



Research Article

Evaluation of Socio-Economic Status of the Indigenous  
Population on the Permanent Site of Usmanu Danfodiyo  
University, Sokoto, Nigeria

Michael Orkuma Ahundu, and Alhaji Mukhtar

Department of Geography, Kaduna State University, Kaduna State

Department of Geography, Faculty of Social Sciences, University of Maiduguri

\*Corresponding author: [orkuma.ahundu@gmail.com](mailto:orkuma.ahundu@gmail.com), [doi.org/10.55639/607.717069](https://doi.org/10.55639/607.717069)

ARTICLE INFO:

Keywords:

Socio-economic,  
Households,  
Indigenous population,  
Poverty

ABSTRACT

The study sought to describe the relationship between socio-economic and demographic characteristics of the indigenous population living on the permanent site of Usmanu Danfodiyo University, Sokoto (UDUS), after they were displaced from their lands. The study adopted the sustainable rural livelihoods model as a tool for studying livelihoods in the study area. Data for this study was obtained through the administration of 349 copies of questionnaire using a multi-stage sampling technique. Socio-Economic Scale (SES) for Northern Nigeria was used to classify the respondents into three SES classes. The SES classes of the respondents were examined using descriptive statistics (frequency and percentage). The Spearman rank correlation statistic was used in testing the hypothesis for the study. The majority (65.6%) of the respondents fall into the lowest SES class using a 28-point indicator. With a  $p=.020$ , findings revealed that there was no significant correlation between income and socio-economic status of the indigenous population. The study recommends prompt payment of compensations, provision of permanent and pensionable jobs as well as access to funds for business and other entrepreneur skills as ways of supporting and boosting their livelihoods. The indigenous population can also be encouraged to form cooperatives and savings schemes to enable them to raise capital to pursue alternative livelihoods..

Corresponding author: Michael Orkuma Ahundu, Email: [orkuma.ahundu@gmail.com](mailto:orkuma.ahundu@gmail.com)  
Department of Geography, Kaduna State University, Kaduna State, Nigeria

## INTRODUCTION

Over the years, social classes have been established within human society. In most cultures, the strata are official and social interactions are limited to members of the same strata with minimal influence from external contacts, as in the Indian caste system. Majority of these divisions are official, rigid and often based on wealth, royalty, family status as well as other factors and membership is often hereditary. Others however are just unofficial distinctions based on wealth and influence without any forms of official restrictions. As a result, memberships in this latter group are therefore flexible and available to anyone. In recent times, researchers such as Vyas and Kumaranayake (2006); Malleson *et al.* (2005); Malleson *et al.*, (2008) and Akingbile (2007) to mention but just a few have gone a step further to develop holistic assessment scales to quantify people's social position in society based on social, economic and demographic data.

Understanding the economic, social and demographic characteristics of communities under study provides a comprehensive insight into the residents' way of life that would not have been available otherwise. Generally, most studies used primary data normally by collecting data about respondents' social, economic and demographic profiles, which provides insight into why and how individuals live and do the things they do. On the other hand, and in tandem with the context of this study, land acquisition and the economic and structural changes that occur in places where land is acquired also positively or negatively affect the livelihoods of people around them and hence their social economic status. That is, land acquisition either enriches or impoverishes a people.

In describing socio-economic characteristics, many researchers consider age, marital status, gender, household size, educational attainment, occupation, religious affiliation, ethnicity, membership of social organizations, and so on as socio-economic characteristics as

seen in the works of Yunusa (1999), Ogunjimi *et al.* (2012), Nkedianye *et al.* (2002) and Mukhtar *et al.* (2019). Most of these studies try to establish a link between these socio-economic characteristics and participation in certain economic activities, educational achievement of children, lifestyles, and health status of respondents.

This paper, however, does not seek to explore the socio-economic characteristics of the indigenous people living on the Permanent Site of UDUS to establish relationships between variables and their health status, educational achievement of their children, or their participation in social activities alone but hopes to ascertain their Socio-Economic Status (SES) to determine how far living within the University after displacement has impacted them since displaced persons have no legal rights over their lands and cannot sell or use them as collateral for loans. The objective of this paper, therefore, is to classify the indigenous population on the Permanent Site of UDUS into Socio Economic Status classes and account for the classes. This is relevant because it will help in determining their needs and the types of interventions that will assist people in better reconstructing their livelihoods, living meaningful and purposeful lives.

## Literature Review

Socio-economic characteristics are attributes that are permanent and homogenous divisions into which individuals or families with similar beliefs, lifestyles, interests, and behavioral patterns can be categorized (Ekhaese and Adeboye, 2014). In describing socio-economic characteristics, many researchers (Ango *et al.*, 2011; Ogunjimi *et al.*, 2012) consider age, marital status, gender, household size, educational attainment, occupation, religious affiliation, ethnicity, membership of social organizations, and so on. Most of these studies try to establish a link between these socio-economic characteristics and participation in certain economic activities. Gaur (2013) defined socio-economic status (SES) as a

measure of the economic and social position of an individual or person relative to others and determined by income, level of education, nature of the occupation, the status of the family in the society, social classification or caste, tangible assets, participation in social activities, political clout and so on. Whereas there are many ways of measuring socio-economic and demographic characteristics of households such as Forster Greer and Thorbecke (FGT), Per Capita Income, International Poverty Line, and other Indexes of wealth and wellbeing as well as socio-economic status (SES) developed and used all over the world for classifying people into social-economic status classes.

In a study of household poverty and child begging in Dundaye District of Wammako Local Government Area, Mogbolu (2011) used the International Poverty Line of \$1 and \$1.25 and found that 83% of heads of households were poor. First, the sample size of 60 households in a district with more than 10000 households makes it impossible to generalise the results back to the population. Second, the study does not factor in domestic assets and livestock wealth, both of which are important indications of acquiring wealth in the northern Nigeria. Similarly, Akighir and Nomor (2013) employed the International Poverty Line in a study on determinants of wood fuel consumption in Makurdi and found an equally high poverty rate.

However, it is worth noting that any measure of socio-economic status of households that rely solely on income and expenditure is bound to be unrealistic, at least when assessing livelihoods. Similarly, a Social Economic Scale (SES) developed and used in one region, country or continent may not be applicable in assessing socio-economic status in another region, country, or continent. For instance, Ovwigho, (2011) constructed a socio-economic status for heads of farming households in Delta State using 68 items and a uniform scoring system to categorise households into SES classes. The problem

with the adopted scale is, first and foremost, the uniform numbering, which means no item weighs more than the others. This means a man with 20 children gets the same score as someone with only one or two children. Secondly, the list of items is rather too large and the scale is place-specific, as many of the items are only found in Delta state. Gaur (2013) developed a seven-item SES scale for India based on education, occupation, income per capita, expenditure, housing condition, living status, and debt to assets ratio. This scale is based on income and excludes agricultural variables. This approach will therefore not be useful to this study since the indigenous population is predominantly farmers. Vyas and Kumaranayake (2006) also constructed an SES scale in the United Kingdom. While this scale is realistic enough, it does not adequately represent the characteristics of the rural poor and their livelihoods.

Malleson (2008) critiqued the methodologies used in assessing livelihood strategies in the humid forest zones of Cameroun, Nigeria, and Ghana and concluded that the use of measures of wealth such as the one developed by Malleson *et al.* (2005) are inadequate and so a combination of one or two methods will provide more detailed data. Again, this SES scale too dwelt primarily on forestry resources and the economies of tropical rain forest region, leaving the savanna zones and their resources and livelihoods activities out. Akinbile (2007) conducted a study in Oyo and Osun states to develop a Social Economic Scale for South West. 650 respondents were sampled from the rainforest and derived savannah ecological zones of South West Nigeria using multistage sampling. Heads of farm families were sampled from villages in Oyo and Osun States to represent the two ecological zones. Correlation analysis was used to determine items that are valid for inclusion in the scale through item analysis. Weights were assigned to valid items using the sigma scoring method. Of the 265 items

collated for measuring SES, only 33 were valid for determining the socio-economic status of farm families in the study area. These scales are however not relevant to the context of this study area and therefore cannot be used for this research.

The Socio-Economic Status (SES) Index by Adegboye *et al.* (2015) was developed specifically for accessing the socioeconomic status of rural dwellers in Northern Nigeria is more embracive and will thus be adopted for this study. It has 28 indicators, with an assigned score per item for determining household SES and 3 categories based on the score of each household. This is consistent with England (2017), who maintained that SES is normally grouped into 3 categories of high, middle, and low SES. The scale developed by Adegboye *et al.* (2015) is better than other indexes such as Malleson *et al.* (2005) which, apart from not capturing livestock wealth which is an important status symbol in Northern Nigeria, did not also have a true zero. Ownership of one-room accommodation on the Malleson Index, for instance, attracts a score of 0 instead of 1 as it is in the Adegboye *et al.* (2015) scale. Although the scale by Adegboye *et al.* (2015) has only 28 items, it provides a comprehension classification of households into SES classes. Adegboye (2016) determined SES classes in Northern Nigeria using the SES index. Using a sample of 300 respondents from 30 villages in 3 states Northern Nigerian states, the findings indicated that 50% of respondents were low SES class, 42.3% were middle SES class while 7.7% of respondents were in the high SES class. The study also found a significant relationship between the level of education, occupation, and the socio-economic status of respondents using  $X^2$  statistics in the states that were included in the study. The methods and results were valid and can be generalized to the population from where the samples were taken. This suggests that the majority of people in Northern Nigeria, including Sokoto State, are of low SES class.

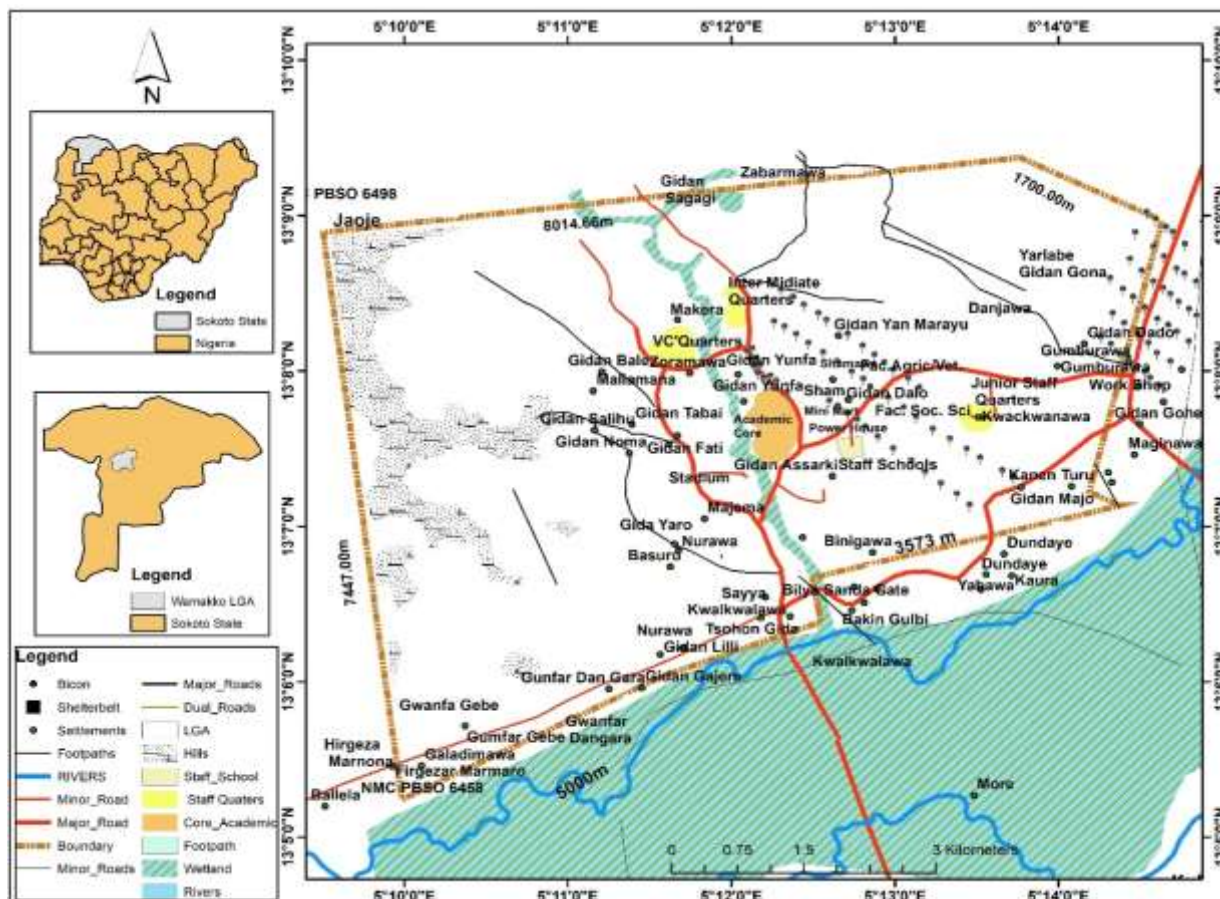
Projects have also been found to affect the SES of people around them especially large-scale development projects in Nigeria requiring land parcels of land. In a study of the socio-economic impact of Kainji Hydroelectricity Dam project in Yauri Emirate, Saidu (2008) sampled 135 respondents from fifteen resettled communities using random sampling. Data was collected using a questionnaire and analyzed using descriptive statistics and chi-square. Findings revealed that the socio-economic characteristics of households were affected leading to the low level of formal education of the household, low income earning of less than \$1 per day, and poverty conditions of varying degrees. Land tenure systems were affected leading to small cultivable lands, non-involvement in the decision-making process as well as reduced. In a theoretical study of development-induced displacement and its socio-economic impacts on displaced people in Tekeze Dam, Ethiopia, Gizachew (2017) applied the Impoverishment Risk and Reconstruction model. Findings indicate that the inability to adopt palliative measures and coping strategies has impoverished the communities. The dam has reduced their farmland as observed by Saidu (2008) in the case of Kainji dam. The study, therefore, recommended cost-benefit analysis of projects in other not to impoverish a small section of the population for the good of the larger part of the country. Although this is not an empirical study, the findings are consistent with previously reviewed studies as well as several other studies in Nigeria and elsewhere. Most land acquisition for development purposes is made in rural areas where there is adequate land for large-scale development. Rural areas are also mostly less populated which makes the problem of compensation and resettlement and purchase less expensive for government and private sector developers (Hao and Lebailly, 2011). Similarly, people living in rural areas have typical social and demographic characteristics. They are mostly

primary producers with diversified economies between agricultural production and who depend on their land for livelihoods (Hao and Lebailly, 2011). Low levels of education and skills characterize their existence which makes them more vulnerable to land dispossession especially when adequate compensation is not paid to enable them to start a life elsewhere (Tuyen, 2013). Although all countries have laws requiring compensation of varying types, many countries do not follow these laws thereby endangering the lives of the rural dwellers who are dispossessed.

Another social dimension of rural areas, as reported by Nguyen, Westen and Zoomers (2017) is the gender disparity in roles. Women are mostly kept indoors while men engage in outdoor jobs such as agriculture and other forms of manual labour. Liyama (2006) studying livelihood diversification strategies in Kerio River Basin in Kenya noted that landholding is an exclusive reserve of men to the disadvantage of women. Similarly, Tagliarino (2016) noted that most rural people whose lands are dispossessed are poor and vulnerable to homelessness, poor health, and social disorientation.

### **The Study Area**

The study area is the Permanent Site of UDUS located in Wammako Local Government Area of Sokoto State. The study area lies between Latitudes 13° 1' N to 13° 09' N and Longitude 5° 13' E to 5° 18' E (Momoh *et.al.*, 2017). It covers a landmass of 5,630 hectares with numerous indigenous settlements dotting the area. UDUS borders the Rima River and its extensive flood plain to the south, Illela road to the East, a sequence of flat topped hills made up of laterite, gently sloping on either side with sparse vegetation to the North. To the West, the University shares borders with a network of hills known as Dangoroji Hills (Alhussein, 2004). UDUS is separated from the Sokoto city by an expansive flood plain of the Rima River which is intensively cultivated for its rich fadama soil. There is a three kilometer road linking the town to the University across the flood plain (Gwandu and Mamman, 2000). The study area is made up of markets, mosques, schools and health centres established by both the University and Wammako Local Government Area.



**Figure 1:** UDUS Showing the Study Area  
**Source:** Adopted from Ahundu et al. (2022)

**Material and Methods**

Data was obtained using a questionnaire survey. A total of ten (10) teams, each with one male and a female were used for the data collection exercise, supervised by the lead author. This number was supplemented with youths from the community who had functional literacy skills due to challenges associated with language and cultural barriers

encountered. The UDUS Permanent Site falls within three districts of the Wammako Local Government Area namely Dundaye, Gumburawa and Gidan Hamidu with 61 settlements and 6,155 households (NPHCDA, 2017). There are 6155 households spread across three administrative wards and one hundred and one settlements within the

**Table 1:** Settlements and Households within the Permanent Site of UDUS

Districts sampled	Number of Settlements	Number of Households	% households
Dundaye	33	1922	117
Gumburawa	32	2426	149
GidanHamidu	36	1807	110
<b>Total</b>	<b>101</b>	<b>6155</b>	<b>376</b>

Source: NPHCDA, (2017)

The multistage sampling technique was adopted, which included stratification and

simple random sampling. Before administering the research instruments, research teams first

identified all of the households in each settlement, then wrote numbers on a piece of paper corresponding to the number of households, placed them in a polythene bag, shake it and then randomly select those to be identified and interviewed. The Statistical Package for the Social Sciences (SPSS) software was used for data analysis and test hypothesis. Similarly, the Socio-Economic

Status Index (SES) developed by Adegboye *et al.* (2015) was used to categorize the indigenous population into distinct SES classes. The SES index had 28 items as shown in Table 2, 2B and 2C. Each item has an assigned score, the aggregate of which placed every household into a socio-economic class (SES).

**Table 2:** Socio-economic Status Scale for Northern Nigeria

S/No.	Valid indicators	Response categories	Standard scores
1	Total number of children	None	0
		1	1
		2	2
		3	2
		4	3
		5	4
		6	5
		7	5
		8	6
		9	6
		10	6
2	Children in primary school	>10	7
		None	2
		1	3
		2	4
		3	5
		4	7
		5	8
		6	8
		7	9
		8	10
3	Children in secondary school	None	2
		1	4
		2	5
		3	6
		4	7
		5	8
		6	9
		7	10
		8	10
		9	10
4	Children in higher institution	None	3
		1	6
		2	6
		3	7
		4	8
		5	9
		6	10
5	Deep water well	No	3
		Yes	6
6	Pit toilet	No	3

		Yes	5
7	Plot of land for building (hectare)	None	3
		1	4
		2	5
		3	7
		4	7
		5	8
		6	8
		7	8
		8	8
		9	8
		10	8
		>10	9

**Table 2B:** Socio-economic Status Scale for Northern Nigeria – continued

S/No.	Valid indicators	Response categories	Standard scores
9	Poultry birds/fowls	None	2
		1	3
		2	3
		3	4
		4	4
		5	4
		6	5
		7	5
		8	5
		9	5
		10	5
		>10	6
10	Goats	None	2
		1	3
		2	3
		3	4
		4	5
		5	6
		6	6
		7	6
		8	6
		9	7
		10	7
		>10	8
11	Sheep	None	3
		1	4
		2	5
		3	5
		4	6
		5	6
		6	6
		7	7
		8	7
		9	7
		10	7
		>10	8



12	Cattle	None	3
		1	5
		2	6
		3	7
		4	7
		5	8
		6	8
		7	8
		8	8
		9	9
		10	9
13	Grain rhombus/store	>10	9
		No	3
		Yes	6

**Source:** Adegboye *et al.* (2015)

**Table 2 C:** Socio-economic Status Scale for Northern Nigeria – continued 2

S/No.	Valid indicators	Response categories	Standard scores
14	Bicycle	No	3
		Yes	6
15	Motor cycle	No	3
		Yes	6
16	Transistor radio	No	3
		Yes	5
17	Cassette player	No	3
		Yes	5
18	VCD player/VHS video player	No	3
		Yes	6
19	Television	No	3
		Yes	5
20	Ceiling, standing or table fan	No	3
		Yes	6
21	Cushion/executive chair	No	3
		Yes	5
22	Wrist watch	No	3
		Yes	5
23	Umbrella	No	2
		Yes	5
24	Standing mirror	No	3
		Yes	6
25	Breakable plates	No	3
		Yes	5
26	Cell phone	No	2
		Yes	5
27	Relative living under same roof	None	3
		1	5
		2	6
		3	7
		4	7
		5	8
		6	8
		7	8
		8	9
		9	9
		10	9
>10	10		

28	Chieftaincy/religious title	No	0
		Yes	4

**Source:** Adegboye *et al.*, (2015)

## RESULTS AND DISCUSSION:

### Socio-Economic Scales of Sampled Respondents

Socio-Economic Scales (SES) classifies people into three categories according to certain criteria (Adegboye *et al.*, 2015). The scale has a list of 28 items reflecting the local environment of rural northern Nigeria. Each item is assigned a score, and the highest score is 172. The aggregate score is used to classify

people into SES classes. Those who scored between 76 and 108 points are considered low, those with scores between 109 and 141 are said to be in the middle class and those with 142 and 172 points are classified as high. From the data collected and analyzed on the Socio-Economic Status (SES) of the indigenous population on the permanent site of UDUS, three SES were found as shown in Table 3.

**Table 3:** Socio-Economic Status of Respondents on the Permanent Site of UDUS

Class	Frequency	Percentage (%)
Low	229	65.6
Middle	118	33.8
High	2	0.57
<b>Total</b>	<b>349</b>	<b>100</b>

**Source:** Field Work, 2019

Table 3 shows that 65% of the respondents in the study area belong to the Low SES class, followed by 33.8% Middle class respondents and 0.57% as of High class respondents. This finding is consistent with that of Adegboye (2016) and Mogbolu (2011) who confirmed that majority of rural dwellers in Northern Nigeria fall within the Low SES class in their respective studies conducted in north central and northwestern regions of Nigeria. The case of widespread poverty and lack of natural resources in the study area is compounded by the fact that the indigenous people were

displaced although not physically dislocated but having constrained access to their resource base which is land.

### Hypothesis Testing

The hypothesis that there is no significant relationship between income and the social-economic status of the indigenous population on the Permanent Site of UDUS is tested using the Spearman rank correlation ( $\rho$ ). Table 4 displays the  $\rho$  statistics for income and SES. Findings show that SES and total income correlated significantly.

**Table 4:** Spearman Rank Correlation Statistics for Income and SES

		Total Income	SES
Spearman's rho	Correlation Coefficient	1.000	.110*
	Sig. (1-tailed)	.	.020
	N	349	349
	Correlation Coefficient	.110*	1.000
	Sig. (1-tailed)	.020	.
	N	349	349

\*Correlation is significant at the 0.05 level (1-tailed).

**Source:** Authors Analysis (2019)

The SES was calculated using aggregate scores of respondents using 28 indicators relevant to their livelihoods with three categories of high, middle, and low SES classes. Income was derived from the respondent's major means of livelihood and the second major means of livelihoods. The Spearman rank correlation result gave a coefficient of .110 and a p-value of .020 which show a significant relationship between income and SES of the respondents on the Permanent Site of UDUS. The null hypothesis is therefore rejected and the alternative retained which state that there is a significant relationship between income and the SES of the indigenous population on the Permanent Site of UDUS. This finding is consistent with those of Adegboye (2016) and Mogbolu (2011), who both found income as a determinant of SES using different indicators. Adegboye (2016) correlated SES with the level of education and occupation as well as age which are determinants of economic power while Mogbolu (2011) used the FGT model which factors in consumption, measured in terms of households purchasing power which is economic. This finding implies that attention should be given to income-generating activities for the indigenous population to better their lives and livelihoods. Interventions such as the prompt payment of

compensations, provision of permanent and pensionable jobs as well as access to funds for business and other entrepreneur skills can go a long way in supporting and boosting their livelihoods.

### CONCLUSION

To determine the SES status of the indigenous population living on the UDUS Permanent Site, socioeconomic and demographic characteristics were collected and aggregated to provide an idea of how they have fared in their current situation, particularly in terms of ownership of basic assets and wealth. As a result, a SES became a handy instrument for putting all of their economic and demographic variables together to determine their social standing. According to the findings, the majority of the indigenous population fell into the lowest social-economic status class due to the nature of their possessions and economic power. Furthermore, their socioeconomic status was highly associated to overall income. Therefore, improving income-generating activities is required to make it easier for people to acquire and increase their assets, which will ultimately raise their social-economic standing and help them overcome poverty and want. Additionally, this will make them more resilient to stress and shocks to their way of life.

### REFERENCES

- Adegboye, M. A. (2016). Socio-economic status categories of rural dwellers in Northern Nigeria. *Advances in Research*, 7(2), 1-10. <https://doi.org/10.9734/air/2016/21836>
- Adegboye, M. A., Oyesola, O. B., and Olumodeji, E. O. (2015). Construction of a socio-economic status scale for rural dwellers in Northern Nigeria. *Asian Journal of Agricultural Extension, Economics, and Sociology*, 4(1), 75-85. <https://doi.org/10.9734/ajaees/2015/8548>
- Ahundu, M.O. Iliya, M.A. Shamaki, M.A, and Olarinde, M.O. (2022). The Status of Land Acquisition on the Permanent Site of Usamanu Danfodiyo University. Sokoto. *Sokoto Journal of Social Sciences*, 12(2), 1-17.
- Akighir, D.T. and Nomor, D.T. (2013). Empirical Investigation of the Poverty-Fuelwood Consumption

- Nexus of in Makurdi Metropolis. *Journal of Economic and Social Research*. 5(1), 116-129.
- Akinbile, L.A. (2007). Standardization of Socio-Economic Status (SES) Scale for farm families in southwest Nigeria. *Journal of Social Sciences*. 14(3) 221-227. <https://doi.org/10.1080/09718923.2007.11978352>
- Alhussein, A. A. (2004). *Transportation problems in UsmanuDanfodiyo University Sokoto*. [Unpublished Undergraduate Project, UsmanuDanfodiyo University Sokoto]. Nigeria.
- Ango, A. K., Ibrahim, S. A., Yakubu, A. A., and Usman, T. (2014). Determination of socio-economic factors influencing youth rural-urban migration in Sokoto State, Nigeria. *Journal of Human Ecology*, 45(3), 223-231.
- Ekhaese, E. N., and Adeboye, A. B. (2014). Go-ahead element of domestic architecture: Socio-economic and cultural characteristics of the residents in Benin. *IMPACT: International Journal of Research in Humanities, Arts and Literature (IMPACT: IJRHAL)*, 2(5), 73-88.
- Gaur, K. L. (2013). Socio-economic status measurement scale: thirst area with changing concept for socio-economic status. *International Journal of Innovative Research and Development*, 9(2), 139-145. <http://www.ijird.com/index.php/ijird/article/view/37303>
- Gizachew, A. (2017). Refining the impoverishment risks and reconstruction (IRR) model: A study of the models overlooked risks, evidence from the impacts of Tekeze Dam, North-East Ethiopia. *Journal of Development and Agricultural Economics*, 9(4), 66-79.
- Gwandu, A.A. and Mamman, A.B. (2000). Consideration in the choice of Dundaye as the site of the UsmanuDanfodiyo University, Sokoto. In Iliya M.A et al., (eds) UsmanuDanfodiyo University Sokoto at 25: Progress, problems, and prospects. University Press Limited and Master Prints, Kaduna.
- Hao, N. D., and Lebailly, P. (2011). *Evolution of livelihood strategy and income of the households in the coastal sandy area of the Central region, Vietnam—the case of ThuaThien Hue Province during period 2003-2008* (No. 2232-2019-2518). 2011 ASAE 7th International Conference, October 13-15, Hanoi, Vietnam 291318, Asian Society of Agricultural Economists (ASAE).
- Liyama, M. (2006). *Livelihoods Diversification Patterns among Households and their Implications on Poverty and Resource Use: A Case Study from a KerioRiver Basin Community*. LUCID Project, International Livestock Research Institute
- Malleson, R., Asaha, S., Egot, M., Obeng-Okrah, K., and Ukpe, I. (2005). African Rattan Research Programme' S Development of African Rattans Project a Socially Differentiated View of the Significance of Rattan for Rural Livelihoods in Cameroon, Ghana and Nigeria Final Socio-Economic Report. Access, February
- Malleson, R., Asaha, S., Sunderland, T., Burnham, P., Egot, M., Obeng-Okrah, K., and Miles, W. (2008). A methodology for assessing rural livelihood strategies in West/Central Africa: lessons from the field. *Ecological and Environmental Anthropology (University of Georgia)*, 25.
- Mogbolu, B. (2011). Incidence of child labour and poverty among rural households in Dundaye District of Wamakko Local Government Area in Sokoto State. Unpublished Undergraduate Project, UsmanuDanfodiyo University Sokoto]. Nigeria.
- Momoh, M., Argungu, G. M., Zangina, U. M., Rabi, A. M., and Saidu, G. (2017). Measurement and Comparison of Selected Empirical Models for the Estimation of Global Solar Radiation for Usmanu Danfodiyo University Sokoto, *IOSR Journal of Applied Physics (IOSR-JAP)* 9(5), 15–23.

- <https://doi.org/10.9790/4861-0905041523>
- Mukhtar, A., Iliya, M.A., Dankani, I.M., and Yakubu A.A. (2019) Demographic and Socio-Economic Characteristics OF Livestock Rearers in Maiduguri Metropolis, Borno State Nigeria. *Jalingo Journal of Social and Management Sciences* Volume 2, Number 1 December, 2019 Page 160-168.
- National Primary Health Care Development Agency (NPHCDA) (2017). National Programme of Immunisation House Listing Register, Abuja-Nigeria
- Nguyen, P., van Westen, A., and Zoomers, A. (2017). Compulsory land acquisition for urban expansion: Livelihood reconstruction after land loss in Hue's peri-urban areas, Central Vietnam. *International Development Planning Review*, 39(2), 99-122. <https://doi.org/10.3828/idpr.2016.32>
- Nkedianye, D. K., Ogutu, J. O., Said, M. Y., Kifugo, S. C., de Leeuw, J., Van Gardingen, P., and Reid, R. S. (2020). Comparative social Demography, Livelihood Diversification and Land Tenure among the Maasai of Kenya and Tanzania. *Pastoralism*, 10(1), 1-25.
- Ogunjimi, S. I., Yusuf, O. J., and Ajala, A. O. (2012). Factors influencing involvement of peri-urban farmers in mini-livestock Farming in South-western Nigeria. *Scientific Journal of Review*, 1(3), 58-69.
- Ovwigho, B.O. (2011). Construction of a Socio-economic Status Scale for Heads of Rural Farm Families in the North Agricultural Zone of Delta State, Nigeria. *Journal of Human Ecology* 33(2), 113-118.
- Saidu, U. (2008). *A study of the Socio-Economic Impact of Kainji Hydroelectricity Dam Project in Yauri Emirate*. [Unpublished Master's Dissertation, Usmanu Danfodiyo University]. Sokoto-Nigeria.
- Tagliarino, N. (2016). *Encroaching on Land and Livelihoods: How National Expropriation Laws Measure Up Against International Standards*. Working Paper. Washington, DC: World Resources Institute. <http://www.wri.org/publication/encroaching-on-land-and-livelihoods>. Working paper. June 2016.
- Tuyen, T. Q. (2013). *Farmland acquisition and household livelihoods in Hanoi's peri-urban areas*. [Unpublished Ph.D. Thesis, University of Waikato]. Vietnam
- Vyas, S., and Kumaranayake, L. (2006). Constructing socio-economic status indices: How to use principal components analysis. *Health Policy and Planning*, 21(6), 459-468.
- Yamane, T. (1967). *Statistics, An Introductory Analysis*, 2<sup>nd</sup> Edition New York: Harper and Row.
- Yunusa, M. (1999). *Not farms alone: A study of rural livelihoods in the Middle Belt of Nigeria*. ASC Working Paper 38/1999. De-Agrarianisation and rural employment network. Afrika-studiecentrum, Leiden and Centre for Research and Documentation (CRD), Kano