

IMPACT OF NIGERIAN INCENTIVE-BASED RISK SHARING AND LENDING SCHEME (NIRSAL) LOAN ON WOMEN FARMERS' WELFARE STATUS IN OYO STATE NIGERIA

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ABSTRACT

The Nigerian Incentive-Based Risk Sharing and Lending Scheme (NIRSAL) aims to improve access to finance and technical assistance for smallholder farmers in Nigeria. The scheme has been implemented but the welfare status of women farmers beneficiaries is yet to be documented. Hence, this study assessed the impact of NIRSAL loan on women farmers' welfare status in Oyo state. Multistage sampling procedure was used to select 172 respondents for the study. The interview guide was used for data collection and analysed using mean, Chi-square, Pearson Product Moment Correlation and t-test. Respondents' age was 37.2 ± 13.0 years with average family size and income of 4.8 ± 1.5 persons and $\text{₦}28,091.16 \pm \text{₦}21,669.0$. The average loan acquired by beneficiaries was $\text{₦}457,233.40 \pm \text{₦}293,978.40$. Level of knowledge on NIRSAL activities was higher among beneficiaries (91.8%). Bureaucracy and slow processing of loan applications ($\bar{X}=1.64$), delays in the disbursement of funds ($\bar{X}=1.48$), discriminatory practices against certain beneficiaries ($\bar{X}=1.36$), difficulty in validating information provided by counterparties ($\bar{X}=1.29$) were major constraints to accessing NIRSAL loans. More of beneficiaries (61.2%) were better-off. Household size ($r=-0.313$), income ($r=0.152$), educational qualifications ($\chi^2=12.482$), knowledge of NIRSAL activities ($r=0.433$) and access to loan ($r=0.336$) significantly related to the welfare status of respondents. Significant variation ($t=11.2$) existed between the welfare status of beneficiaries and non-beneficiaries. Nigerian Incentive Based Risk Sharing and Lending Scheme loan impacted more on the welfare of the beneficiaries. Establishing more accessible service points, improving outreach programs, and addressing discriminatory practices will improve the impact of the scheme.

Keywords: Beneficiaries of NIRSAL, women farmers, welfare status, loan

INTRODUCTION

Globally, agriculture has been identified as a major component in the achievement of the second Sustainable Development Goals - to eradicate extreme poverty and hunger (Kersten, Harms, Liket, and Maas 2017; United Nations, 2015), and as such the world's government has placed so much focus on the development of agriculture across the world. The agricultural sector in many developing countries is underperforming, in part because women, who represent a crucial resource in agriculture and the rural economy through their roles as farmers, labourers and entrepreneurs, face more severe constraints than men in access to productive resources (Shaikh and Shinde (2019)). Aggregate data shows that women comprise about 43 per cent of the agricultural labour force globally and in developing countries (Ejike, Osuji, Effiong and Agu, 2018). Women farmers often manage complex households and pursue multiple livelihood strategies. Women in rural areas often juggle multiple livelihood strategies, including crop and animal production, food processing, wage labour, and household management. Despite their contributions, structural inequalities continue to limit their access to agricultural opportunities and economic benefits. Women's economic security is rooted in the consistent ability to meet basic needs such as food, shelter, and education. Beyond these essentials, financial security includes access to education, vocational training, and employment opportunities.

Paid employment is one of the benchmarks for financial security, but in the circumstances where many women have either sporadic or minimal opportunities to engage in paid work or farming activities throughout their adult life, a government-provided, broadly based, financial safety net is essential if economic security for women is to be enhanced. Jones and Ejeta (2016) asserted that if the focus of the world's governments is to eradicate poverty using agriculture as a medium, new investment in agricultural research, and perhaps, technological developments directed towards enhanced agricultural farming systems are required. This is because about three-quarters of the world's poor live in rural areas. The rural areas account for the majority of the agricultural products (crops and animal) consumed in the cities across the world. In the light of global population growth, estimated at 1.7% annually (World Bank, 2016), it is imperative that smallholder farmers shift from traditional methods to more technologically advanced and efficient systems (Ellinger and Penson, 2014). Lawanson (2018) posited that various researches conducted on the contribution of farmers to agricultural development in the country suggest that women's contribution to farm work is as high as between 60 and 90% of the total farm tasks performed. Despite their contributions, women are often excluded from certain occupational categories due to gender imbalance created by formal as well as informal barriers. The formal barriers which continue to hinder the entry of women into such occupational categories include: lack of educational

or technical training, labour laws and trading customs; while the informal barriers include: customs and religious practices, difficulties in combining domestic and labour market activities, and management and worker attitudes (Adisa, Mordi, Simpson, and Iwowo, 2020) These obstacles also hinder women's access to financial services. Many are excluded from loan schemes due to lack of collateral, the small scale of their operations, or difficulties navigating complex administrative procedures. However, initiatives like the Nigerian Incentive-Based Risk Sharing Scheme for Agricultural Lending (NIRSAL) are beginning to address these issues. According to Sadiq and Akume (2021), even though the objectives of the NIRSAL COVID-19 loan scheme were not fully achieved, it significantly improved the livelihoods of beneficiaries and helped cushion the pandemic's impact on small enterprises.

Despite these positive strides, many Nigerian women farmers remain economically insecure and unaware of available financial opportunities. M'Kaibi, Steyn, Ochola, and Du Plessis (2017) noted that while some African countries, such as Kenya, have made progress in closing gender gaps through increased female participation in paid employment, disparities in income and access to financial resources persist. In Nigeria, awareness and uptake of NIRSAL's services remain uneven. While some farmers reported tangible benefits, others lacked knowledge of the programme entirely. This study was therefore undertaken to empirically examine the impact of NIRSAL loans on the welfare of women farmers in Oyo State. Specifically, it aims to describe their socio-economic profiles, assess their knowledge of NIRSAL, identify barriers to access, and compare welfare status between beneficiaries and non-beneficiaries. To achieve this, the study tests two hypotheses: first, that there is no significant relationship between socio-economic characteristics and welfare status; and second, that there is no significant difference in welfare status between NIRSAL beneficiaries and non-beneficiaries.

METHODOLOGY

The study was conducted in Oyo State, Nigeria—an inland state located in the southwestern region of the country. Its capital, Ibadan, is one of Nigeria's largest cities and was once the second most populous city in Africa. Oyo State shares borders with Kwara State to the north, Osun State to the east, and Ogun State and the Republic of Benin to the southwest. With a projected population of 7,840,864 as of 2016, the state ranks as the fifth most populous in Nigeria. The majority of its residents are Yoruba, and the Yoruba language dominates across communities. The economy is primarily agrarian,

with production of key crops such as cassava, cocoa, and tobacco.

The study utilised a multistage sampling procedure. In the first stage, 40% of the agricultural zones in the state—Ibadan and Oyo—were purposively selected. This was followed by the random selection of three blocks from each zone: Oyo East, Afijio, Oyo West, Lagelu, Oluyole, and Akinyele. In the third stage, two cells were randomly selected from each block, after which women farmers within these cells were stratified into beneficiaries and non-beneficiaries of the NIRSAL programme. From each group, 30% of farmers were randomly selected, given 225 respondents (93 beneficiaries and 132 non-beneficiaries). Propensity Score Matching (PSM) was applied using the nearest neighbour method to control for selection bias, resulting in a matched sample of 172 respondents (85 beneficiaries and 87 non-beneficiaries). Primary data were collected through an interview schedule, and monthly household expenditures were estimated. Per Capita Expenditure (PCE) was calculated by dividing total household expenditure by household size, and welfare status was categorized using the National Bureau of Statistics (NBS, 2005) method. Respondents were classified as "worse-off" if their PCE fell below two-thirds of the mean, and "better-off" if it was above that threshold.

RESULTS AND DISCUSSION

The socioeconomic characteristics of the respondents in Table 1 show that the average age of the respondents was 37.2 ± 13.0 years. Forty-three per cent of the respondents were within the age brackets of 31 and 40 years, while 29.7% and 27.3% of respondents were below 30 years and above 40 years, respectively. Disaggregated data reveal that the average age of beneficiaries was 35.6 ± 10.8 years, and that of non-beneficiaries was 38.7 ± 14.8 . The result revealed that the average household size for all the respondents were 4.8 ± 1.5 persons. Most (66.2%) of the respondents had household sizes between 4 and 6 persons, while 19.8% of respondents had households between 1 and 3 persons and 14.0 % had households of more than 6 persons. The average household size of beneficiaries and non-beneficiaries was 4.9 ± 1.5 and 4.6 ± 1.5 respectively. This analysis implies that the average household size is relatively large having six person and even more. It also implies that the average household size of the beneficiaries is slightly higher than the average household size of the non-beneficiaries. This could indicate that households who receive benefits are likely to have more members, which could lead to greater economic burden on the household. This could mean that, even after receiving benefits, the households still struggle to meet their needs and provides for their household

members with the limited resources they have. This result is similar to that of Olutayo (2019) who reported a fairly large family size among rural households in Southwest, Nigeria. According to the findings in Table 1, it is evident that a significant proportion of the respondents have monthly incomes that fall below the national minimum wage, with 45.3% earning between ₦10,000 and ₦29,999. Furthermore, 31.4% of the respondents earn between ₦30,000 and ₦49,999, while 8.7% earn below ₦10,000 and 14.6% earn above ₦50,000. The average monthly income of the respondents was ₦28,091.16±₦21,669.0. By examining the disaggregated data in Table 1, it becomes evident that the average monthly income of NIRSAL beneficiaries was ₦33,229.41±₦22,273.94, whereas for non-beneficiaries, the average income is

₦24,672.41±₦20,308.50. The results suggest that the average monthly income of beneficiaries of the NIRSAL was higher than that of the non-beneficiaries. This implies that the NIRSAL scheme may have a positive impact on the income levels of women farmers who are beneficiaries of the program. This difference provides strong evidence that the increase in income among beneficiaries can be attributed to their access to and utilisation of loans provided through the NIRSAL scheme. The financial support offered by the programme appears to have enhanced the productive capacity of women farmers, enabling them to expand their farming activities and generate higher returns. This finding highlights the potential effectiveness of the scheme in improving the welfare status of beneficiaries.

Table 1: Socioeconomic characteristics of respondents

	Beneficiaries	%	Beneficiaries	%	Overall	%
Age						
<30		28.2		31.0		29.7
31-40 years		50.6		35.6		43.0
41-50 years		15.3		10.3		12.8
51-60 years		3.5		18.5		11.0
> 60 years		2.4		4.6		3.5
Mean±SD	35.6±10.8		38.7±14.8		37.2±13.0	
Household size						
1-3		11.3		24.1		19.8
4-6		70.6		62.1		66.2
>6		14.1		13.8		14.0
Mean±SD	4.9±1.5		4.6±1.5		4.8±1.5	
Income (N)						
<10,000		7.1		10.3		8.7
10,000-29,999		50.0		50.6		45.3
30,000-49,999		32.9		29.9		31.4
50,000 and above		20.0		9.2		14.6
Mean±SD	₦33,229.41± ₦22,273.94		₦24,672.41± ₦20,308.50		₦28,091.16 ±₦21,669.0	

Source: Field survey, 2023

Respondent’s level of knowledge of NIRSAL activities

Table 2 reveals a notable difference in the level of knowledge of NIRSAL activities among respondents. Overall, 54.7% of the respondents demonstrated a high level of knowledge, while 45.3% had a low level. However, when disaggregated, a significant disparity becomes evident: 91.8% of beneficiaries reported a high level of knowledge, in sharp contrast to 81.6% of non-beneficiaries who exhibited a low level of knowledge. This substantial gap suggests that the beneficiaries of NIRSAL initiatives are far more informed about the organisation's activities than non-beneficiaries. This disparity in knowledge is significant and may have important implications for economic welfare and access to opportunities. Those

with a higher level of awareness are better positioned to engage with and benefit from NIRSAL's offerings, including financial support, training, and agricultural services. In contrast, limited knowledge among non-beneficiaries can hinder their ability to participate in such programs, potentially widening the gap in income and economic opportunities. Over time, this could exacerbate existing inequalities, especially among already disadvantaged groups, thereby reinforcing cycles of poverty and limiting the overall effectiveness of inclusive development efforts. This result aligns with the findings of Abebe (2020), who reported that farmers who participated in a cash-for-work and food-for-work programme in Ethiopia were better informed about the objective of the programme than the non-participants.

Table 2: Respondents’ knowledge of NIRSAL activities

	Beneficiary %	Non-beneficiary %	Overall %	Min value	Max value	Mean±SD
Low (0-4.6)	8.2	81.6	45.3	0	10	4.7±2.2
High (4.7-10.0)	91.8	18.4	54.7			

Constraints to accessing NIRSAL loans among beneficiaries

Table 3 reveals a multitude of constraints that beneficiaries face in accessing NIRSAL loans. The top constraint was identified as bureaucracy and slow processing of loan applications, with a mean score of 1.64. This was closely followed by the delays in the disbursement of funds (\bar{X} =1.48). Other constraints included discriminatory practices against certain beneficiaries (\bar{X} =1.36), difficulty in validating information provided by counterparties (\bar{X} =1.29), and difficulty in coming up with good proposals (\bar{X} =1.19). However, inadequate personnel ranked the least of these concerns, with a mean score of 0.72. This implies that bureaucratic and administrative processes are hindering potential beneficiaries from accessing NIRSAL loans, and that the process is slower than would be ideal when the goal is to effectively support women farmers. This can lead to psychological factors such as

discouragement and disempowerment, as well as decreased income and financial hardship. Delays in the disbursement of funds can further exacerbate this issue, as women farmers may not be able to hold onto the opportunity once it has been presented. In addition, discriminatory practices and difficulty in validating information can further limit access to potential beneficiaries. Discriminatory practices against certain beneficiaries can also create tensions and negative attitudes towards the loan scheme, which can discourage affected groups from applying for the loans. These issues can have a profound negative impact on the welfare of these individuals if they are not addressed quickly in order to ensure that the loans are granted in a timely manner. This result aligns with the findings of Agbo, Iroh and Ihemezi (2015) that bureaucratic and administrative obstacles pose a significant hurdle for farmers when attempting to acquire loans from formal credit sources

Table 3: Constraints to accessing NIRSAL loan

Constraints	Not a constraint	Mild	Severe	Mean	Rank
Low rate of loan repayment	27.1	51.8	21.2	1.06	6 th
Inadequate of fund for women farmers	30.6	41.2	28.2	1.02	7 th
Delays in disbursement of funds to women farmers	68.2	11.8	20.0	1.48	2 nd
Criticised for being discriminatory against certain beneficiaries and types of women farmer enterprises	41.2	54.1	4.7	1.36	3 rd
NIRSAL are reluctant to give loans due to poorly packaged proposals from applicants	42.4	34.1	23.5	1.19	5 th
Bureaucracy and slow processing of loan applications	77.6	8.2	14.1	1.64	1 st
NIRSAL having difficulty in validating information provided by counterparties	40.0	49.4	10.6	1.29	4 th
Lack of information technology infrastructure	7.1	67.1	25.9	0.81	8 th
Inadequacy of personnel, insufficient training of required staff, and deficiencies in equipping the staff	10.6	51.8	37.6	0.72	10 th
Misunderstandings around the modalities of the NIRSAL program operations	22.4	36.5	41.2	0.81	8 th

Source: Field survey, 2023

Level of welfare status

Table 4 shows that overall, most (51.7%) were better off, while 48.3% were worse off. On the other hand, disaggregated data indicate that most (61.2%) of the beneficiaries of NIRSAL were better-off, while a large percentage (57.5%) of non-beneficiaries of NIRSAL were worse-off relative to their welfare status. This suggests that the Nigerian Incentive-Based Risk Sharing and Lending Scheme (NIRSAL) loan had an overall positive effect on the welfare of the beneficiaries, as most of them were

better off than non-beneficiaries. Additionally, it indicates that the program may not have had as great an impact on those who were not beneficiaries, as a significantly larger percentage of them were worse off. The results thus suggest that the NIRSAL program was effective in helping the beneficiaries improve their well-being, while having a lesser effect on non-beneficiaries. This result is consistent with the findings of Alawode and Oluwatayo (2019) that beneficiaries of the agricultural financing

programme had better welfare than non-beneficiaries.

Table 4: Distribution according to welfare status of beneficiaries and non-beneficiaries of the NIRSAL scheme

Category	Beneficiary %	Non-Beneficiary %	Overall	Minimum	Maximum	Mean/SD
Low (<194,666,67)	38.8	57.5	48.3	59,666.67	196,666.67	₦114,771.26±24,329.35
High (≥196,666,67)	61.2	42.5	51.7			

Source: Field survey, 2023

Relationship between selected socioeconomic characteristics and respondents’ welfare status

Results from Table 5 indicate that there is a significant negative relationship between household size and the welfare status of respondents ($r = -0.313, p < 0.05$). Similarly, a significant relationship exists between respondents’ monthly income ($r = 0.152, p < 0.05$). This aligns with the findings of Akaakhol and Aye (2014) that access to credit

increases farming households’ welfare. These results suggest that access to loans and other sources of financial aid may be an important factor in improving the welfare status of women farmers. This finding is line with the study of Lakkan, Channa, Magsi, Koondher, Wang and Channa (2020), who reported an inverse relationship between family size and farmers’ welfare status.

Table 5: Relationship between selected socioeconomic characteristics and respondents’ welfare status

Variables	r-value	p-value	Decision
Household size	-0.313	0.001	Significant
Farm size	0.006	0.940	Not significant
Income	0.152	0.018	Significant
Loan from NIRSAL	0.411	0.004	Significant

Source: Field survey, 2023

Relationship between selected socioeconomic characteristics and respondents’ welfare status. The Chi-squared analysis as shown in Table 6 suggests that only the respondents’ educational qualifications were significantly associated with their welfare level ($\chi^2 = 12.482, p < 0.05$). This implies that educational qualifications are key to the welfare level of respondents. Women farmers with higher

educational qualifications are more likely to have a higher welfare level compared to those who have lower educational qualifications. This result corroborates the finding of Daudu, Abdoulaye, Bamba Shuaib and Awotide (2023) that a significant relationship exists between educational qualification and farmers’ welfare status.

Table 6: Chi-square analysis showing the relationship between selected socioeconomic characteristics and respondents’ welfare

	χ^2	df	p-value	Decision
Education	12.482	3	0.029	Significant
Marital status	0.394	2	0.821	Not significant
Mode of land acquisition	5.363	3	0.147	Not significant

Source: Field survey, 2023

Difference in welfare status of beneficiaries and non-beneficiaries

Table 7 shows that there is a significant difference in the welfare status of beneficiaries and non-beneficiaries of NIRSAL scheme ($F = 41.3, p < 0.05$). This implies that the women farmers who benefited from the NIRSAL scheme have a better welfare status compared to those who did not benefit. The result suggests that the NIRSAL scheme has had a positive impact on the welfare of women farmers. There could be several factors

responsible for this result. Firstly, the NIRSAL scheme may have provided financial support to women farmers, allowing them to invest in their farms and improve their productivity. This could lead to higher incomes and an improved welfare status. Secondly, the NIRSAL scheme may have provided training and technical assistance to women farmers, improving their knowledge and skills in farming practices. This could result in higher yields and greater efficiency, leading to improved welfare. This corroborates the finding of Sadiq and Akume

(2021) that the NIRSAL scheme has a significant positive impact on the socio-economic well-being of the recipients and their family members.

Table 7: t-test analysis showing the variation in welfare status of beneficiaries and non-beneficiaries

	N	Mean	Standard deviation	Standard error	t	df	P
Beneficiaries	85	130221.18	23385.71	2536.54	11.2	170	0.000
Non-beneficiaries	87	98808.43	11434.22	1225.88			

CONCLUSION AND RECOMMENDATIONS

The study revealed that the income levels were relatively low. Beneficiaries of the NIRSAL scheme were more knowledgeable about its activities but faced challenges such as bureaucratic processes, delays in loan disbursement, and difficulty in validating information. However, their overall welfare status was better compared to non-beneficiaries. The findings also indicated that factors such as educational qualification, income, knowledge, and access to NIRSAL activities contributed to the improved welfare of women farmers. Conversely, larger household sizes and constraints in accessing NIRSAL activities were associated with lower welfare status. The findings underscore the importance of considering factors such as educational qualification and income when targeting beneficiaries for the NIRSAL scheme.

Based on the findings of the study, the following recommendations are hereby provided:

1. There is a need to address the challenges faced by beneficiaries, such as bureaucratic processes and delays in loan disbursement. Hence, there is a need to streamline these processes and ensure timely disbursement of funds to enhance the effectiveness of the scheme in supporting women farmers.
2. While beneficiaries were more knowledgeable about NIRSAL activities, there is still a need to enhance awareness of loan under NIRSAL scheme among both beneficiaries and non-beneficiaries. NIRSAL should invest in targeted communication strategies to ensure that women farmers are well-informed about the scheme's benefits, eligibility criteria, and application processes.
3. NIRSAL should provide clearer guidelines and support mechanisms to assist women farmers in providing accurate and verifiable information during the loan application process.
4. NIRSAL should consider designing targeted interventions and support programs that address the specific needs and capacities of women farmers with lower income levels.

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