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INCOME DIVERSIFICATION CONSTRAINTS AMONG FARM HOUSEHOLDS IN THE NIGER DELTA REGION OF NIGERIA

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ABSTRACT: *This study investigated constraints limiting income diversification among farm households within Nigeria's Niger Delta Region. A total of 360 respondents were selected through multistage, purposive, and random sampling methodologies. Primary data obtained via structured questionnaires underwent analysis using descriptive and inferential statistical methods. Findings revealed that the principal constraints inhibiting non-farm income-generating activities included escalating costs of fuel and essential materials, deteriorated road infrastructure, and insufficient access to credit facilities. The study recommends governmental investment in modern, high-quality rural infrastructure to minimize entry barriers for both farm and non-farm ventures, thereby enabling households to maximize their productive capabilities and achieve enhanced diversification outcomes. Additionally, policymakers should expand access to affordable credit through various Credit Guarantee Scheme programs, subsidize agricultural inputs and equipment rental services to strengthen smallholder farmer productivity, and implement measures to ensure fuel affordability.*

KEYWORDS: *Income diversification, constraints, non-farm economic activities, farm households, Niger Delta Region*

INTRODUCTION

Agriculture constitutes the primary income source for most rural populations in developing nations and serves as the fundamental economic sector underpinning social and economic advancement (Adem & Tesafa, 2020; Teji, 2020). Nevertheless, research by Ellis (2000) demonstrated that household economic activities adapt under varying circumstances. These adaptations manifest in two principal ways: firstly, farm households may intensify or expand their agricultural production through

extensification or diversification. Secondly, they may diversify their economic activity portfolio beyond agriculture, either on-farm or off-farm, through temporary or permanent migration seeking improved opportunities.

Diversification represents the process through which households establish multiple income streams (Wan et al., 2016). Teji (2020); Osuafor and Nwankwo (2017) both characterized diversification as a process wherein households expand their range of economic activities, either voluntarily or involuntarily in order to improve household income. Similarly, Ike (2015) conceptualized diversification as the mechanism by which rural households engage in varied livelihood portfolios, combining resources and assets to satisfy basic needs, enhance living standards and welfare, and manage risk. Correspondingly, Odoh et al. (2019) emphasized that non-farm and off-farm income-generating activities constitute crucial employment sources in rural areas across most developing countries.

Research by Agyeman et al. (2014) identified multiple roles for diversification, including supporting farm households in accumulating income to expand agricultural operations and engage in non-farm enterprises, while addressing immediate household requirements such as educational expenses, food purchases, shelter provision, and healthcare access. Dimova and Sen (2010) underscored diversification's significance by asserting its normalcy in rural communities as opposed to specialization. They further contended that diversification facilitates smooth household income flows by dispersing risks. Teji (2020) corroborated this perspective, explaining that diversification has become essential due to agriculture's inherent risks. Bassie (2014) similarly observed that rural farm households participate in multiple economic activities, thereby diversifying income sources to minimize agriculture-related risks and challenges. Consequently, as Ike (2015) noted, participation in non-farm and off-farm economic activities has emerged as a principal income diversification strategy widely practiced by farmers in developing countries.

Two primary motivations drive farm household income diversification: pull factors and push factors. According to Abdul-Malek and Usami (2010), pull factors represent diversification undertaken for asset accumulation objectives, whereas push factors denote diversification pursued to reduce vulnerability and build shock resilience. Abdul-Hakim and Che-Mat (2011) explained that pull factor-driven diversification typically associates with income increases and asset accumulation, improving household livelihoods, while push factor-motivated diversification helps extract households from poverty. Barrett et al. (2001) identified income diversification as a critical strategy

for rural households, particularly in developing economies, to mitigate risks, enhance livelihoods, and ensure economic stability. Within Nigeria's Niger Delta region, where agriculture remains the predominant livelihood source, farm households engage in multiple income-generating activities, including off-farm employment and non-agricultural enterprises, to cope with economic uncertainties and climate-related risks (Nwafor et al., 2020). However, despite income diversification's recognized benefits, farm households in this region encounter significant constraints hindering their ability to effectively diversify and improve their welfare.

A major constraint involves limited access to credit and financial services, impeding farmers' capacity to invest in alternative income-generating activities. Many smallholder farmers lack collateral and struggle to satisfy stringent loan conditions, making business expansion financing difficult to secure (Odoemenem & Obinne, 2010). Additionally, inadequate infrastructure, including insufficient rural roads, unstable electricity supply, and weak market linkages, limits off-farm and non-farm enterprise profitability (Adereti, 2015). These infrastructural deficiencies reduce market access and increase production costs, discouraging income diversification efforts. Furthermore, low educational levels and entrepreneurial skills among farm households constrain their ability to explore and sustain non-farm income opportunities. Insufficient technical training and business development support further limits their participation in profitable agribusiness ventures (Oladele & Ward, 2018). Government policies and institutional frameworks also significantly shape income diversification efforts. However, weak rural development program implementation and inconsistent agricultural policies have created an unsupportive environment for smallholder farmers seeking to diversify income sources (Ezeh, 2022).

Environmental challenges including climate change, soil degradation, and frequent flooding further compound difficulties faced by Niger Delta farm households. Studies demonstrate that climate variability negatively impacts farm productivity, rendering sole reliance on agriculture unsustainable (Ozor et al., 2010). Additionally, oil exploration activities have caused environmental degradation, soil contamination, and declining agricultural productivity, compelling many farmers to abandon their primary livelihood without viable alternative income sources (Nwankwo et al., 2019). Given these constraints, assessing factors limiting income diversification among Niger Delta farm households becomes imperative. Understanding these challenges will provide insights into policy interventions, institutional support mechanisms, and capacity-building initiatives that can enhance sustainable livelihood diversification and economic empowerment throughout the region.

METHODOLOGY

The study was conducted in Nigeria's Niger Delta region, comprising all six states from the South-South geopolitical zone, one state (Ondo) from the South-West geopolitical zone, and two states (Abia and Imo) from the South-East geopolitical zone. All Niger Delta states produce crude oil except Cross River State. Thus, the Niger Delta states include Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo, and Rivers. The Niger Delta, historically called the Oil Rivers due to its significant palm oil production, is a densely populated region designated as the British Oil Rivers from 1885 until 1893, when it expanded to become the Niger Coast Protectorate. This petroleum-rich region has been central to international controversy over pollution. As officially defined by the Nigerian government, the Niger Delta extends over approximately 70,000 km² (27,000 square miles), comprising 7.5% of Nigeria's land mass and inhabited by approximately 31 million people (National Population Commission [NPC], 2006). Despite extensive geographic coverage, the Niger Delta mangrove forest has approximately 80% of its vegetation distributed across three states (Bayelsa, Delta, and Rivers). Although composed of six mangrove species, mangrove growth primarily occurs in brackish muddy creek banks. A substantial portion of the area features marshy and swampy terrain, making physical development more difficult and costly compared to other relatively drier Nigerian regions.

The study population comprised all rural farming households across the nine Niger Delta states. Despite increasing urbanization, rural households remain predominantly engaged in farming (Ike, 2015). Multistage, purposive, and random sampling procedures were employed to generate study respondents. Stage I involved purposively selecting five of the six oil-producing Niger Delta states (Akwa Ibom, Bayelsa, Delta, Edo, and Rivers), informed by Cross River State's non-oil-producing status. In Stage II, three states were randomly selected from the five chosen states: Delta, Edo, and Rivers. Stage III involved randomly sampling six Local Government Areas (LGAs) from each selected state—two LGAs from each of the three agricultural zones—yielding 18 LGAs for the study. Stage IV involved randomly selecting four communities from each sampled LGA, totaling 72 communities. Finally, in Stage V, five farming households were randomly selected from each community, producing 360 respondents for the study.

Primary data were utilized for this study, collected through structured questionnaires administered to respondents. Trained enumerators fluent in both English and local languages facilitated data collection. The questionnaire was designed to obtain information regarding constraints to income diversification for analysis. Data generated for this study underwent analysis using descriptive and

inferential statistical tools. To ascertain household income diversification constraints, respondents ranked constraints based on their perceived seriousness as income diversification impediments. A 4-point Likert-type scale obtained data as follows:

- Very serious = 4
- Serious = 3
- Moderately serious = 2
- Not serious = 1

Determination of cut-off point:

Cut-off point (x) = $\frac{\sum f}{n} = \frac{4+3+2+1}{4} = \frac{10}{4} = 2.50$

To make inferential statements, mean scores were compared with the critical mean of 2.50. If a constraint's calculated mean exceeded the standard critical value, the constraint was regarded as very serious; otherwise, it was not considered serious.

RESULT AND DISCUSSION

Table: Constraints to Participation in Non-Farm Income Generating Activities

S/N	Constraints	VS (4)	MS (3)	S (2)	NS (1)	Score	Mean	Rank
1	Escalating fuel and essential material costs	203(47.0)	77(17.8)	77(17.8)	75(17.4)	1272	3.52	1st
2	Inadequate funds	79(18.3)	190(44.0)	82(19.0)	81(18.8)	1131	3.51	2nd
3	Deteriorated road conditions	91(21.1)	158(36.6)	87(20.1)	96(22.2)	1108	2.98	3rd
4	Credit facility scarcity	85(19.4)	162(37.5)	96(22.2)	89(20.6)	1107	2.88	4th
5	Unaffordable necessary machines and facilities	84(19.4)	138(31.9)	114(26.4)	96(22.2)	1074	2.83	5th
6	Poor electricity supply	58(13.4)	152(35.2)	118(27.3)	104(24.1)	1028	2.78	6th
7	Inadequate public pricing	77(53.5)	28(19.4)	9(6.3)	30(20.8)	440	2.66	7st
8	Government policies and regulations	34(23.6)	56(38.9)	20(13.9)	43(23.6)	387	2.53	8th
9	Low public patronage of crafts	28(19.4)	69(47.9)	14(9.7)	33(22.9)	380	2.49	9th
10	Health challenge	34(23.6)	57(39.6)	15(10.4)	38(26.4)	375	2.32	10th
11	Lack of creative ideas on better non-farm activities	34(23.6)	48(33.3)	24(16.7)	38(26.4)	366	2.24	11th
12	Land inadequacy	26(18.1)	62(43.1)	20(13.9)	36(25.0)	366	2.23	12th
13	Youth migration to urban areas	32(22.2)	78(54.2)	11(7.6)	23(16.0)	407	2.23	13th
14	Water scarcity	31(21.5)	60(41.7)	23(16.0)	30(20.8)	380	2.20	14th
15	Required education and skills	45(31.3)	17(11.8)	58(40.3)	24(16.7)	371	2.19	15th
16	Household member age	19(13.2)	43(29.9)	57(39.6)	25(17.4)	344	2.18	16th
17	Lack of required skills	19(13.2)	36(25.0)	59(41.0)	30(20.8)	332	2.16	17th

18	Low technical know-how on technology use	13(9.0)	43(29.9)	60(41.7)	28(19.4)	329	2.16	18th
19	General laziness	14(9.7)	35(24.3)	66(45.8)	29(20.1)	322	2.14	19th
	Grand Mean						2.54	

Note: VS = Very Serious, MS = Moderately Serious, S = Serious NS = Not Serious
Mean >2.5 = Serious; Mean<2.5 = Not Serious; Percentage in Parenthesis.

Table 1 demonstrates that among nineteen examined constraints, eight were considered serious. Escalating fuel and essential material costs ($\bar{x}$ = 3.52), inadequate funds ($\bar{x}$ = 3.25), deteriorated road conditions ($\bar{x}$ = 2.98), and credit facility scarcity ($\bar{x}$ = 2.88) were identified as the most notable constraints affecting non-farm income-generating activity performance in the Niger Delta region. Obasi et al. (2014) attributed high rural transportation costs to poor road networks. Similarly, Obasi and Njokuoma (2008) reported transportation as the most critical factor affecting marketers and their performance in many developing economies.

Additional identified constraints included unaffordable necessary machines and facilities ($\bar{x}$ = 2.82), poor electricity supply ($\bar{x}$ = 2.78), inadequate public pricing ($\bar{x}$ = 2.65), and government policies and regulations ($\bar{x}$ = 2.52). These findings align with Osondu et al. (2014), where inadequate capital for starting non-farm businesses (43.3%) and lack of credit access (35.0%) were identified as the foremost constraints to rural women embarking on non-farm activities in Abia State. Additionally, Katega (2013) found inadequate capital for running established non-farm activities as a constraining factor affecting non-farm activity performance. The grand mean ($\bar{x}$ = 2.54), exceeding the critical mean, indicates that all items constitute constraints to non-farm income-generating activity participation.

CONCLUSION AND RECOMMENDATIONS

Rural farming households in Nigeria's Niger Delta region engage in income diversification to mitigate poor farm output risks associated with climate change vulnerabilities. Despite these efforts, serious constraints to income diversification exist, as identified in this study. Proper implementation of policies and strategies aimed at mitigating these serious constraints will ensure that a greater percentage of households escape poverty.

Based on the findings of the study, the following recommendations are proposed:

- Infrastructure (tarred roads, electricity provision, pipe-borne water, etc.) in the Niger Delta region and throughout the country remains deplorable. The government should construct modern, high-quality infrastructural facilities in rural areas. This could reduce entry barriers

in farm and non-farm activities, enabling households to utilize their full capabilities and ensure higher diversification indices.

- The government should expand access to affordable credit facilities and other inputs for households through various Credit Guarantee Scheme programs, subsidize inputs and equipment hiring services to improve smallholder farmer production and quality farm product supply, and implement measures to ensure fuel affordability.

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