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# BURNOUT AMONG FARMERS IN ENUGU STATE, NIGERIA: THE ROLE OF ECONOMIC STRESS AND FARMING INSECURITIES

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# Abstract

The contemporary agricultural ecosystem in Nigeria is consistently threatened by many factors, including the psychological condition of burnout. The present study examined farmers' burnout based on economic stress and farming insecurities in a sample of farmers recruited from different farming communities in Enugu state, Nigeria. Two hundred and fourteen respondents completed a self-report measure of economic stress and farming insecurity. Two hypotheses were tested using data from the respondents. Multiple regression was performed on the data, and the result demonstrated a statistically significant effect of economic stress and farming insecurity on farmers' burnout F (1,212), 24.34 P< .05. An observation of the  $R^2$  indicated that the independent variable explained about 18.8% of the variation in farmer's burnout. The study has implications for food production.

Keywords: burnout, economic stress, farming insecurity, farmers

#### **INTRODUCTION**

Over the years, agriculture has remained a potential source of income for many households and has demonstrated a significant contribution to the development of Nigeria. Intimations suggest that the country has a vast arable area dedicated to agricultural production. Accordingly, Simona (2021) stressed that about 6.5 million hectares of land are used for permanent crops and 30.3 million hectares of meadows and pastures. Nigeria's substantial agricultural resource base offers enormous potential for agricultural production (Ogwumike & Akinnibosun, 2013). Literature abounds emphasizing the link between agriculture and the gross domestic product of Nigeria (Bala & Alhassan, 2017; Giroh et al., 2021; Ikenwa et al., 2017; Nkiru, 2006; Nwaogwugwu & Evans, 2016; Ogbanga, 2018; Ogbonnaya, 2003; Olajide et al., 2010; Sa'ad & Yau, 2016; Sokoya et al., 2014). It represents a significant livelihood source for many households and provides raw materials for agro-allied industries (Ogwumike & Akinnibosun, 2013).

Nigeria's agricultural system is the leading producer of various farm products, including palm oil, cocoa beans, pineapple, and sorghum. It is the world's second-largest producer of sorghum, after only the United States, and ranks fifth in the production of palm oil and cocoa beans. Nigeria is also a key global exporter of nuts. In terms of value, it is the world's second-largest exporter of cashew nuts. Indeed, among the top ten export categories are oil, fruits, nuts, and seeds. Nigerians create various food items for human and animal consumption in agriculture. However, agricultural activities are described in livestock and crop production.

Farmers are responsible for the crops and livestock essentialities for human life. They work daily to keep an ample supply of crops and animal products on the market because the world would perish without food. A farmer's primary goal to make a living and feed the population is to cultivate quality crops and healthy animals. Thus, agriculture is essential for many Nigerians in all six geographical zones. Farming operations provide a source of income for many households, while the products of farming activities feed the entire population. As a result, many Nigerian engage in crop farming activities, while others rear animals. More people participate in agricultural activities in rural areas than in urban areas. Several settlements in Enugu state, Nigeria, are well-known for their agriculture and food production. These communities are located across the seventeen local government areas of the state. Indeed, farming is a popular activity in Uzo-Uwani, Awgu, Ugbawka, etc. Mostly, cassava, yam, and various types of vegetables are the focus of farmers in the state. However, the proliferation of livestock farming in recent times has significantly increased the number of farmers in the state.

Although the number of farmers continues to increase, there is a growing intimation suggesting a massive decline in food production and agricultural activities (Anigbogu et al., 2015; Austin et al., 2011; Eze & Chinedu-Eze, 2016; Njoku, 2000; Okongor et al., 2021; Okoro et al., 2016; Onogwu et al., 2017). The trend is observed in the ever-increasing food insecurity and dependency that have led to massive food importation. There are indications that efforts are geared toward improving food production (Sabo et al., 2017). However, security challenges remain the central problem of agricultural productivity in Nigeria (Adelaja & George, 2019; Njoku, 2018; Nwanmereni, 2022; Sadiq et al., 2018; Udemezue. & Kanu., 2019). Indeed, it negatively impacts farmers' productivity and ability to participate in farming.

Furthermore, natural environmental resources such as rainfall, temperature, and relative humidity (Idumah et al., 2016), high rate of disease and pest attacks, lack of loan and credit procurement, and lack of technical knowledge (Abu, 2016; Anosike et al., 2020) are critical to food production. More so, inconsistent government policies, environmental degradation, and agricultural non-sustainable output (Metu et al., 2016), including inconsistency in agricultural mechanization policy, lack of favorable conditions for full integration of agricultural mechanization, and lack of essential infrastructure (Olaoye & Rotimi, 2010) contribute to the low farming output. However, studies have implicated burnout as a constrain to agricultural and food productivity (Botha & White, 2013; Jones-Bitton et al., 2019; Kallioniemi et al., 2016; Reissig et al., 2019; Truchot & Andela, 2018).

During recent decades, agriculture has faced significant changes worldwide. Agriculture is gradually changing from a traditional farming system towards a more systematic production process, including more substantial investments, increased risks, a more structured workplace with employees, and the adoption of new technologies. The occupational challenges associated with farming are well recognized and can impact burnout. The trend describes a conflict in one's relationship with work and well-being. Burnout develops over a long time during stressful conditions and is a particularly understudied area of farmer mental health. Accordingly, Leiter and Maslach (2016) described burnout as a fundamental crisis in the psychological connections that individuals establish with work, reflecting exhaustion, cynicism, and low professional efficacy. Burnout is associated with negative consequences to physical and psychological health and has negative professional implications, including job dissatisfaction, absenteeism, and poor productivity (Salvagioni et al.,

2017). Hence, burnout in farmers poses personal risks to those affected and could have negative implications for farm productivity, business, and the ongoing success of the agricultural sector.

#### Economic stress and burnout

Economic stress has been recognized as a significant threat to workers' well-being and performance (Sanchez-Gomez et al., 2021). Economic stress describes the aspects of economic life that are potential stressors to human functioning and consist of objective and subjective components. Economic stress is associated with feelings of scarcity or threat due to uncertainty or inability to meet basic needs, satisfy wants and luxuries, and provide security, flexibility in choices, and a safety net. The economic crisis of recent times had a detrimental impact on the economies of several world economies, including Nigeria. Numerous literature emphasizes that periods of economic turmoil potentiate the appearance of mental health issues, such as stress, anxiety, and depression, and decrease well-being (Davis et al., 2020; Hu et al., 2021; Ranta et al., 2020). Farmers' psychological health and well-being can be affected by several emerging and re-emerging occupational risks, especially during a financially unfavorable period of economic downturn. In particular, adverse outcomes such as scarcity of capital, rising inflation rate, a sharp reduction in demands, and agricultural marketing uncertainties are most likely to increase a farmer's stress level and heighten anxiety. Indeed, research has demonstrated that high levels of stress and anxiety can lead to burnout and fatigue (Horvath & Grass, 2021). The present study assumed that economic stress triggers a negative emotional state and exacerbates the condition of physical, emotional, and mental exhaustion leading to withdrawal and decreased farmers' self-efficacy belief.

H<sup>1</sup>: Economic stress will significantly predict farmer's burnout

#### Farming insecurity and burnout

Farm insecurity refers to the growing range and severity of violent attacks against farmers and farming communities. Consistent suspected herder attacks, banditry, kidnapping, and other attacks in farmlands around the country demonstrate farming insecurity in today's farming ecology. This condition poses a severe dilemma for the farming community and has a wide-ranging impact on the country's food output. Many farmers in remote communities are unwilling to enter their farmlands for fear of being kidnapped or attacked unfairly by herders (Abdulkareem, 2021). The growing breadth of farmer-herder confrontations in various parts of Nigeria has resulted in several lives and farm items being destroyed (Somtochukwu et al., 2018). In most cases, farming communities are forced to quit their farmlands and agricultural products in response to assailants' aggressiveness (Anthony et al., 2020). Several farming communities in Enugu state, Nigeria, have witnessed varying threats of attacks and clashes between the herders and the farmers, including the 2016 invasion of the Nimbo community (Jasper & Iwuamadi, 2018), ongoing kidnappings, and other insecurities bedeviling the farming communities. Concern about insecurity affects the psychological state of the farmers, reflecting a probable increase in farming stress and burnout.

H<sup>2</sup>: Farming insecurity will significantly predict farmer's burnout

#### Method

The present study was conducted in the five farming communities in Enugu state, Nigeria. The specific areas included Uzo-uwani, Awgu, Ugbawka, Aninri, and Nsukka. The selected communities are widely considered farming communities in terms of the intensity of agricultural activities. Male and female farmers were recruited as the study participants using a simple random sampling method. Three hundred and twenty-three farmers were approached between April and July 2021 and were asked to participate in the study. All participants were active farmers within the farming communities. They were briefed on the study's objectives and were informed that participation in the survey was voluntary and that they could withdraw any time they wanted. In particular, only those who consented to participate in the survey completed the consent form. Hence, the study questionnaire was given to them to fill on the spot. Two hundred and twenty-eight questionnaires were distributed. However, only the adequately filled ones (214) were used for the study. The remaining 14 questionnaires were discarded due to wrong filling or unreturned.

#### Instrument

Burnout was measured with the Maslach Burnout Inventory (MBI–GS) developed by Maslach et al. (2018). The scale is a 16-item self-report scale used to measure the three components of burnout separately: exhaustion (5 items), cynicism (5 items), and professional efficacy (6 items). Items are measured using a 7-point Likert scale (0–6). The exhaustion scale assesses general feelings of exhaustion (e.g., "Working all day is a strain for me"), while the cynicism scale "assesses feeling of indifference or a distant attitude towards work; it represents dysfunctional coping with job strains" (e.g., "I have become less enthusiastic about my work"). The professional efficacy subscale assesses an individual's "feelings of effectiveness at work" and "encompasses both social and non-social aspects of occupational accomplishments" (e.g., "At my work, I feel confident that I am effective in getting things done"). The reliabilities of the scales were obtained following a pilot study (Cronbach alpha values of 0.83).

The Economic Stress Scale (ESS), adapted from the Family Economic Strain Scale developed by (Hilton & Devall, 1997), measures the perceived economic stress. The measure is a 15-item Linkert-type scale scored on a 5-point scale. A reliability coefficient of 0.87 was recorded for the instrument following a pilot study. A higher score indicates higher economic stress.

Farming insecurity was measured with a scale designed to assess respondents' knowledge of security situations and perception of farming at a time of security uncertainties. The instrument consists of 17 items rated on a 5-point Likert-type scale (1 = Never, 5 = Always). A higher score on this scale indicates high insecurity. The instrument was validated following a pilot study, and 0.77 Cronbach's alpha was obtained.

#### Result

A cross-sectional research design was employed for the study. The statistics software IBM SPSS® (v. 25, package for Windows, SPSS Inc., Chicago, IL, USA) was used to analyze the data. The table below shows the result of a multiple regression analysis conducted to test the effect of economic stress and farming insecurity on farmers' burnout.

Table 1: shows the regression for the analysis.

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		В	SEB	β	t	$R^2$	Sig
	Economic stress	1.81	.043		31.71	188	.000
Farming insecurity 67  .066 67  26.18  .000	Farming insecurity	67	.066	67	26.18		.000

Note: B = Unstandardized regression coefficient; SEB = Standardized error of the coefficient;  $\beta$  = Standardized coefficient;  $R^2$  = Coefficient of determination. \*P<.000.

The study was conducted to understand the effect of economic stress and farming insecurity on farmers' burnout. Based on this objective, two hypotheses were proposed for the study. Multiple regression was performed on the data, and the result demonstrated a statistically significant effect of economic stress and farming insecurity on farmers' burnout F (1,212), 24.34 P<.05. An observation of the  $R^2$  indicated that the independent variable explained about 18.8% of the variation in farmer's burnout.

# Discussion

The present study examined farmers' burnout based on economic stress and farming insecurities in a sample of farmers recruited from different farming communities in Enugu state, Nigeria. Two hundred and fourteen respondents completed a self-report measure of economic stress and farming insecurity. Two hypotheses were tested using data from the respondents. The multiple regression analysis indicated that economic stress and farming insecurity statistically predicted farmers' motivation. In particular, the result revealed that the independent variables jointly contributed about 18.8% of the variation in farmers' burnout. Thus, the first hypothesis was confirmed, stating that economic stress significantly predicts farmers' burnout. This means that the stress accompanying the present-day economic realities is likely to exacerbate burnout in farmers. The result is aligned with a previous finding that established a correlation between financial stress and burnout (Reissig et al., 2019). The recent economic downturn in rising inflation and lowering demands impact farmers and might contribute to decreased food production. The trend significantly affects farmers' motivation and interest in engaging in agricultural activities.

Furthermore, the result of the study demonstrated that farming insecurity significantly predicts farmers' burnout. Thus, the second hypothesis was also affirmed. Due to the recent rise in insecurities, many farmers are compelled to exit their farmlands and suspend farming activities. The immense burden of farmers' inactivity in the long or short-term is typically confronted with a psychological state of reduced motivation. Thus, the absence of agricultural activities and lack of inspiration seems to emerge as common characteristic in today's heightened farming insecurities. This work presents evidence that the trend of farming insecurity triggers a certain level of nervousness that interferes with the motivation of the farmers. Accordingly, in recent research, Greig et al. (2020) reported that stress and anxiety are significant variables that influence farmers. Thus, this finding presupposes that many farmers within the volatile farming areas in Enugu state might attempt to avoid the uncertainties associated with farming activities. They might experience a series of psychological challenges and stressors, predominately involving increased anxiety relative to economic conditions and insecurity. Burnout farmers will have difficulty coping with changes and innovation, reducing their prospects for dealing with the current realities and demanding situations of agricultural practice. This could have a significant effect on food production.

# Limitations of the study

The present study has some limitations, which could serve as starting points for future research. First of all, despite solid theoretical premises based on previous scientific findings, the cross-sectional study design does not allow for causal inferences about the relationships between the variables. Future longitudinal studies are needed to replicate these results and provide further insights into how economic stress and farming insecurity influence farmers' burnout. Secondly, a possible limitation is that the samples consisted only of farmers in Enugu state, Nigeria, limiting the generalizability to other populations. However, this way of obtaining data is usually used in research and has shown good levels of validity and reliability (Wheeler et al., 2014). Moreover, it should be noted that the samples encompass individuals who adopt crop farming as their stable jobs. The study findings could therefore be different if replicated, considering other types of farmers (e.g., livestock farmers) who are equally affected by the current economic downturn.

#### **Practical Implications**

Despite the limitations, the present study offers essential insights for agricultural research and food production, broadening the knowledge of the consequences of economic stress and farming insecurity on farming-related burnout. A regular assessment of farming-related burnout should be conducted to avoid adverse outcomes such as decreased food production, food insecurity, and hunger. Based on this outcome, implementing farmer's health promotion programs is advisable. This program could help to enhance farmers' emotional resilience, reducing the influence that negative economic and security consequences have on agricultural productivity. Furthermore, providing farmers with financial incentives and ensuring their safety could be helpful to increase farming motivation and thus enhance food production

# Conclusions

In conclusion, this work investigates the effect of economic stress and farming insecurity on farmers' burnout. The results of the study conducted on a sample of farmers in Enugu state, Nigeria, show that economic stress and farming insecurity seem to be positive predictors of farmers' burnout. Furthermore, economically stressed farmers tend to be de-motivated and negatively related to farming behaviors. Also, the security concern exacerbates distress which is implicated in reduced productivity. This result demonstrates the importance of burnout in understanding farmers' work outcomes and underlines the need to support farmers affected by this type of stress. In this perspective, intervention programs should be implemented to reduce the impact of burnout. This will help maintain and promote the health of farmers, preventing food crises and helping them achieve the best possible performance.

# REFERENCES

- [1] ABDULKAREEM, M. (2021). ABUJA FARMERS LAMENT THE IMPACT OF INSECURITY AND HERDERS' ATTACKS. HTTPS://WWW.PREMIUMTIMESNG.COM/NEWS/MORE-NEWS/475895-ABUJA-FARMERS-LAMENT-IMPACT-OF-INSECURITY-HERDERS-ATTACKS.HTML
- [2] ABU, G. A. (2016). ANALYSIS OF FACTORS AFFECTING FOOD SECURITY IN RURAL AND URBAN FARMING HOUSEHOLDS OF BENUE STATE, NIGERIA. INTERNATIONAL JOURNAL OF FOOD AND AGRICULTURAL ECONOMICS, 4(1).
- [3] ADELAJA, A., & GEORGE, J. (2019). TERRORISM AND LAND USE IN AGRICULTURE: THE CASE OF BOKO HARAM IN NIGERIA. LAND USE POLICY, 88. HTTPS://DOI.ORG/10.1016/J.LANDUSEPOL.2019.104116
- [4] ANIGBOGU, T. U., AGBASI, O. E., & OKOLI, I. M. (2015). SOCIOECONOMIC FACTORS INFLUENCING AGRICULTURAL PRODUCTION AMONG COOPERATIVE FARMERS IN ANAMBRA STATE, NIGERIA. INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN ECONOMICS AND MANAGEMENT SCIENCES,

4(3). HTTPS://DOI.ORG/10.6007/IJAREMS/V4-I3/1876

- [5] ANOSIKE, F. U., REKWOT, G. Z., OWOSHAGBA, O. B., AHMED, S., & ATIKU, J. A. (2020). CHALLENGES OF POULTRY PRODUCTION IN NIGERIA: A REVIEW. NIGERIAN JOURNAL OF ANIMAL PRODUCTION, 45(1). HTTPS://DOI.ORG/10.51791/NJAP.V45I1.335
- [6] ANTHONY, E., DANIEL, A., & PROMISE, O. E. (2020). FARMERS/HERDSMEN CRISIS AND SUSTAINABLE FOOD PRODUCTION IN NIGERIA. THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES, 8(4). HTTPS://DOI.ORG/10.24940/THEIJHSS/2020/V8/I4/HS2004-045
- [7] AUSTIN, O. C., NWOSU, A. C., & BAHARUDDIN, A. H. (2011). RISING FOOD INSECURITY: DIMENSIONS IN FARM HOUSEHOLDS. AMERICAN JOURNAL OF AGRICULTURAL AND BIOLOGICAL SCIENCE, 6(3). HTTPS://DOI.ORG/10.3844/AJABSSP.2011.403.409
- [8] BALA, S. A., & ALHASSAN, A. (2017). STRUCTURAL EFFECT OF OIL PRICE SHOCKS AND FOOD IMPORTATION ON ECONOMIC GROWTH IN NIGERIA USING THE SVAR MODEL. INTERNATIONAL BUSINESS AND ACCOUNTING RESEARCH JOURNAL, 2(1). HTTPS://DOI.ORG/10.15294/IBARJ.V2I1.30
- [9] BOTHA, N., & WHITE, T. (2013). DISTRESS AND BURNOUT AMONG NZ DAIRY FARMERS DISTRESS AND BURNOUT AMONG NZ DAIRY FARMERS: RESEARCH FINDINGS AND POLICY RECOMMENDATIONS. EXTENSION FARMING SYSTEMS JOURNAL, 9(1).
- [10] DAVIS, A. N., CARLO, G., & CROCKETT, L. J. (2020). THE ROLE OF ECONOMIC STRESS IN PARENTS' DEPRESSION AND WARMTH AND ADOLESCENTS' PROSOCIAL BEHAVIORS AMONG U.S. LATINO. PEACE AND CONFLICT, 26(2). HTTPS://DOI.ORG/10.1037/PAC0000406
- [11] EZE, S. C., & CHINEDU-EZE, V. (2016). AGRIPRENEURSHIP CURRICULUM DEVELOPMENT IN NIGERIAN HIGHER INSTITUTIONS. INTERNATIONAL JOURNAL OF SMALL BUSINESS AND ENTREPRENEURSHIP RESEARCH, 4(6). HTTPS://DOI.ORG/10.37745/EJSBER.VOL4.NO6.P53-66.2016
- [12] GIROH, D. Y., TAFIDA, A. A., MORRIS, L., & MARCUS, G. K. (2021). OVERCOMING SMALL HOLDER FARMERS' FINANCIAL EXCLUSION USING ANCHOR BORROWERS' PROGRAM IN YOLA NORTH AND YOLA SOUTH LOCAL GOVERNMENT AREAS, ADAMAWA STATE, NIGERIA. SCIENTIFIC PAPERS SERIES MANAGEMENT, ECONOMIC ENGINEERING IN AGRICULTURE AND RURAL DEVELOPMENT, 21(1).
- [13] GREIG, B., NUTHALL, P., & OLD, K. (2020). AN ANALYSIS OF FARMERS' HUMAN CHARACTERISTICS AS DRIVERS OF THEIR ANXIETY. IN JOURNAL OF AGROMEDICINE (VOL. 25, ISSUE 1). HTTPS://DOI.ORG/10.1080/1059924X.2019.1656692
- [14] HILTON, J. M., & DEVALL, E. L. (1997). THE FAMILY ECONOMIC STRAIN SCALE: DEVELOPMENT AND EVALUATION OF THE INSTRUMENT WITH SINGLE-AND TWO-PARENT FAMILIES. JOURNAL OF FAMILY AND ECONOMIC ISSUES (VOL. 18, ISSUE 3). HTTPS://DOI.ORG/10.1023/A:1024974829218
- [15] HORVATH, C., & GRASS, N. (2021). PANDEMIC, ECONOMIC UNCERTAINTY, AND PROTESTS: WHAT WILL HAPPEN TO STUDENT REGISTERED NURSE ANESTHETISTS-RESILIENCY OR BURNOUT? AANA JOURNAL, 89(5).
- [16] HU, Y., YE, B., & TAN, J. (2021). THE STRESS OF COVID-19, ANXIETY, ECONOMIC INSECURITY, AND MENTAL HEALTH LITERACY: A STRUCTURAL EQUATION MODELING APPROACH. FRONTIERS IN PSYCHOLOGY, 12. HTTPS://DOI.ORG/10.3389/FPSYG.2021.707079
- [17] IKENWA, K. O., SULAIMON, A.-H. A., & KUYE, O. L. (2017). TRANSFORMING THE NIGERIAN AGRICULTURAL SECTOR INTO AN AGRIBUSINESS MODEL – THE ROLE OF GOVERNMENT, BUSINESS, AND SOCIETY. ACTA UNIVERSITATIS SAPIENTIAE, ECONOMICS AND BUSINESS, 5(1). HTTPS://DOI.ORG/10.1515/AUSEB-2017-0005
- [18] JONES-BITTON, A., HAGEN, B., FLEMING, S. J., & HOY, S. (2019). FARMER BURNOUT IN CANADA. INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH, 16(24). HTTPS://DOI.ORG/10.3390/IJERPH16245074
- [19] KALLIONIEMI, M. K., SIMOLA, A., KASEVA, J., & KYMÄLÄINEN, H. R. (2016). STRESS AND BURNOUT AMONG FINNISH DAIRY FARMERS. JOURNAL OF AGROMEDICINE, 21(3). HTTPS://DOI.ORG/10.1080/1059924X.2016.1178611
- [20] LEITER, M. P., & MASLACH, C. (2016). LATENT BURNOUT PROFILES: A NEW APPROACH TO UNDERSTANDING THE BURNOUT EXPERIENCE. BURNOUT RESEARCH, 3(4). HTTPS://DOI.ORG/10.1016/J.BURN.2016.09.001
- [21] MASLACH, C., JACKSON, S. E., & LEITER, M. P. (2018). MASLACH BURNOUT INVENTORY MANUAL. IN MIND GARDEN, INC.
- [22] METU, A. G., OKEYIKA, K. O., & MADUKA, O. D. (2016). ACHIEVING SUSTAINABLE FOOD SECURITY IN NIGERIA: CHALLENGES AND WAY FORWARD. 3RD INTERNATIONAL CONFERENCE ON AFRICAN DEVELOPMENT ISSUES.
- [23] NJOKU, A. (2018). HERDSMEN-FARMERS CLASHES IN NIGERIA: IMPLICATIONS FOR ECONOMIC GROWTH AND NATIONAL SECURITY. ASIAN JOURNAL OF SOCIAL SCIENCES, ARTS AND HUMANITIES, 6(1).
- [24] NJOKU, P. C. (2000). NIGERIAN AGRICULTURE AND THE CHALLENGES OF THE 21ST CENTURY. AGRO-SCIENCE, 1(1). HTTPS://DOI.ORG/10.4314/AS.V1I1.1459
- [25] NKIRU, M. (2006). PROMOTING HUMAN WASTE TECHNOLOGY TRANSFER IS A REQUIREMENT FOR NIGERIA'S SUSTAINABILITY OF CROP PRODUCTION. 3RD INTERNATIONAL ECOLOGICAL SANITATION CONFERENCE.

- [26] NWANMERENI, D. (2022). STAKEHOLDER RELATIONS PERSPECTIVES IN MANAGING NIGERIA'S RISING CRIMES. RANDWICK INTERNATIONAL OF SOCIAL SCIENCE JOURNAL, 3(1). HTTPS://DOI.ORG/10.47175/RISSJ.V3I1.366
- [27] NWAOGWUGWU, I., & EVANS, O. (2016). A SECTORAL ANALYSIS OF FISCAL AND MONETARY ACTIONS IN NIGERIA. THE JOURNAL OF DEVELOPING AREAS, 50(4). HTTPS://DOI.ORG/10.1353/JDA.2016.0162
- [28] OGBANGA, A. (2018). AGRICULTURAL DEVELOPMENT AND EMPLOYMENT GENERATION IN NIGERIA. ALLWELL INTERNATIONAL JOURNAL OF ADVANCED STUDIES IN ECOLOGY, 5(1).
- [29] OGBONNAYA, O. (2003). DEFORESTATION IN NIGERIA. CONSEQUENCES AND SOLUTION'NATURE WATCH, DECEMBER.
- [30] OGWUMIKE, F. O., & AKINNIBOSUN, M. K. (2013). DETERMINANTS OF POVERTY AMONG FARMING HOUSEHOLDS IN NIGERIA. MEDITERRANEAN JOURNAL OF SOCIAL SCIENCES, 4(2). HTTPS://DOI.ORG/10.5901/MJSS.2013.V4N2P365
- [31] OKONGOR, G., NJOKU, C., ESSOKA, P., & EFIONG, J. (2021). CLIMATE VARIABILITY AND YAM PRODUCTION: NEXUS AND PROJECTIONS. SARHAD JOURNAL OF AGRICULTURE, 37(2). HTTPS://DOI.ORG/10.17582/JOURNAL.SJA/2021/37.2.406.418
- [32] OKORO, U. S., OMONONA, B. T., & IBOK, O. W. (2016). DETERMINANTS OF TECHNICAL EFFICIENCY IN IRRIGATED ORNAMENTAL PLANTS PRODUCTION SYSTEM OF AKWA IBOM STATE, NIGERIA. ISSN, 7(15).
- [33] OLAJIDE, O. T., AKINLABI, B. H., & TIJANI, A. A. (2010). AGRICULTURE RESOURCE AND ECONOMIC GROWTH IN NIGERIA. EUROPEAN SCIENTIFIC JOURNAL, 8(22).
- [34] OLAOYE, J. O., & ROTIMI, A. O. (2010). MEASUREMENT OF AGRICULTURAL MECHANIZATION INDEX AND ANALYSIS OF AGRICULTURAL PRODUCTIVITY OF FARM SETTLEMENTS IN SOUTHWEST NIGERIA. AGRIC ENG INT: CIGR JOURNAL, 12(1).
- [35] ONOGWU, G. O., AUDU, I. A., & IGBODOR, F. O. (2017). FACTORS INFLUENCING AGRICULTURAL PRODUCTIVITY OF SMALLHOLDER FARMERS IN TARABA STATE, NIGERIA. INTERNATIONAL JOURNAL OF AGRICULTURE INNOVATIONS AND RESEARCH (VOL. 6, ISSUE 1).
- [36] RANTA, M., PUNAMÄKI, R. L., CHOW, A., & SALMELA-ARO, K. (2020). THE ECONOMIC STRESS MODEL IN EMERGING ADULTHOOD: THE ROLE OF SOCIAL RELATIONSHIPS AND FINANCIAL CAPABILITY. EMERGING ADULTHOOD, 8(6). HTTPS://DOI.ORG/10.1177/2167696819893574
- [37] REISSIG, L., CRAMERI, A., & VON WYL, A. (2019). PREVALENCE AND PREDICTORS OF BURNOUT IN SWISS FARMERS – BURNOUT IN THE CONTEXT OF THE INTERRELATION OF WORK AND HOUSEHOLD. MENTAL HEALTH AND PREVENTION, 14. HTTPS://DOI.ORG/10.1016/J.MPH.2019.200157
- [38] SA'AD, S., & YAU, M. H. (2016). OIL RESOURCE CURSE SYNDROME: EMPIRICAL EVIDENCE FROM NIGERIA. NILE JOURNAL OF BUSINESS AND ECONOMICS, 2(2). HTTPS://DOI.ORG/10.20321/NILEJBE.V2I2.50
- [39] SADIQ, M. S., SINGH, I. P., SINGH, N. K., & YAKUBU, G. M. (2018). IMPROVING EFFICIENCY AND TFP OF LOWLAND PADDY RICE FARMERS IN THE KWARA STATE OF NIGERIA. JOURNAL OF AGRICULTURAL SCIENCES - SRI LANKA, 13(2). HTTPS://DOI.ORG/10.4038/JAS.V13I2.8336
- [40] SALVAGIONI, D. A. J., MELANDA, F. N., MESAS, A. E., GONZÁLEZ, A. D., GABANI, F. L., & DE ANDRADE, S. M. (2017). PHYSICAL, PSYCHOLOGICAL AND OCCUPATIONAL CONSEQUENCES OF JOB BURNOUT: A SYSTEMATIC REVIEW OF PROSPECTIVE STUDIES. IN PLOS ONE (VOL. 12, ISSUE 10). HTTPS://DOI.ORG/10.1371/JOURNAL.PONE.0185781
- [41] SANCHEZ-GOMEZ, M., GIORGI, G., FINSTAD, G. L., ALESSIO, F., ARIZA-MONTES, A., ARCANGELI, G., & MUCCI, N. (2021). ECONOMIC STRESS AT WORK: ITS IMPACT ON ABSENTEEISM AND INNOVATION. INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH, 18(10). HTTPS://DOI.ORG/10.3390/IJERPH18105265
- [42] SIMONA, V. (2021). AGRICULTURE IN NIGERIA STATISTICS AND FACTS | STATISTA. FARMING.
- [43] SOKOYA, A. A., ALABI, A. O., & FAGBOLA, B. O. (2014). FARMERS INFORMATION LITERACY AND AWARENESS TOWARDS AGRICULTURAL PRODUCE AND FOOD SECURITY: FADAMA III PROGRAMS IN OSUN STATE NIGERIA. IFLA WORLD LIBRARY AND INFORMATION CONGRESS 2014.
- [44] SOMTOCHUKWU, V. O., OREKYEH, E. S. AND, & EZE, U. O. (2018). MEDIA FRAMING OF HERDSMEN-FARMERS CONFLICT IN NIGERIA. INTERNATIONAL JOURNAL OF COMMUNICATION: AN INTERDISCIPLINARY JOURNAL OF COMMUNICATION STUDIES, DECEMBER.
- [45] TRUCHOT, D., & ANDELA, M. (2018). BURNOUT AND HOPELESSNESS AMONG FARMERS: THE FARMERS STRESSORS INVENTORY. SOCIAL PSYCHIATRY AND PSYCHIATRIC EPIDEMIOLOGY, 53(8). HTTPS://DOI.ORG/10.1007/S00127-018-1528-8
- [46] UDEMEZUE., J. C., & KANU., N. A. (2019). CHALLENGES OF NIGERIAN AGRICULTURAL SECTOR IN THE TWENTY-FIRST CENTURY: THE CASE OF NOMADIC INSURGENCE AND TERRORIST SECTS. UNIVERSAL JOURNAL OF AGRICULTURAL RESEARCH, 7(2). HTTPS://DOI.ORG/10.13189/UJAR.2019.070204
- [47] WHEELER, A. R., SHANINE, K. K., LEON, M. R., & WHITMAN, M. V. (2014). STUDENT-RECRUITED SAMPLES IN ORGANIZATIONAL RESEARCH: A REVIEW, ANALYSIS, AND GUIDELINES FOR FUTURE RESEARCH. JOURNAL OF OCCUPATIONAL AND ORGANIZATIONAL PSYCHOLOGY, 87(1). HTTPS://DOI.ORG/10.1111/JOOP.12042