's Law, each extra percentage point of unemployment can cost an economy up to 2% of its GDP, highlighting the inverse relationship between unemployment and GDP. The cost of lost output increases significantly (Okun, 1962).

Typical neo-classical theories of economic growth, such the Solow model, provide an alternative perspective (Cinnirella and Streb, 2017). They stress that rather than only capital accumulation, sustainable economic growth depends on variables including higher worker productivity, workforce size, and technology improvements (Gabardo et al., 2017). This calls into question the idea that growth can always be driven by a simple influx of cash. Nigeria's unemployment has a variety of root reasons. Reemployment is made more difficult by the fragmented labor market, which is marked by a lack of mobility between job categories. The problem is made worse by the labor force's quick expansion, which is caused by population growth and migration trends. Jobs prospects have also been impacted by changes in the economic environment, such as a shift away from agriculture and toward other industries. Nigeria's continually poor economic climate makes it difficult to create jobs. This discourages investment attempts along with security worries. Even individuals who want to create their own businesses run into obstacles because of inadequate infrastructure and a

difficult investment environment. Additionally, demographic changes are crucial. Job development initiatives may be hampered by the flood of new workers, especially following a baby boom. Unemployment grows when not enough jobs are created to handle this influx.

Numerous studies in Nigeria have investigated the connections between numerous important economic factors and unemployment. Aimola et al. (2021) further emphasized the relationship between inflation and unemployment in another study. They found a strong positive association between the two variables using long-term time series data, suggesting that inflationary pressures may make Nigerian unemployment worse. The study conducted by Oumarou and Maigaa (2019) explores the complex link between trade, foreign direct investment (FDI), and economic development in an exploratory look at Niger's economic environment. The research reveals intriguing insights by using a variety of econometric tests, such as the Granger causality test, Kwiatkowski-Philips-Schmidt-Shin stationary test, Johansen co-integration test, and Augmented Dickey–Fuller unit root test. The results present a dynamic image. It turns out that commerce and economic expansion are mutually supportive of one another. But there is more of a one-way relationship between trade and FDI, with trade having a major impact on FDI. The impact on economic growth, however, is a finding that may surprise some: trade promotes it, while FDI, shockingly, has a dampening effect in Niger. The study provides insightful information about the subtleties of Niger's economic environment. It presents a patchwork of complex linkages, emphasizing how trade and foreign direct investment have shaped the country's economic history.

According to the study by Akeju and Olanipekun (2015), unemployment has increased over the past ten years in sub-Saharan Africa, with Nigeria facing particular difficulties due to its fast population expansion and low employment rates. Their research explores Okun's Law and evaluates its suitability for Nigeria. It reveals the links between unemployment and economic growth over the short and long terms by applying the Error Correction Model and the Johasen cointegration test. The findings highlight the urgent need for more foreign direct investment and budgetary measures to address Nigeria's skyrocketing unemployment rates. According to a related study by Elorhor (2019), unemployment is a problem for the global economy that prevents growth. Because of this, his research examined the effect of unemployment on economic development in Nigeria between 1986 and 2008. The results, which

make use of a number of statistical tests and procedures, show how important it is for Nigeria's economic growth to have employed labor, capital formation, unemployment, and job openings all at the same time. Interestingly, the Gross Domestic Product decreases by around 11.56 percent for every 1% increase in unemployment. The results highlight the necessity of increasing capital formation, infrastructure development, and government action to support economic growth and employment creation. More investigation is necessary to provide complete answers.

According to Obidike and Nduka (2022), a number of economic obstacles have surfaced as a result of Nigeria's interaction with market forces since the Structural Adjustment Programme was implemented in 1986. These include high interest rates, trade imbalances, erratic currency rates, growing unemployment, and unpredictable economic growth. This 34-year research, which runs from 1987 through 2020, examines how macroeconomic factors affect the Nigerian economy. The results show that the money supply, trade openness, foreign direct investment, and inflation all have a positive short-term impact on the real gross domestic product. Exchange rates and interest rates, however, have little influence. Policymakers should use expansionary monetary policies to spur economic development, improve productivity to reduce inflation, and maintain currency stability to support the Nigerian economy.

Sahoo and Sahoo (2019) examined the relationship between a number of macroeconomic factors and unemployment in India by looking at the country's unemployment dynamics. Their investigation uncovered intricate connections. They concluded that there was an inverse relationship between unemployment and economic growth, with economic expansion causing a decrease in the jobless rate. Sahoo and Sahoo (2019) suggested that the Indian government give the development of new job opportunities top priority in light of their results. Regardless of the education and occupation of the populace, they suggested upgrading the agriculture sector and enhancing agricultural infrastructures as a way to increase the industry's appeal and create jobs. Dayıoğlu and Aydın (2021) examined the theoretical connections between Turkey's current account balance, inflation, unemployment, and economic development from a theoretical perspective. They discovered a negative correlation between growth and unemployment, particularly in times of crisis, underscoring the significance of economic stability in controlling unemployment.

In Summary, it should be noted that unemployment in Nigeria is a complex issue with a variety of core reasons, such as population increase, altering economic dynamics, and adverse governmental initiatives. Holistic methods that take into account not just economic policies but also changes to the investment climate, education, and skill development are needed to address this issue. The fight against unemployment is still a crucial effort for Nigeria as it works to realize its enormous potential. All things considered, these studies show that unemployment is a complex problem affected by a range of economic variables, such as inflation, foreign direct investment, and economic expansion. Comprehending these intricate processes is imperative in formulating efficacious programs to counter unemployment and advance economic prosperity in these nations.

3. MATERIAL AND METHODOLOGY

3.1. Source Of Data

In this research, secondary data has been used. Secondary data is collected from the Central bank Statistical Bulletin 2021, World Bank National Accounts Data and International Labour Organization, ILOSTAT database. There are five variables which include: Unemployment Rate (UNER), Population Growth Rate (PGR), Population Size (Population), Gross Domestic Product per capita (GDPC) and Gross Fixed Capital Formation (GFCF).

3.2. Method of Data Analysis

In the realm of macroeconomics, understanding the stationary nature of time series data is paramount. The term "stationary" refers to a crucial property of time series datasets where the mean and variance of the data remain constant over the observed time period. It implies that the distribution of data remains stable over time. Furthermore, in stationary data, the covariance between two time periods is solely determined by the time interval between those periods, regardless of the actual time when this covariance is calculated. Conversely, if these conditions are not met, the process is considered non-stationary.

Various statistical tests are available to assess the stationarity of time series data. The Augmented Dickey-Fuller (ADF) test, Phillips-Perron test, Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test, and the Phillips-Perron tests all serve as tools in this evaluation (Afriyie et al., 2020). For this study, we have opted to utilize the ADF test to determine the stationarity status of the data collected. The ADF test is a robust method for identifying the presence of a unit

root in a time series dataset, with the test statistic yielding a negative value (Ramenah et al., 2018). The hypothesis under scrutiny involves determining if the data has a unit root (indicating non-stationarity) or if it is stationary without this root. If the test statistic is more negative, it provides stronger evidence against the presence of a unit root, thereby favoring stationarity (Rahman et al., 2023).

The next step involves choosing the order of integration, denoted as 'p.' The null hypothesis, 'H0,' asserts the presence of a unit root (non-stationarity), while the alternative hypothesis, 'H1,' states that no unit root exists (stationarity). The selection of 'p' is based on how many times differencing is necessary to reject 'H0,' signifying the number of unit roots present. Once 'p' is established, the specific ARDL models are employed, tailored to the dataset at hand. The ARDL (m, n; p) model captures the essence of the relationship between variables, accounting for exogenous variables and lag structures. The model's final form ensures the errors within it maintain white noise characteristics.

In the world of time series analysis, the cointegration test plays a crucial role. Cointegration delves into the exploration of stationary linear combinations of integrated variables, unveiling shared stochastic trends and long-run equilibrium (Engle and Granger, 1987). For cases where variables exhibit different integration orders, the ARDL approach shines as the most suitable technique. To navigate this complex web of statistical methods, the present study endeavors to determine the order of integration, discern the short-run and long-run impacts of selected macroeconomic variables, and ultimately identify which variables wield the most significant influence on the unemployment rate in Nigeria. The goal is to unlock a deeper understanding of this multifaceted issue, supporting the creation of more effective policies that drive social and economic development in Nigeria.

The data obtained for this study was analyzed with the aid of Eviews 9.0 Software.

4. RESULTS

This section presents the data analysis using the data obtained for the study which available on request.

4.1. Data Analysis

The result obtained in table 1 below shows the descriptive properties of the data obtained for the present study.

Table Table 1. Descriptive Statistics of Unemployment Rate (UNER), Population Growth Rate (PGR), Population Size (Population), Gross Domestic Product per capita (GDPC), and Gross Fixed Capital Formation (GFCF).

| Measures	LOG(UNER)	LOG(PGR)	LOG(POPULATION)	LOG(GDPC)	LOG(GFCF)
Mean	2.285248	2.534217	4.524079	9.672227	13.15335
Median	2.185483	2.660740	4.656531	9.959603	12.04456
Std. Dev.	0.587723	0.665827	0.708200	2.914462	4.034293
Skewness	0.270505	-0.862801	-1.550854	0.204628	0.867472
Kurtosis	2.039644	2.897383	5.258882	1.545083	2.268502
Jarque-Bera	2.632448	3.685058	1.242356	4.949261	7.681099
Probability	0.268146	0.158416	0.537311	0.084194	0.061482
Observations	52	52	52	52	52

Source: Author's Analysis

The The result of the descriptive statistics presented in Table 1 found that the mean unemployment rate (UNER) over the period of the study was 2.29%, population growth rate (PGR) was 2.53%, population size was 4.52 billion, Gross Domestic Product per capita (GDPC) was N9.67 million while the Gross Fixed Capital Formation (GFCF) was N13.15 million. The standard deviation for the variables showed that the values in the data set were approximately close to their various means. All the variables positively skewed as indicated by the positive Skewness coefficients except for the population growth rate and the population size which were found to be negatively skewed with a coefficients of -0.862801 and -1.550854
respectively. The result of the Jarque-Bera test showed that the variables were approximately normally distributed after taking logarithm of the variables with p-values obtained as 0.268146, 0.158416, 0.537311, 0.084194, and 0.061482 for LOG(UNER), LOG(PGR), LOG(POPULATION), LOG(GDPC) and LOG(GFCF) respectively .

The result presented in Figure 1 revealed that from 1970 to 1989, the average UNER remains relatively stable, ranging from 4.1 to 7.4, with minor fluctuations. It should be noted that the average UNER represents the average underemployment rate for each corresponding year. It was found that starting from the 1990s, there was an increase in the average UNER, indicating a rise in underemployment rates. This upward trend continues until the early 2000s. The average UNER reaches its peak in 2008 at 19.1, suggesting a higher level of

underemployment during that period. After 2008, there was a gradual decline in the average UNER, with some fluctuations in subsequent years. The outcome shown in Figure 1 indicated that, from 1970 to 1989, the average UNER remained mostly steady, fluctuating very little between 4.1 and 7.4. The average UNER, it should be noted, indicates the average rate of underemployment for each corresponding year. Indicating a rise in underemployment rates, it was discovered that the average UNER increased beginning in the 1990s. The early 2000s saw the continuation of this increasing trend. The average UNER peaks in 2008 at 19.1, indicating increased underemployment rates during that time. The average UNER began to gradually fall after 2008, with occasional volatility in the years that followed. The average UNER increased significantly in 2020, rising to 33.8, but it decreased noticeably in 2021 compared to 2020 but remained very high at 9.79. The average UNER trend indicates that underemployment rates have fluctuated throughout time, with some eras seeing higher underemployment rates than others.

Figure 1. Time Series Graph of Unemployment Rate (%) from 1970 -2021
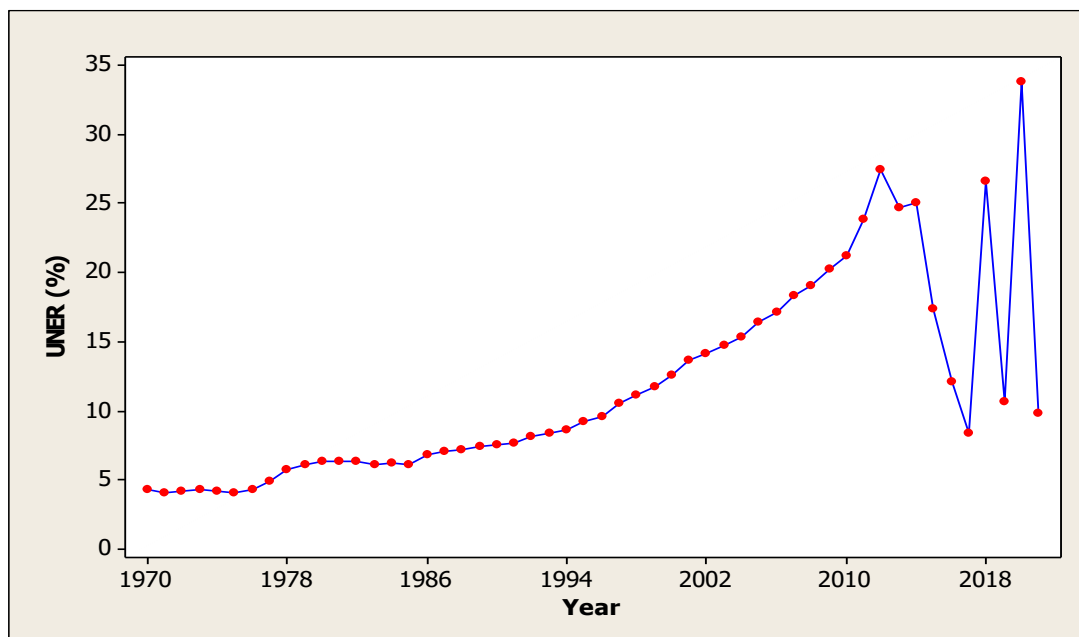
According to the data shown in Figure 2, average PGR between 1970 and 2021 fluctuates between various years, showing changes in population increase. Throughout the 1970s and 1980s, the average PGR remains comparatively steady between 2.4 and 6.8. The average PGR starts to vary more after the 1990s, with some years showing greater growth rates (such as 1999, with a PGR of 15.432) and others showing lower growth rates (such as 2011, with a

PGR of 19.4). The average PGR increased significantly between 2001 and 2004, peaking at 23.173 in that year. With minor shifts in the most recent years (2020 and 2021), the average PGR incrementally drops and stabilizes around 25. In accordance with the average PGR trend, there are periods of relatively steady population growth interspersed with periods where growth rates are higher or lower.

Figure 2. Time Series Graph of population growth rate (%) from 1970 - 2021
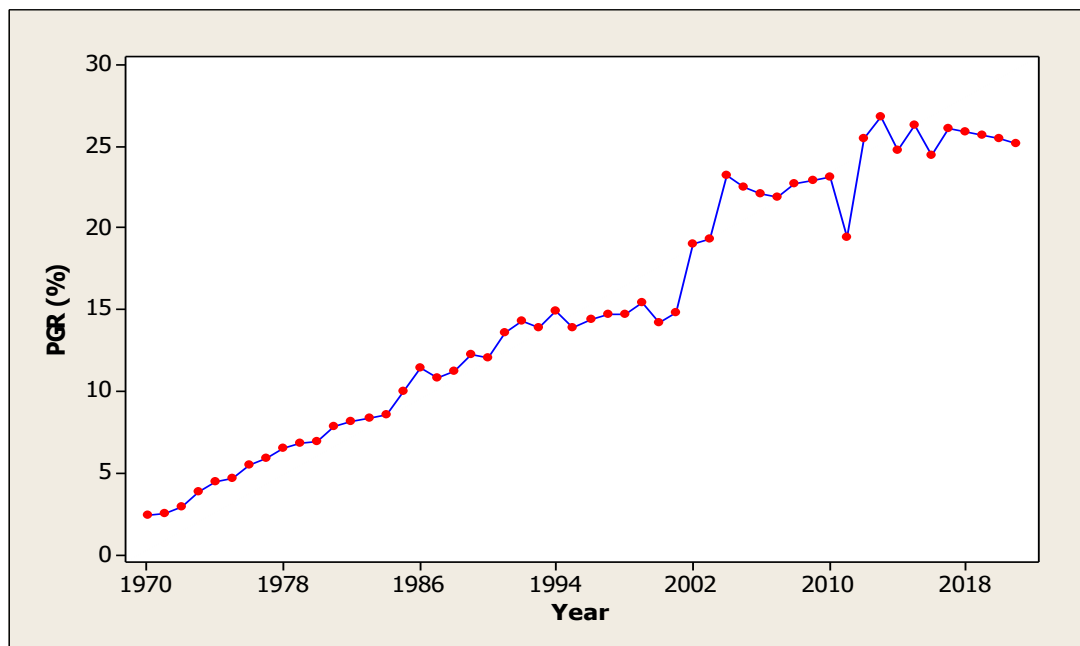
4. 2. Testing the variables for Stationarity

A stationary process is a process or series whose properties do not depend on the time at which the series is observed. For this purpose, the Augmented Dickey-Fuller (ADF) test was used to test the stationarity of the data.

H01: (Non Stationarity)

vs

H11: (Stationarity)

The result of the unit root test on the variables using the Augmented Dickey-Fuller test statistic obtained in Table 2 found that the UNER, PGR, GDPC and GFCF has no unit root and stationary overtime at the first difference with trend since the test statistic value has more negative values (-5.864978, -8.425551, -6.201611, and -7.092285 respectively) at 5% significant level while the Population was found to have no unit root and stationary overtime at the zero

difference with trend since the test statistic value has more negative value (-4.744635) at 5% significant level.

This result implies that UNER, PGR, GDPC and GFCF are integrated of order 1 (I(1)) while Population was integrated of order 0 (I(0)). Hence, all the series were stationary over the study period with the presence of trend.

Table 2. Result of Augmented Dickey-Fuller unit root test for the variables

Variables	Level		1st Difference		Order of integration
	No Trend	With Trend	No Trend	With Trend	
LOG(UNER)	-1.040046	-1.568633	-5.900122	-5.864978	I(1)
LOG(PGR)	-3.511782	-2.387340	-7.055992	-8.425551	I(1)
LOG(POPULATION)	-5.465517	-4.744635	-	-	I(0)
LOG(GDPC)	0.035282	-2.287959	-6.253944	-6.201611	I(1)
LOG(GFCF)	0.517817	-1.821191	-6.897727	-7.092285	I(1)
Critical values					
5%	-2.926622	-3.51307	-2.926622	-3.510740	

Source: Author's Analysis

4. 3. Result of the Co-integration test of the Variables

The result presented in Table 2 showed that some of the variables were found to be stationary at zero difference I(0) but after first differencing I(1), they all became stationary. The differencing was applied to avoid having a spurious regression. Since the differenced variables were stationary, there could be co-integration between the variables. This test enables one to know if some of the variables in the model are cointegrated and as well shows if there is long term relationship existing between the set of the variables. When the variables are integrated of different order as the situation in the present study, the appropriate method to employ is the autoregressive distributed lag (ARDL) approach. Hence, the present study shall employ the ARDL approach to examine the long-run relationship of the variables since the variables were integrated of order (I(1) and I(0)). The number of the lag used in the co-integration test is based on the information criterion used in the underlying model. The co-integration trace test of UNER, PGR, GDPC, GFCF and Population was presented in Table 3.

The ARDL Model for the model is presented by performing the ARDL bound test to determine whether the level relationship is present amongst the variables considered in the ARDL model. The result presented in Table 3 shows the estimates of the ADRL model describing the relationship that exists between the UNER, PGR, GDPC, GFCF and Population. The result of the ARDL bound test for co-integration presented in table 3 found a calculated F-statistic value of 9.940358 which was above the upper bounds critical value of 4.01 assuming a 5% significance level. This result indicates the rejection of the null hypothesis of no cointegrating relationship amongst the variables of the ARDL model. Hence, the findings imply that Unemployment Rate (UNER) is cointegrated with Population Growth Rate (PGR), Population Size (Population), Gross Domestic Product per capita (GDPC) and Gross Fixed Capital Formation (GFCF). Also, the result further implies that there exists a long-run relationship amongst the variables.

Table 3. Result of test for the existence of level relationship amongst the variables in the ARDL

Number of regressors	Value of statistic K=4
Computed F-statistic	9.940358
5% critical value	
Lower bound value	2.86
Upper bound value	4.01

The critical bound values were extracted from (Pesaran et al., 2001).

The result obtained in Table 3 revealed that there exist a long-run relationship amongst the variables of the ARDL model since the computed F-statistic value of 9.940358 was greater than the lower and Upper bound values at significant level of 0.05 (9.940358 > (4.01, 2.86)). Hence it is appropriate to obtain the estimates of the ARDL long-run coefficient for the model and also obtain the estimates of the error correction model (ECM). The result of the long-run estimates is presented in Table 4 while the result obtained in Table 5 presents the estimates of the corresponding ECM. After evaluating 16 models, the ARDL (1, 0, 0, 0, 0) model was selected as the better model using the Hannan-Quinn criterion (HQ). The result indicates that UNER has 1 lag, PGR has 0 lag, Population has 0 lag, GDPC has 0 lag, and GFCF has 0 lag in the model; this can be seen in the result presented in Table 5..

Table 4. Estimated long-run coefficients: ARDL(1, 0, 0, 0, 0) selected by Hannan-Quinn criterion (HQ).

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(PGR)	0.076228	0.298715	0.255187	0.7997
LOG(POPULATION)	0.088736	0.207387	0.427876	0.6708
LOG(GDPC)	0.251094	0.065007	3.862577	0.0004
LOG(GFCF)	-0.077329	0.032277	-2.395761	0.0208
C	0.276044	0.415113	0.664985	0.5095

Source: Author's Analysis

The result of the long-run relationship between the UNER and variables such as GDPC and GFCF presented in Table 4 found that the coefficients for all the variables were significant since their p-values were obtained as 0.0004 and -0.0208 respectively and less than significant level of 0.05. It was found that PGR, Population, and GDPC have positive coefficients while GFCF has a negative coefficient. The result obtained indicates that GDPC and GFCF have significant long-run effect on group output in Nigeria.

From the result presented in Table 4, the Co-integration equation can be expressed as equation (4) below:

$$Cointeq = LOG(UNER) - (0.0762*LOG(PGR) + 0.0887*LOG(POPULATION)$$
$$+ 0.2511*LOG(GDPC) -0.0773*LOG(GFCF) + 0.2760) \qquad (4)$$

The presented in Table 5 showed that the error correction coefficient of -1.120594 (p-value = 0.0000) was significant and indicates that the system corrects its previous period disequilibrium at a speed of 12.1% annually. The result of the ECT (Error Correction Term) implies an oscillatory convergence since the ECT coefficient falls between 0 and -2; this ensures that the system will be convergent. A further result showed that the lag of PGR and Population Size has an insignificant short-term effect on unemployment Rate within the observed period.

Table 5. Error correction representation of the selected ARDL model: ARDL ARDL(1, 0, 0, 0, 0) selected by Hannan-Quinn criterion (HQ).

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(PGR)	0.085421	0.335340	0.254729	0.8001
DLOG(POPULATION)	0.099437	0.232371	0.427924	0.6707
DLOG(GDPC)	0.281375	0.080261	3.505749	0.0010
DLOG(GFCF)	-0.086654	0.036546	-2.371111	0.0221
CointEq(-1)	-1.120594	0.160302	-6.990506	0.0000

Source: Author's Analysis

5. CONCLUSION

This study examined the impact of variables such as population growth rate (PGR), population size, Gross Domestic Product per capita (GDPC) and Gross Fixed Capital Formation (GFCF) on unemployment rate (UNER) in Nigeria. The findings of the study found that the mean unemployment rate (UNER) over the period of the study was 2.29%, population growth rate (PGR) was 2.53%, population size was 4.52 million, Gross Domestic Product per capita (GDPC) was N9.67 million while the Gross Fixed Capital Formation (GFCF) was N13.15 million. The standard deviation for the variables showed that the values in the data set were approximately close to their various means. Variables such as unemployment rate (UNER), Gross Domestic Product per capita (GDPC), and Gross Fixed Capital Formation (GFCF) were found to be positively skewed as indicated by their corresponding positive Skewness coefficients while population growth rate and the population size were found to be negatively skewed with a coefficients of -0.862801 and -1.550854 respectively. The result of the Jarque-Bera test showed that the variables were approximately normally distributed after taking logarithm of the variables.

The result of the unit root test on the variables using the Augmented Dickey-Fuller test statistic found that the UNER, PGR, GDPC and GFCF has no unit root and stationary overtime at the first difference with trend while the Population was found to have no unit root and stationary overtime at the zero difference with trend. This result implies that UNER, PGR, GDPC and GFCF are integrated of order 1 (I(1)) while Population was integrated of order 0 (I(0)). Hence, all the series were stationary over the study period with the presence of trend.

The result of the ARDL bound test for co-integration hat Unemployment Rate (UNER) is cointegrated with Population Growth Rate (PGR), Population Size (Population), Gross Domestic Product per capita (GDPC) and Gross Fixed

Capital Formation (GFCF). Also, the result further implies that there exists a long-run relationship amongst the variables. Hence it is appropriate to obtain the estimates of the ARDL long-run coefficient for the model and also obtain the estimates of the error correction model (ECM). After evaluating 16 models, the ARDL (1, 0, 0, 0, 0) model was selected as the better model using the Hannan-Quinn criterion (HQ). The result indicates that UNER has 1 lag, PGR has 0 lag, Population has 0 lag, GDPC has 0 lag, and GFCF has 0 lag in the model.

The error correction coefficient was found to be -1.120594 (p-value = 0.0000) which indicates that the system corrects its previous period disequilibrium at a speed of 12.1% annually. The result of the ECT (Error Correction Term) implies an oscillatory convergence since the ECT coefficient falls between 0 and -2; this ensures that the system will be convergent. A further result showed that the lag of PGR and Population Size has an insignificant short-term effect on unemployment Rate within the observed period. The outcome of the present study revealed that Gross Domestic Product per capita (GDPC) and Gross Fixed Capital Formation (GFCF) has significant long-run impact on unemployment rate, hence, we recommend huge investment in small and medium scale industries in other to boast the GDPC and GFCF to have the expected positive impact on unemployment rate both on the short-run and long-run. Also, the study recommends an evidence-based diversification of the Nigerian economy which is expected to grow sectors such as the agricultural sector as a medium of reducing unemployment in Nigeria and minimize the rush for limited white-collar jobs in the country.

DISCLOSURE OF CONFLICT
The authors declare that they have no conflicts of interest.

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GENDERING TRIBAL FOOD SECURITY: A CASE FROM INDIA

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ABSTRACT

Gender and food security are interdependent and essential components for the "Zero Hunger" goal. For addressing the hunger challenge, women's access to resources, effective participation in household decision-making, income-earning opportunities, and awareness about food and nutritional choices are much more significant than literacy levels and health status. Moreover, tribal women have a greater challenge due to their decreasing access to forests, higher exposure to malnutrition and inadequacies of public food security programmes. Therefore, policies aiming at food security needs effective gendering, not only in food production but also in government sponsored schemes for zero hunger. This paper highlights the food security status of tribal households in Uttar Pradesh, the most populated state with second largest hunger population. It aims to contribute to the empirical literature on the gender dimension of food policy and integrated food systems. The paper uses binary logit models to highlight the gender aspect of the food security challenges in tribal households. Households with effective involvement of women in decision-making and income generation, individual spending power, higher formal education, and association with self-help groups, have lesser food and nutritional insecurity probabilities.

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1. INTRODUCTION

Gendering seeks to analyse a problem with a bottom-up approach (Kaiser, S. 2012). It is related to socialising and implementing any activity according to the dominant gender norms. Gendering is increasingly significant for food security challenges because women not only are the providers of food but also suffers the most in case of shortages and unavailability. Moreover, across social groups, women (girls, & mothers in the households) bear a more significant proportion of the challenge (OXFAM 2019). In low-income regions, 60-80 per cent of food-related activities (from production on farms to kitchen preparation and household distribution) are the females' responsibility. Thus, the food security challenge for women is not only limited to lower self-consumption but also managing the food and nutritional levels of the entire household. For tribal communities, in the last four decades, not only have gender relations become inequitable, but their vulnerability has widened in terms of food insecurity, malnutrition, access to resources, livelihood opportunities, health and violence.

Food security has evolved in terms of its definitions and determinants, yet has remained a development challenge, equally affected by market forces and government intervention (Prosekova, A.Y. & Ivanova, S. A. 2018; IDS: 2014; Vyas, V.S. 2000; Asterik, V.P. 1999). To a greater extent, government interventions have overlooked women as the key instrument in ensuring effective delivery and nutritional security for the household and the community. Market forces target women as independent buyers and focus more on becoming friendly and sensitive towards their preferences and needs. Market forces are essential because food price volatility primarily affects the poor and vulnerable populations and the prevalent food systems through the demonstration effect and income effect. Market forces, thus, impact the food and nutrition security of vulnerable households. Government intervention is the other side of the same coin regarding food security. It ensures food availability and access for vulnerable households and provides a policy framework for ensuring lower levels of hunger and better absorption of food by the households. The recent cause of concern has been the rising trend of nutrition-deficient diets and increasing levels of malnutrition.

Women, being the crucial participant in food production, provision and preparation, and their limited access to productive resources contrast, become a significant determinant for food security. Further, the status and empowerment of women are affected by access and equity issues in society within the

changing economic structure. It has been a near-universal fact that if societies invest in gender equality and female empowerment (equal access to and control over education; healthcare, technology, resources, markets and decision-making), the economic transformation and development process becomes faster and equitable (USAID). Empirical studies deal with gender issues from two perspectives. One is female farmers' status, productivity, access to resources and markets, and discrimination. Another female empowerment and intrahousehold distribution of food in poor and low-income households lead to female and child malnutrition. One of the missing links in the existing literature is the role played by women as household managers in maintaining food security. In other words, the gender dimension of food security is becoming more critical as the national food security mission expands from food to nutrition security. The gender dimension here refers to the active decision-making powers, education and spending power and awareness about child and self-nutrition with the female members of the household. Case studies and field surveys-based literature reveal that tribal populations with sufficient food stocks, permanent income sources and land are comparatively better at coping with selected mainstreaming risks and vulnerabilities, but not necessarily food security vulnerabilities. Moreover, gender dimension of food security revolves around gender discrimination and gender inequality in terms of access to food, adequacy of food and intra-household food distribution.

Furthermore, empirical studies dealing with tribal food insecurity and malnutrition levels are limited to extremely poor and backward regions of selected states. Uttar Pradesh though does not have extreme poverty situations, but malnutrition levels and multidimensional poverty levels are extremely high. In the context of zero hunger goal, the state has a paradoxical situation of largest foodgrain production with highest levels of child malnutrition and anaemic women. Moreover, tribal population has a marginal presence in the state and therefore remains least investigated in the development research. Recent research has incorporated the questions related to the suitability of a targeted/packaged approach rather than a uniform policy approach for faster progress towards achieving sustainable development goals (SDG) in general and SDG 2 (Zero hunger) and SDG 5 (Gender Equality) in specific for tribal and indigenous population. Determinants of tribal food security is one of the under examined research question. Several possible questions can emerge in this context. How far the food security situation is explained by the land size and land ownership for the tribal household size? Does male and female land ownership affect food security status? Whether cropping pattern in tribal regions

is increasingly nutrition sensitive or nutrition deficient? Majority of the literature available on tribal food security challenges focuses on the income levels, land, cropping pattern, access to public distribution system and decreasing dependence on forest. There are further critical questions which remain less examined. For instance, how does female decision-making affects household food security give the context of decreasing dependence on forests? How far public distribution system is supplementing the growing nutritional deficits in the tribal areas? What are the challenges and shortcomings in the ongoing universal food security programmes in the country?

This paper discusses the food security challenges faced by the tribal households of Uttar Pradesh. The discussion emerges from the survey of 210 tribal households from the Lakhimpur Kheri and Sonbhadra districts. Differences in the malnutrition status of male and female children 0-60 months of age and gender equality based on household decision-making, earning status, formal education and SHG activities are the two dimensions taken up in the study. There are two hypotheses for the study. First, there is a significant difference between male and female child malnutrition status in the tribal household. Second, household food security positively depends on income levels, land size, household spending and access to food. Three important conclusions emerged from the study's detailed personal interviews and field observations. First, there is an urgent need to make the food security programme gender friendly. Second, there can be improvements in nutritional outcomes only when food literacy and food governance in the tribal areas get integrated into the food distribution policies. Thirdly, gender discrimination in nutrition, though not a typical pattern in tribal food culture, increases with decreasing access to forest-based food and non-vegetarian diets.

2. BRIEF LITERATURE REVIEW ON GENDERING TRIBAL FOOD SECURITY

Tribal food insecurity and malnutrition have emerged as one of the many development paradoxes (Bang, A. 2020; LANCET 2021). It is a paradox arising from mainstreaming the tribal and indigenous population (Tagade, N. 2012; Das & Saha, 2016; Jerath et al., 2021). The impact of mainstreaming is visible through increasing literacy levels, household income, employment opportunities, decreasing mortality rates, discrimination, and poverty levels. This integration process needs a long-term approach through a more significant focus on creating awareness and cultural adaptation (FAO: 2010, UNICEF

2019). The Global Nutrition Report (2020) highlights that moving ahead from the global and national level progress, local or cross-sectional food and nutritional insecurity are increasingly worrisome. Food security is at a critical juncture because malnutrition levels among males, females and children are the highest in majority of the tribal communities. For instance, 70.7 per cent of the tribal households are in the lowest two wealth quintiles (GOI 2021b). Mortality rates are not the highest, but stunting (43.8 percent) and wasting (27.4 percent) prevalence along with underweight (45.3 percent) is the highest with the lowest percentage of dietary diversity (20.6 percent) and minimum acceptable diet (8.1percent) for children in the age group of 6-23 months (pp. 317). A few decades back, tribal communities were forest dwellers dependent on natural resources for their livelihood and living. In the last four decades, their dependence on forests and natural resources has decreased, with an increasing reliance on public provisions. High levels of malnutrition in the tribal population across age groups are significantly determined by low-income levels, literacy, disease burden, open defecation and improper source of drinking water, lack of awareness, taboos and cultural practices, to mention a few, among many reasons. In addition, gender and food security are another set of interdependent factors for this mainstreaming process (Esterik, V. P. 1999; Kadilya, S. et al., 2012; Aryal et al., 2021). Women in tribal societies have experienced a significant shift from being dominant to a vulnerable position with the mainstreaming of tribal development. This further accentuates their demand for and dependence on public provisions related to their livelihood and dietary needs, nutritional intakes, primary health care, household amenities, and different entitlements for household well-being. Further, this dependence and vulnerability have positively scaled up because of displacement from forests, landlessness, atrocities, social biases, irregular allocation of public expenditures, income disparities, and distressed migration. Nevertheless, government, civil society, and international organisations initiated specific interventions contributing to tribal development. Microfinance, self-help groups, urban migration, and primary education are the four significant factors in the gradual socio-economic development of tribal populations across India (Xaxa, 2004; Gomati, 2008; Burman, 2012). The Central and the State Governments administer various programmes and interventions to minimise the problem, though tribal-specific schemes are very few (Aijaz, R. 2017; Rampal, P. 2021). Moreover, many development and social intervention programmes, funded by international agencies, are implemented for tribal regions (World Bank 2014). Lack of regular and systematic data on the fund allocations and utilisation is one of the biggest policy challenges for tribal development programmes (GOI: 2013;

2018; 2019; 2020).

The final "Decade for Action" regarding SDG-2 faced a setback due to the widespread CORONAVIRUS Pandemic. There are several factors affecting the explicit and hidden hunger (Kimura, 2013; Gödecke et al., 2018, ILO:2020, World Bank:2021, United Nations: 2020). Prevalence of hunger has been increasing across regions and social groups despite expanded food security networks in worst affected Asian countries including India. National Food Security Program has remained inadequate in terms of consistency and therefore needs a comprehensive approach for the tribal communities (Dev, M. 2018; GOI: 2018; Saigal & Srivastava: 2020; Koshi & Chandra: 2021). Common factors identified in the literature are changing patterns in food production, declining agricultural productivity, increasing risks and shocks in agricultural activities, unstable food prices, low per capita income, forced changes in staple diets and food habits, feminisation of agriculture, climatic and natural hazards, widening economic disparities, marketisation and commodification of food security and several others. Off late burden of anthropometric failure, due to 'nutrition deprivation', in children has been the biggest challenge, particularly, for the vulnerable population groups and in the poorest regions of the country (Adhikari, T. et al.,2020). Multilevel (a. Household, b. Village or Community and c. District) Logistic Regression Models are used to analyse the children and mothers' data available from the NFHS fourth round to establish that, in India, tribal children have a larger likelihood of undernutrition, and malnutrition burden than non-tribal children. The researcher through an extensive modelling finds anthropometric failure interacting with correlates like, household poverty, low level of mother's education, inadequacies in public service delivery in an elevated manner among various socio economic and demographic variables. The study also finds high degree of variance across all multi levels for undernutrition prevalence. Some of the important findings from the study supports the larger need for tribal specific policies than a uniform policy and larger focus on the gender differences of malnutrition burden.

Theoretical as well as empirical studies always emphasize upon the strong correlation between gender inequality and food insecurity. The authors flag wide policy and research issues in in gender-just food and nutrition interventions in India. The vast body of literature available on the challenges and pathways of food security and nutrition reveals that the tribal population, being the most minor proportion of the population, is mainly studied in a cross-sectional framework. (Agarwal B. 2015; Roy N. et.al. (2017); Asher & Shattuck 2017;

Pandey V. et al. 2016; Agarwal B. et al. 2018; Ghale Y. et al. 2018). These studies discuss the pathways of food security as well as potential and limitations of Gender Equality (SDG 5) and some other SDGs (SDG 1, 2, 13, 14, & 15), on household food security, where women have an instrumental role to play. Women and food security are analysed from three dimensions. First, as the food producers, mainly the small and marginal farm producers. Second, women as the consumer and food manager at the household level. The third and very significant dimension is the institutional mechanisms affecting the potential and limitations of women in the above mentioned two roles. Asher & Shattuck 2017; Ghale Y. et al. 2018 adopts a qualitative approach to elaborate on the impact of women's decision making on different dimensions of food security. They have emphasized on the gender sensitive food policies and programmes to strengthen the instrumental role played by women. The brief discussion indicates that gender dimensions of food security and role of women's decision-making needs more investigation at the household level. More importantly, tribal food security is dominated by the per capita income and backwardness arguments and therefore focusses on states like Chhattisgarh, Orissa, and Jharkhand. Food security in Uttar Pradesh is largely analysed in the context of poverty across social categories instead of decision making at the household level. Consequently, food insecurity is observed as the outcome of poverty rather than decision making and gender dimensions.

Hypothesis formulation for the present study: the above literature review indicates that agricultural productivity, women's access to food, literacy levels and health status significantly affect the food security status of the household and malnutrition levels in children. None of the studies include women's decision making as an explicit determinant for food security status or child malnutrition. Therefore, the present study proposes three major hypotheses in the study. First null hypothesis states that availability and access to food supply is the major determinant of food security for tribal households. The second null hypothesis states that women decision making does not affect the probability of households getting food secure. The third null hypothesis states that women decision making does not affect any parameter of malnutrition in the tribal households..

3. OBJECTIVES, AND RESEARCH METHODOLOGY

The paper adopts quantitative approach to analyse the relationship between gender decision making and nutritional outcomes in tribal households. The paper delineates the food and nutritional status and its determinants for the tribal

households through a primary survey of 212 households. The detailed research methodology, adopted in the paper, has been explained into three sections, viz, sampling design, measurement of food and nutritional security and LOGIT estimations with test of significance. a tool of positivist paradigm.

3.1. Data and Sampling Design

Multistage Purposive sampling technique is used to select two districts and four villages from the four development-blocks, two each from the selected districts (see Box-1). Tribal households in Uttar Pradesh are minimal in numbers and they have their locational advantages and disadvantages. Lakhimpur Kheri is the largest district in the State, located in the Terai Region of the foothills of the Himalayas on the Nepal Border. Tharu tribe is the specific tribal group living inside the dense forest area of Dudhwa National Park situated in the District of Lakhimpur Kheri. Lakhimpur Kheri has the smallest share, only 0.6 per cent of the tribal population (53,375 as per the 2011 Census), but is dominated by a homogeneous tribal community, i.e., Tharus, with significant dependence on forests, land and water but primarily controlled by the Forest Department and Border Security Force.

Sonbhadra is the second-largest district in Uttar Pradesh. It is located in the Southeast of the U.P., sharing borders with four states: Bihar, Madhya Pradesh, Jharkhand and Chattisgarh. It is a hilly region with a dense forest where different tribal communities, such as Gond, Baiga, Khaiwar, and PVTGs, live. Sonbhadra has the most extensive mineral resources and mining industries in the State. Sonbhadra has the highest share, 20.67 per cent of the tribal population (3,85,018 as per the 2011 Census), with heterogeneous tribal communities. The vulnerabilities and risks have increased with declining dependence on forests and land resources due to increased industrial activities.

3.2.   Measurement of Food and Nutritional Security

The primary survey is conducted through structured questionnaire based on the Food Insecurity Experience scale developed by the Food and Agriculture Organisation, United Nations and the SPANDAN Questionnaire, developed by the Indira Gandhi Institute of Development Research, Mumbai. These questionnaires are extensive survey instruments, capturing a vast scale of information including socio-economic background of the households, quantity, quality, and diversity of food consumed by the respondents at the household. Given the limited possibility of covering the complete questionnaire with the

selected sample in tribal villages, as their out-of-pocket expenses on food grains and necessary food items like pulses, milk and dairy products cooking oil, fruits and vegetables are not a regular activity, questions on Food Insecurity Experience were included.

More importantly, women in low-income, agrarian households, as well as deprived or underprivileged households play a critical role in balancing three dimensions of food security: a) from production on the family-owned plot, b) food distribution between sale and self-consumption and c) food allocation within the household. Thus, the role of females in household decision-making is crucial not only for the nutritional outcomes of children but also for the overall status of food security in the household. There has been a great discussion going on in the existing food security literature related to the objective vs subjective and experiential measurements of food security at the household level (ADB, 2013; Westerweel & Samwel, 2014; Maitra & Rao 2017; Gupta & Mishra, 2020, Gebre, et, al. 2021). There is a growing focus on subjective food security measurements, particularly for low-income households. There are several reasons, such as a low level of education and training, a low level of fixed assets and their limited availability, a more extensive dependence on government provisions, and loosely defined income and expenditure boundaries.

Therefore, the present paper also adopts the subjective measurement approach. The status of perceived food security depends on the direct question about the food security status and the seven essential questions used in the FIES survey mentioned above. The status of food security at the household level has been categorised into three groups, viz, Food Secure HHs, Food Insecure HHs and Transitory Food Insecure HHs, following the discussion in Gebre, G.G. et al. (2021) and Maitra, C. & Rao, D.S.P (2017). Further, the four critical nutritional outcomes for the selected sample were calculated from the collected height, weight, and age data of mothers (212 respondents) and 329 children (total children up to the age of 5 years), which includes 160 boys and 169 girls).

3.3. Estimations and Test of Significance

The gender dimensions of food security and malnutrition status of the child are captured through a set of questions (mothers as respondents), identifying the role of women in decision making, assessment of household problems, their individual income, spending and employment status and their education and health status. After normalisation and tabulations, the collected field data were

used to estimate the Chi-Sq value and odds ratio. The chi-square Test was used to determine if there are significant gender differences in male and female child malnutrition. Moreover, the test is also used to analyse the association between selected categorical variables. Significant results at the 5 per cent level have been reported in the chapter, although several combinations of data estimations were carried out.

Further, two Binary Logistic Models have been developed to explain the factors associated with food security. All the households are grouped into two categories: food secure=1 and food insecure=0 for both models. The dependent variable takes 1 for food-secure households and 0 for food-insecure households. The first is the partial model, including independent variables only related to women's decision-making, individual spending and awareness about child and self-nutritional needs. The second binary logit model is the complete model that considers all the other covariates and women's empowerment-related variables. Similarly, two Binary Logistic Models have been developed to assess the relationship between malnutrition status (any malnutrition=1 and no malnutrition=0, separately for stunting, wasting and underweight) and mother's decision-making. In the full models for any and no malnutrition, along with the three-decision-making mentioned above variables, we have also considered a few child-related variables (children's age, gender, and whether they suffered from fever or diarrhoea), mother's characteristics (education, Underage Marriage, BMI and earning status), employment status of father and some household characteristics-related variables (food security, agricultural land holdings, sanitation).

4. RESULTS AND FINDINGS

Results and findings are presented in two sections. The first section analyses the food security status of the surveyed tribal households in Uttar Pradesh into four important dimensions, food availability, access, absorption and nutritional security. The second section presents the results and finding from the LOGIT estimations carried out on the survey data.

4.1. Tribal Food Security in Uttar Pradesh: An Overview of The Tribal Households

Uttar Pradesh, which is the most populated state in India, remains as the second lowest performer on most parameters of SDGs (see Table 1). The tribal population is expected to lag behind their counterparts at the All-India level as

well as state level (GOI 2021a). Uttar Pradesh, has a much smaller share of the tribal population, concentrated in 12 out of 75 districts. Despite being a minority population subset, the development indicators reveal the existence of the majority of development disadvantages faced by the tribal population in most states (World Bank 2014; Mani S. et al. 2017). For instance, in the NFHS-IV survey, 45.9 per cent of tribal households were falling in the poorest wealth category. The literacy rate is 55.68 per cent, with a male-female literacy gap of 24.1 per cent. The poverty ratio in the State has decreased significantly from 49.8 to 27.1 during 2009-2012 , however, deprivation according to household amenities, public services and professional and technical education is still among the highest. Food security outcomes in the tribal communities are improving marginally. Less than 50 per cent of the tribal population have BPL coverage, 60.7 per cent of tribal females are anaemic, 45.9 per cent of men are underweight, and 54.9 per cent of children are stunted. Therefore, a detailed investigation of food and nutritional security status is vital to highlight the underlying factors for realising the SDG goals.

Table 2 provides a brief description of the sample characteristics. The median family size Of the surveyed 212 households, is 5 (mean value 5.89) with total 329 children up to 59 months. 79.2 per cent of households depend on agriculture and allied activities, and 23.5 per cent are cultivators or farming households. The remaining 55.3 per cent of the agriculture-dependent households are marginal or landless households, dependent on the farm and casual labour as their primary income source. Seventy-five percentiles of the households have a monthly income of Rs.5000. In contrast, the joint family monthly income is Rs. 30000. There are 18.9 per cent of the respondents who are either not aware of the size of the monthly cash income earned by their husband, or they sell their foodgrains stock every time they need cash. 50 per cent of the surveyed females (mothers of at least one child up to 5 years of age) are occupied only 24 hours a day in household work and family care, and only 2.3 per cent (5 in count) have a paid job. 51.2 per cent of the households have proper water and sanitation facilities within their house premise, which is less than 92 per cent of households, as reported in the Block level Statistical Bulletin (2019), Government of Uttar Pradesh. Further, set of 18 questions is analysed to elucidate the status of food security/ insecurity for the households for a shorter duration of time and also the changing pattern of the food systems in the tribal households. It reveals that for the tribal households, availability and access are not significant concerns for their food security status. There is no gender discrimination regarding food intake except for pregnant females. Their food

security status depends significantly on the absorption/utilisation and nutrition dimension.

4.1.1. Availability of Food and Food insecurity in selected Tribal Households

For the tribal households, food security status varies with the season of crop sowing (extreme deprivation) and harvesting (abundance). Food availability is specifically affected by land size and family size (Mahadevan & Saurdi, 2012; Dimitri, C. & Rogus, S. 2014), but both variables show a positive relationship in the present study. The availability of land and land size in the present study do not appear to be significant factors for tribal food security (through the Chi Sq Test). The households explain two possible reasons. Higher land size leads to higher sales of agricultural cereals produced in the market, a shift towards cash crops, and thus higher levels of food and non-food expenditures and bank deposits for the family. Another reason is the higher family size land density, along with the majority (63.8 per cent) of the households having 0.5-1.00 hectares of land and 14 per cent being landless.

During the survey, 33.9 per cent of respondents had not faced any food insecurity in the last seven days or last six months as they possessed sufficient rice and wheat stock, 30.6 were food insecure, whereas 35.4 per cent of the households were transitory food insecure. Sixty-nine per cent of the households are predominantly vegetarian, whereas the rest are preferably non-vegetarian households. Given their dietary pattern, the availability and quality of fish, chicken, and other flesh food play a vital role in balancing their diet. The village heads categorically mentioned that 10-12 years back, there was a larger availability of fish and other meat products given the availability of water bodies, and the animal husbandry activities supported through self-help group formation. Among the surveyed households, more than 57 per cent could not get the preferred or appropriate quality of food again, indicating a food shortage. During the field survey, food grains, pulses, cooking oil, ghee, milk, sugar, and several other stocks or availability were also calculated, which show no significant relationship with food security status. This is due to two crucial factors. One, when the total food stock of their more prominent joint family is considered, it appears significant, but as the total farm production is distributed among the family units, the food security decreases, and thus, PDS plays a vital role for these tribal households. However, government food security schemes appear in these villages with a temporary approach, as a one-time distribution

program. A forced shift in the food pattern is clearly visible, given the dominance of cereal distribution in the PDS, ICDS, and MDM programmes. The consumption of cereals dominates nutritional intake, explained as "staple grain fundamentalism" Jose, S. (2019) and "Hidden Hunger" Kimura, A.H. (2013), even though household preference for food items such as bread, snacks and many other, from the market, is consistently increasing.

4.1.2. Availability of Food and Food insecurity in selected Tribal Households

National Nutrition Monitoring Bureau (NNMB) Survey-IIIrd Round (2008-09) revealed that for tribal communities, the mean intake of major foodstuffs and nutrients is below the Recommended Daily Allowances (RDA) by the Indian Council of Medical Research. It has been observed through the National Sample Survey (NSS) consumption data that mean consumption for the schedule tribes was 54 per cent lower in the districts where they are a minority. Physical access (forest-based availability), income levels, market access, and road density are found as significant determinants of food choices in general and fruit and vegetable consumption in particular, for different social groups (Dimitri, C. & Rogus S. 2014; Bajpai, B.K. 2020; Chaudhary S. et al. 2020). Thus, the established norms of calorie intake and dimensions of food security differs for tribal population from the non-tribal population.

Access in the surveyed households depends on the household income, ease of food access for women in the household (i.e. distribution through PDS shops or Aanganwadi centres, women's control on food collection from the forest, ponds or growing in the homestead garden or interhousehold sharing), intrahousehold distribution and gender equity. The average income in the surveyed villages comes out to be Rs.4485.4 among the 212-household level, ranging between Rs. 2000-3000 to Rs. 10000 per month. Adequacy of food is reflected in the frequency of eating of major food groups. Every household member consumes rice or wheat according to their choice, rice and rice-based items being their staple diet. Along with rice, vegetables are an essential component of their daily diet. 40-42 per cent of households use locally cultivated fish and vegetables for every meal. Pulses are consumed once a week if available or when distributed through the ANM (Auxiliary Nursing Midwifery) centres. The consumption of pulses is higher for children and older members of the family. The frequency of food consumption data in the field survey showed that most of the households consumed milk, fruits, meat, fish, and eggs, as per availability in a week or a

month or when visitors/relatives arrived in the family. This consumption mainly depends on the level of income, mother's education and earning status. Weekly consumption of non-veg items (eggs, fish, chicken, or meat) is lower among females. It depends on festivals/ family functions, surplus home production, and poultry and fish cultivation opportunities for the females of the households. As a coping strategy for the shortage of cash income or food, milk, eggs, fish and chicken are always used as a medium of exchange; hence, less availability and low frequency of consumption always exist.

4.1.3. Absorption of Food and Food insecurity in selected Tribal Households

The third important dimension of food security is the Absorption/Utilisation and Quality factors. These depend on the cultural/customary habits and practices; availability of safe drinking water, sanitation facilities, LPG (liquified petroleum gas) cylinder, storage capacity of the household and storage practices in the household; public services for mother and child health care; and general health care access. 48-50 per cent of the households do not have a functional (i.e. along with water connection) sanitation facility and are still dependent on open defecation. Similarly, 50-60 per cent of the families need a safe drinking water source or place of water for cooking purposes because of contamination issues. Water contamination is one of the biggest health problems in Sonbhadra. These two factors are gender-specific, given the more considerable impact on female health and social status. The lack of proper drainage systems across households affects the water quality and waterborne and bone diseases in families across age groups. Only 26.9 per cent of the HHs have LPG connections, and the refilling cost is higher than usual due to a lack of transport options and limited supply frequency. Therefore, all the households still use woodfires (gathered through the forest by females with the permission of the Forest Department) to cook their food. LPG is used only during the rainy season or for boiling water in winter. Females can manage cooking activities with a maximum of 2-3 LPG cylinders annually. Absorption of food in tribal households significantly depends on the storage capacity and practices. Given that 70 per cent of the houses and 95 per cent of the kitchen sheds are made of mud and wood (kutcha houses), food quality gets affected, and lack of education of the household members often leads to consumption of lower quality food.

4.2.4. Status of Nutritional Security for tribal population in Uttar Pradesh

Nutritional insecurity appears to be more prominent for the surveyed tribal

households. It is believed that they always have enough food to eat. However, there are challenges related to health, productivity, and availability of introductory public provisions like water, electricity, sanitation, transport and many more, which forces them to compromise on food quality and diversity, leading to severe stunting and underweight in their children (Vishwanathan et al.; G., 2020) Thus, malnutrition in linked with unfavourable socio-demographic factors and quality of food rather than availability of food. The three critical Anthropometric measurements, viz, stunting, wasting and underweight are present in Table 3-5 for the surveyed tribal children. 64.6 per cent of mothers and 75 percent of the children, between 0-60 months of age, were registered as anaemic in the primary health centre records in the villages. It can be inferred that the prevalence of underweight increases with an increase in the age of the child in the community. It is essential to observe a 50 per cent or slightly higher prevalence of severe stunting in the selected tribal villages in Uttar Pradesh. Stunting prevalence is 2.2 per cent higher in male children than in girls. In terms of underweight for the surveyed children, the prevalence of severe underweight for boys is 7.5 per cent and 11.24 per cent for girls. However, the prevalence of Underweight with SD<-2 increases to 11.25 per cent for boys and 26.04 per cent for girls. The difference between the underweight prevalence between girls and boys is significantly different, as indicated by the Chi-Square values.

The important point for further investigation is the vast differences between stunting wasting and underweight prevalence (Jose, S. 2019). One primary reason behind these differences is food quality and absorption in the selected sample. In the available literature, the prevalence of child undernutrition depends on the mother's education, BMI, breastfeeding practices, and micronutrient supplements given to the children (Adhikari, T. et al. 2020). On the contrary, most surveyed mothers are in the normal BMI category, irrespective of their high anaemia levels. Studies have highlighted the prevalence of anaemia as evidence of the inter-generational prevalence of anaemia in tribal mothers and children (Kirby et al.; V., 2021). Poverty, food insecurity, prevalence of malnutrition, mother's health and socio-economic situations have been identified as significant variables using the bivariate and multivariate regression model on the NFHS IV data in the empirical literature.

4.2. Food Security and Role of Gender Decision-Making: Findings from the LOGIT Estimations

As discussed earlier, household food security is assumed to depend on several

factors. However, women, in the primary role of managing the same, particularly during any shock on income level or shortage of food, need effective ownership and control over resources. It has been established repeatedly that paid employment for women is the primary prerequisite in this context. For tribal households where 79.2 per cent of the surveyed women are not at all involved in income-earning activities or working on their own farms, their decision-making and control over resources become more crucial for food security. In tribal households' females can play a significant role only if there is effective improvement in their education level, earning status and decision-making. The binary logistics regression model (Table 6) with correlates related to women's decision-making and household characteristics reveals that the probability of food security for a household increases with female decision-making, individual spending power and earning status. It was also observed that females actively involved in SHG, or non-farm income-generating activities have yet to experience food shortage and nutritional insecurity for their children. Interestingly, households where the mothers are more aware of themselves, and their children's food or nutritional problems utilise the Aanganwadi services effectively but also have a higher chance of declaring themselves food insecure. Nevertheless, beneficiaries of the POSHAN programme are also more likely to be food-secured than those not availing of this scheme. However, this difference is statistically insignificant. Table 7-8 shows the crosstabs and chi sq value for female decision-making and earning status with the perceived food security levels. The reason for reported transitory food insecurity with decision-making may be due to household members' increasing compulsion of non-food expenditures. One of the important observations from the field survey, as well as the logistics regression model, is the considerable impact of female decision-making, spending power, education, and cash-earning options on food security for tribal households as well as lower malnutrition status of children. Moreover, it is significant in lowering the prevalence of wasting and underweight in their children. Only effective decision-making by women can affect stunting, as the prevalence is very high.

5. CONCLUSION AND POLICY RECOMMENDATIONS

The The adequacy of food and the idea of food security, at large, appears to have a different meaning for the policymakers and the tribal population. Tribal communities share their food stock, land and livestock much more than the non-tribal households. They have a community-dependent coping mechanism against hunger and food shortages. In the surveyed tribal villages, food security

for tribal households predominantly depends on the cultivated, wild and policy environment-facilitated food supplies.[xii] (Jerath, S.G. et al., 2021; Narayanan, S., 2019). Moreover, purchasing food items remains an occasional activity except when they migrate. Out of the selected 212 households, only 30.7 per cent reported their experience of food insecurity in the last six months and the week before the survey. 35.3 per cent of households reported transitory food insecurity status, whereas 33.9 per cent reported food security.

The food insecurity is not only because of the decreased availability of rice stock but also rising market prices of meat, fish, and vegetables. Land availability is a significant determinant of food diversity rather than food security. Land availability enables them to diversify the cropping pattern of cereal and cash crops, grow vegetables for self-consumption. In the binary logistics regression model estimation, land size above ten bighas only becomes significant, indicating the need for a gender-sensitive land and food distribution policies for the tribal communities. Public provisioning of food and basic household amenities significantly affects the malnutrition level, i.e. stunting and underweight (Vepa, S.S. et al. 2020). Findings for the four dimensions of food security repeatedly indicate the urgent need for gendering to improve the food and nutrition status of tribal children and women. Gendering requires larger participation of tribal women in the implementation and formulation of public distribution system at the local level.

National Family health survey data shows that the decision-making role of females in tribal households is comparatively more robust than other social categories. During the study, almost ten such decisions were analysed, and female agri-decisions were found significant for girls' weight for height ratio. Females participating in any type of decision at the household level significantly affects the height ratio among children. Females' involvement in household decision-making impacts the wasting and underweight prevalence of children and the food security levels of households. One crucial point to be noted here is that the decision-making of females is partial, without any ownership of resources or paid employment opportunities prevalent. 50 per cent of females are occupied with household activities, and 25 per cent of females are working on their own farms without any cash-earning activities. Females in the age group of 40-60 who have some involvement in livestock-related activities can manage the household's food security situation. Regarding food access, inefficiencies in the PDS system or POSHAN Abhiyan, need to be regularised and specified in terms of distribution of pulses, milk and dairy products, any nutritional

supplements. Community specific behavioural approach of food security must be incorporated in the public programmes.

Moreover, more gender-sensitive and gender-friendly policies for food distribution and nutrition intake provisions must be considered. Some of the mothers and the Aanganwadi workers believed that even if some packets (a mixture of multigrain or any such non-cereal food) were distributed, they were unaware of their cooking process, so they were forced to use it for animals. The distribution of cooking oil, pulses, crushed grain and milk powder is never used for consumption by females and children; instead, it is consumed in different forms by either family members or wasted. Nutritional security rather than food security, is a challenging issue, and tribal populations have some specific constraints. Thus, awareness programs and women's involvement in the public distribution may provide the desired results of ZERO HUNGER goal. The discussion with the female respondents and the tribal Head reveals that incentive-based food literacy and awareness workshops for adolescent girls and mothers (integrating food, health, education and technology) can effectively target stunting and undernourishment prevalent among the tribal population. Another critical area was exploring the possibility of local procurement of nutritive food items and redistribution as "Poshaahar", along with non-vegetarian food baskets, mainly fish or animal-based protein.

Limitation of the Study: the major limitation is the low awareness among the tribal households with respect to the norms of food and nutritional security which affects their responses. The present study is based on the survey conducted in the month of January to March 2020 in the selected tribal households. The chosen tribal households have a very small out of pockets expense on food items. Therefore, food security status has very less interaction with the per capita income and expenditure levels of the household. There is a further scope of quantifying the women's decision making and analysing the status of food security in terms of calorie intake by the individuals. A longitudinal study could further confirm the robustness of the results.

DISCLOSURE OF CONFLICT

The authors declare that they have no conflicts of interest.

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Box- 1. Sample Design: Selected State: Uttar Pradesh	
Selected Districts and the rationale (Total = 2 Districts)	
1. Sonbhadra	2. Lakhimpur Kheri
Located in South East of U.P.	Located in North of U.P.
Natural resources rich hilly area	Dense Forest Area in Dudhwa National Park
Border sharing with four states	Located in the Terai Region of the foot hills of Himalaya on the Nepal Border
2nd Largest District of U.P.	Largest District of U.P.
Selection of 2 Development Blocks from each District= Total 4 Blocks Highest Tribal Concentration (in rural areas) Blocks	
Village Selection (1 from each Block) = Total 4 Villages I. Villages situated inside dense forest area. II. More than 50 per cent, tribal population. III. The village has a PHC and Government Veterinary Centre. IV. Females with at least 1 child of less than 5 years of age V. AAY card (white ration card) VI. ANM records	
1.a.i Majhauli(Dudhi Block) Selected Sample HHs: 41	2.a.i Parseya(Palia Block) Selected Sample HHs: 48
1.b.i Bhabhni(Babhni Block) Selected Sample HHs: 63	2.b.i Belapursua(Nighasan Block) Selected Sample HHs: 60
Total Sample Size=212 Tribal Households	

Table 1. Important Sub-Indicators for SDG-2 (Zero Hunger)					
	Target	India	Kerala	Uttar Pradesh	Schedule Tribes
Percentage of beneficiaries covered under National Food Security Act (NFSA) 2013	100	99.51	100	99.23	83.2
Percentage of pregnant women aged 15-49 years who are anaemic	25.2	50.4	22.6	51	54.67
Percentage of children under five years who are underweight	1.9	33.4	18.7	36.8	54.93
Percentage of children under five years who are stunted	6	34.7	20.5	38.8	51.74
Percentage of adolescents aged 10-19 years	14.2	28.4	9.1	31.6	70.08

who are anaemic					
Gross Value Added (constant prices) in agriculture per worker (in Lakhs/worker)	1.22	0.71	2.2	0.59	---
Rice and wheat produced annually per unit area in kilograms	5322.1	2995.2	2920.1	3158.5	2105.5

Source: SDG India, Dashboard 2020-2021, NITI AAYOG, New Delhi and Compendium of District Factsheets: Tribal Health and Nutrition, Based on NFHS-IV (2015-16) published by Ministry of Tribal Affairs, GOI, 2020.

Table-2. Descriptive Statistics from the field Survey			
	Median (Mean) Value	Range (min-max)	SD
Average family size (based on Ration Card members)	5.0 (5.89)	3-8	1.219
Family size based on the joint family system	10	3-48	6.540
Land Holding (in hectares) per household	0.48	0-5	2.953
Landless Households in numbers	32 (16 %)	--	--
Respondent mother as an earning member (in nos.)	15	--	--
Agriculture as Major Occupation for the respondent's husband	46.7% (99)	--	--
Non Farm as Major Occupation for the respondent's husband	10.8% (23)	--	--
Respondent's Husband in government service	05	--	--
Monthly Income (in Rs.) of the Husband	2000 (4486)	0-20000	9320.89
Extended Family Monthly Income (in Rs.)	12000 (22194.76)	1000-150000	22751.94
Households with proper sanitation facilities	51.6%	0-75%	
Households with proper drinking facilities	51.6%	0-75%	
Share of Food Expenditure in Total Expenditure	28	13-100	23.636
Share of Non-Food Expenditure in the Total Expenditure	72	0-87	23.636
Monthly Household food expenditure in Rs.	1000 (1615)	20-3300	2376.98
Largest item of monthly household expenditure in Rs.	1000 (1808.29)	00-3586	2761.34
Total availability of Rice Stock in the household for any six months (in Kgms)	215	0-1698	272.122
Total availability of Wheat Stock in the Household for any six months (in Kgms)	126	0-1900	228.536
Total availability of Pulses Stock in the Household for any six months (in Kgs)	3.0 (18.38)	0-78	71.426
Total availability of Cooking Oil Stock in the Household for any six months (in litres)	2.0 (9.42)	0-50	48.436
Total availability of Ghee Stock in the Household for any six months (in grams)	0.00 (170.89)	0-5000gms	664.750

Source : Field Survey conducted by the author

Z Score Range	Table- 3. HAZ (Stunting)					
	Total		Boys		Girls	
	Number of Children	Percentage of Children	Number of Boys	Percentage of Boys	Number of Girls	Percentage of Girls
<-3SD	**169**	**51.37**	**84**	**52.5**	**85**	**50.3**
-3SD to -2SD	**35**	**10.64**	**12**	**7.5**	**23**	**13.61**
-2SD to -1SD	31	9.42	13	8.13	18	10.65
-1SD to -0	30	9.12	17	10.63	13	7.69
0 to 1SD	24	7.29	13	8.13	11	6.51
1SD to 2SD	17	5.17	9	5.63	8	4.73

2SD to 3SD	11	3.34	4	2.5	7	4.14
>3SD	12	3.65	8	5	4	2.37
Total	329	100	160	100	169	100
Chi Square	Pearson chi2(7) = 6.9388 Pr = 0.435					

	Table- 4. WHZ (Wasting)					
	Total		Boys		Girls	
Z Score Range	Number of Children	Percentage of Children	Number of Boys	Percentage of Boys	Number of Girls	Percentage of Girls
<-3SD	34	10.5	13	8.2	21	12.7
-3SD to -2SD	24	7.4	10	6.3	14	8.4
-2SD to -1SD	34	10.5	14	8.9	20	12.1
-1SD to 0	57	17.6	23	14.6	34	20.5
0 to 1SD	69	21.3	40	25.3	29	17.5
1SD to 2SD	64	19.8	32	20.3	32	19.3
2SD to 3SD	27	8.3	18	11.4	9	5.4
>3SD	15	4.6	8	5.1	7	4.2
Total	324	100	158	100	166	100
Chi Square	Pearson chi2(7) = 10.3597 Pr = 0.169					

	Table- 5. WAZ (underweight)					
	Total		Boys		Girls	
Z Score Range	Number of Children	Percentage of Children	Number of Boys	Percentage of Boys	Number of Girls	Percentage of Girls
<-3SD	31	9.42	12	7.5	19	11.24
-3SD to -2SD	**62**	**18.84**	**18**	**11.25**	**44**	**26.04**
-2SD to -1SD	**113**	**34.35**	**57**	**35.63**	**56**	**33.14**
-1SD to 0	**76**	**23.1**	**39**	**24.38**	**37**	**21.89**
0 to 1SD	39	11.85	28	17.5	11	6.51
1SD to 2SD	4	1.22	3	1.88	0	0
2SD to 3SD	1	0.3	1	0.63	1	0.59
>3SD	3	0.91	2	1.25	1	0.59
Total	329	100	160	100	169	100
Chi Square	Pearson chi2(7) = 22.0592 Pr = 0.002					

Table-6. Odds ratio in the Binary Logit Model Estimations				
Correlates	Food Security	Any Stunting	Any Wasting	Any Underweight
Partial Model Psuedo R²	0.0129	0.0296	0.0251	0.201
Women involvement in any household decision making	1.1299	0.9606	0.5006***	0.8958
Female Individual spending	0.6824	0.3548**	3.4053***	0.5040**
Awareness about child and self-nutrition	1.6996***	0.6136**	1.9445**	1.1564
Full Model	0.2187	0.1842	0.1968	0.1731
Education level VIII-XII class	2.2506**	0.8619	2.4903***	0.6024
SHG activities	0.2596*	0.4806***	7.7032*	0.6204

Earning from Non Farm activities	0.2947***	0.9654	5.8174**	1.3589
Bank Deposit	2.115***	NA	NA	NA
Land Size	2.1689	0.9316	0.3218**	0.4270***
Husband with a regular wage	1.0953	0.4993	2.7835	0.4142
Female Child	NA	1.0628	1.7146	3.0624*
Sanitation facility	NA	0.4160**	0.7486	0.3910**

Note: significance level at 1 per cent*, 5 per cent** and 10 per cent *** otherwise insignificant.

Table-7. Household Decision and Food Security Status (%)				
Household decision	Secure	Insecure	Transitory Insecure	Total (N)
only wife	33.33	29.63	37.04	27
only husband	35.71	38.39	25.89	112
partially wife	31.51	19.18	49.32	73
Pearson chi2(4) = 12.4439 Pr = 0.014				

Table-8: Women Any Decision and Food Security Status (%)				
Decision	Secure	Insecure	Transitory Insecure	Total
No	35.71	38.39	25.89	112
Yes	32	22	46	100
Pearson chi2(2) = 10.8825 Pr = 0.004				

A BOOK REVIEW: IDENTITY PHENOMENON IN WOMEN'S NON-GOVERNMENTAL ORGANIZATIONS IN TÜRKIYE

Gökhan Duman *

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CANSEL USLU, DİDEM DOĞANYILMAZ DUMAN

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Gökhan Duman[*]

ABSTRACT

A descriptive and a critical review regarding the book entitled "Identity Phenomenon in Women's Non-Governmental Organizations in Türkiye" written by Cansel Uslu and Didem Doğanyılmaz Duman is provided.

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1. INTRODUCTION

The Identity is a complex phenomenon that involves both defining oneself and being defined by the social environment. In a modern society, being in many organizations, institutions, and communities brings with it many identity definitions.

In this work, it has been researched how the concept of identity is constructed in women's non-governmental organizations in Türkiye. The authors conducted in-depth interviews with five women's non-governmental organizations originated from socio-political cultures. These organizations are İlerici Kadınlar Derneği (IKD), Havle Kadın Derneği, Kadın Adayları Destekleme Derneği (KA.DER), Kadının İnsan Hakkı Yeni Çözümler Derneği (KIH-YC), and Kadın Merkezi Vakfı (KAMER). It is evident that the selection of organization has been handpicked to analyze how identity construction in different ideologies affects similarity/difference. Therefore, the similarities and differences in the selected women's non-governmental organizations were comparatively analyzed on the basis of culture, ideology, discourse, power, and society. Authors used the obtained data from the interviews to complete the discourse analysis, one of the qualitative research data analysis methods, within the scope of similarities/differences in relation to identity and political culture.

The aim of the book is to investigate how the phenomenon of identity is formed in women's non-governmental organizations and by what components it is consciously and/or unconsciously affected. In addition, while focusing on the impact of non-governmental organizations on democracy, discourse in the public sphere, and socio-political decision-making elements, it has also been analyzed how they construct discourses on this issue and how they differ among themselves.

Studies on the phenomenon of identity constitute a rich theoretical accumulation in interdisciplinary literature. By carrying this knowledge to the field, the book examined how identity construction took place in women's non-governmental organizations. In addition, there is no similar comprehensive study in the literature on the formation and reflection of the phenomenon of identity in women's non-governmental organizations and its effects that occur and/or may arise in the socio-political framework. The focus of the book on the relevant gap

and its planned contribution to the literature reveals the originality of the work. Although the book aims to emphasize the importance of the interaction of identity with society, it is also important how the construction process and similarities/differences are formed. Non-governmental organizations are in a critical position in terms of finding a place in the public sphere, constructing discourse, and establishing solidarity/unity in society through similarities. For example, while some of the interviewed women's non-governmental organizations have a religious position, others define themselves ideologically. Since the adopted views and cultures differ, the discourses are shaped accordingly. Therefore, in the book, a holistic perspective is presented by making a comparative analysis of discourses in different socio-political cultures. It was aimed to reveal the identity, political culture and ideology adopted by non-governmental organizations through discourse analysis and to determine the changing/transforming discourses within the framework of the determined sample group. One of the advantages of the method is that, due to the selection of typical case sampling, mainstream identities that are active and visible in the public sphere can be analyzed and the existing differences/similarities can be presented comparatively. Thus, it is aimed to raise awareness within the framework of solidarity/unity in both non-governmental organizations and society. The disadvantage is that only selected socio-political identities are examined nevertheless it varies even wider. Additionally, it could be thought that more comprehensive results could be obtained by expanding the study further by adding women's non-governmental organizations in different socio-political cultures. However, the identity typologies adopted by the selected non-governmental organizations represent the leading mainstream identities in society, offering the reader a holistic perspective and thus minimizing the disadvantage.

The book consists of three parts. In the first part, identity was focused as a conceptual framework, in the second part, the place of civil society was explained, and in the third part, in-depth interviews were examined with discourse analysis.

In the first part, the subheadings of identity phenomenon are individual identity, collective identity; and pertaining to identity approaches, primordial, modernist, instrumentalist, social constructionist and ethno-symbolist approaches are explained. Within the scope of the social constructionist approach, which forms the theoretical basis of the study, it is emphasized that identities are transformed and constantly reconstructed as a result of interaction with social processes

(p.34). It is also accepted that the identity characteristics of the individual are "given" at birth. However, within the scope of social relations, the identity of the individual is transformed and reconstructed by cultural, ideological, economic, and psychological factors (p.35). Therefore, it is stated that the phenomenon of identity is reconstructed politically, sociologically, economically, and psychologically in women's non-governmental organizations. How this occurs and what factors change are among the research questions (p.38).

From another perspective, examining the concept of identity in terms of power, subject and discourse (p.42) reveals how identity construction occurs in the context of power relations. Here, not only political but also patriarchal, economic, and social power elements are focused. Transforming one's identity is related to the relevant areas of power. Thus, it is important to be able to engage in discourse in the public sphere within the scope of social interaction and relations with spheres of power (p.44).

The title "identity conflicts" (p.45) aims to question whether there is a conflict between women's non-governmental organizations due to differences in individual and collective identities. In the study, it is emphasized that if there is a conflict, this conflict situation can be turned into an advantage by making visible the effects such as the emergence of different opinions, raising awareness, developing a sense of empathy, creating tolerance, and a relative reduction in alienation (p.48).

In the second part (p.49), civil society is discussed as a conceptual framework. The classical understanding of civil society, the transcendent State understanding, and the understanding of civil society as a necessity were mentioned. Following the theoretical explanation of civil society, the history of civil society in Türkiye was examined in the single-party, multi-party period, then in the 1960s, 1970s, after 1980s and in the 2000s.

The third part (p.79) is the section where the interview transcripts are analyzed. The interviews were analyzed using the interpretative view method from discourse analysis. The remarkable elements obtained as a result of the interviews are titled as categories. The category headings in question are: organizational structure-decision-making processes, identity definitions, conflict element-joint activities, solidarity networks-sisterhood, gender-political power, multiple identities, public sphere-political mobilization.

As a result, it was concluded that the non-governmental organizations included in the sample agreed on women's rights and used an inclusive language in their events.

"According to the interview data, IKD focuses on the struggle for socialist rights, Havle Kadın Derneği primarily focuses on the struggle for the rights of Muslim feminist women, KA.DER focuses on the struggle to ensure equality between women and men in decision-making mechanisms, KIH-YC focuses on the struggle for gender equality and human rights, and KAMER focuses on the struggle for coping with violence and gender equality." (p.131-132).

Sisterhood is an important concept within the framework of feminist terminology and the authors included it in the interviews to determine how the non-governmental organizations embraced the concept. It is noteworthy that every single organization has a completely different view on the concept (p.134). While Havle Kadın Derneği embraces the concept of sisterhood, IKD focuses on the concept of solidarity instead. KA.DER emphasizes that not only sisterhood but also men's contribution to the struggle is important, and KIH-YÇ, criticizes that sisterhood and sexual identity are ignored. Last but not least, KAMER highlights sharing and solidarity and emphasized the importance of men's contribution to the gender struggle. Although the women's non-governmental organizations in the sample have different identities, ideologies, and cultures, it is concluded that each organization contributes to women's rights with different issues and tools (p.137-138).

To conclude, the book creates a rich accumulation of knowledge in terms of the coexistence of theory and field work over a complex issue. However, as a criticism, studies on women's non-governmental organizations could have been given in depth in the literature review section. In addition, it is possible to say that the category titles would be reduced, and they would be more associated with the information obtained.

DISCLOSURE OF CONFLICT

The authors declare that they have no conflicts of interest.

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