NIGERIAN ASSOCIATION OF AGRICULTURAL ECONOMISTS (NAAE)
24TH ANNUAL CONFERENCE IMO 2024 – PROCEEDING
15th – 18th October, 2024

THEME: "Environmental Sustainability: Food and Water Security"

Barriers to cooperative membership and participation in off-farm activities faced by couples and non-couples in selected states of Nigeria

H. Sallawu*, Y. O. Gbadamosi, P. D. Adebayo, U. J. Adama, I. S. Ugochukwu, S. O. Salami, M. Shehu, J. N. Nmadu
Department of Agricultural Economics and Farm management, Federal University of Technology, Minna, Nigeria
*Corresponding author: Email: halima.sallawu@futminna.edu.ng, Phone: +2348034532845

Abstract
The study aimed at examining the barriers to cooperative membership and off-farm activities participation faced by couples and non-couples in selected states of Nigeria. The research question is that what are the barriers to cooperative membership and participation in off-farm activities faced by couples and non-couples in the study area. The research was conducted in six Nigerian states using structured questionnaires to collect data from 820 selected respondents, analytical techniques including descriptive statistics, factor analysis, and structural equation models were employed. On the basis of the socio-economic findings of the study, it was revealed that cooperative members, especially adult males, outnumber non-members across all states which suggest wide gender disparities. Regional variations in gender disparities in cooperative membership also exist stressing the need for inclusive policies and targeted programs for youth and elderly. Commitment, transparency, economic status, and employee efficiency are significant while inadequate infrastructure, poor communication, and limited education affecting participation are constraints. Robust cooperative institutions effectively linked to off-farm participation require improved infrastructure, access to education, corporate governance and sound financial management.

Keywords: Structural Equation Modelling, Factor Analysis, Latent variable, Sex and Gender

Introduction
Cooperatives play a crucial role in fostering economic development, social cohesion, and individual empowerment. They offer members numerous benefits, including enhanced access to resources, financial support, and collective bargaining power (Birchall, 2004). Cooperative membership can be particularly significant in rural and developing areas, where access to conventional financial services and markets is limited (ICA, 2020). However, the factors influencing individuals' decisions to join cooperatives are multifaceted and can vary significantly between different demographic groups, such as couples and non-couples. This study aims to explore both the mediating and non-mediating factors that influence cooperative membership among couples and non-couples, providing a comprehensive understanding of the dynamics at play. Couples in this study refers to a pair of people that is male and female who are bonded by marriage, committed to each other which may involves

planning for the future, sharing responsibilities and decision making. While the non-couples are individuals who are not any marital relationship with anybody.

Despite the recognized benefits of cooperative membership, there remains a gap in understanding the specific barriers that influence individuals' decisions to join cooperatives, particularly when comparing couples and non-couples. Previous research has primarily focused on general factors affecting cooperative membership without delving into the unique motivations and barriers faced by these distinct demographic groups (Birchall and Simmons, 2009). This study seeks to address these gaps by identifying key barriers faced by couples and non-couples in joining cooperatives. By distinguishing between the motivations and barriers faced by couples and non-couples, this study can provide targeted insights that help cooperatives tailor their outreach and support strategies to different demographic groups (Chaddad and Cook, 2004). The findings of this study can contribute to the development of more inclusive and effective cooperative models, ultimately enhancing their impact on economic development and social well-being (ICA, 2020). The state where selected randomly and the number of state selected was based on the resources available to the researchers. The specific objectives of the study were:

i. To describe the socio-economic characteristics of the respondents sampled for this study.
ii. To describe the common barriers to cooperative membership faced by couples and non-couples in the study area.
iii. To describe the common barriers to participation in off-farm activities faced by couples and non-couples in the study area.

Literature Review

Conceptual Framework

The conceptual framework for this research revolves around understanding the framework which distinguishes between the motivations and barriers faced by couples and non-couples in joining cooperatives. This distinction is crucial for developing tailored strategies to enhance cooperative membership across different demographic groups.

- Couples:
- Motivations: Couples might join cooperatives to enhance household economic stability, access joint financial services, and benefit from cooperative support systems. Joint decision-making processes and shared economic goals can influence their membership decisions.
- Barriers: Challenges might include joint decision-making, aligning individual interests, and balancing household priorities.
- Non-Couples:
- Motivations: Non-couples may prioritize individual economic empowerment, social networking opportunities, and personal development.
- Barriers: Social isolation, lack of peer support, and individual economic constraints can pose challenges.

Theoretical Review

This research is developed on four theories namely: Theory of Reasoned Action, Social Capital Theory, Resource Dependence Theory and Collective Action Theory. For couples, decision-making processes about joining cooperatives can be influenced by shared economic

goals, household stability, and joint financial planning. Theories like TRA and Social Capital Theory can help explain how couples negotiate and agree on cooperative membership based on mutual benefits and social norms. Common barriers to cooperative membership include lack of awareness, mistrust in cooperative management, and limited access to information (Bhuyan, 2007). Couples and non-couples may face additional specific barriers. For instance, couples might encounter challenges related to joint decision-making and aligning individual interests, while non-couples may face barriers related to social isolation and lack of peer support (Birchall and Ketilson, 2009). Identifying these barriers can inform the development of targeted strategies to overcome them.

Methodology

This research was conducted in six selected states in Nigeria, namely, Federal Capital Territory, Kogi and Niger in central Nigeria, Anambra in the South-East, Kaduna in the North-West and Osun in the South-West. Apart from Niger State that shares international boundary with the Republic of Benin to the West, all the other states are internally bounded as shown in Table 1 and Fig. 1. The states were selected randomly and the number of the states was based on the resources available to the researchers.

To achieve the stated objectives of this study, two local government areas were selected in each of the states in the study where a sampling frame of the membership of cooperative societies were established. Based on the available information and resources. A proportionate sample was drawn from the sampling frame given a total of 820 in the study as shown in Table 2. As can be observed, it appears that membership of cooperative societies is stronger in the northern parts and diminishes southwards. The main data used for this study are from primary sources collected from respondents with the aid of structured questionnaire and interview schedules.

To achieve the various stated objectives of this research, a combination of analytical techniques was utilized. First, various descriptive statistics were used including means, standard deviations and percentages and the results were presented in tables and graphics. In addition, factor analysis and structural equation modelling (SEM) were employed to determine the nature of inter-relationships between the various barriers and the number of latent factors inherent in them (Tables 3 and 4).

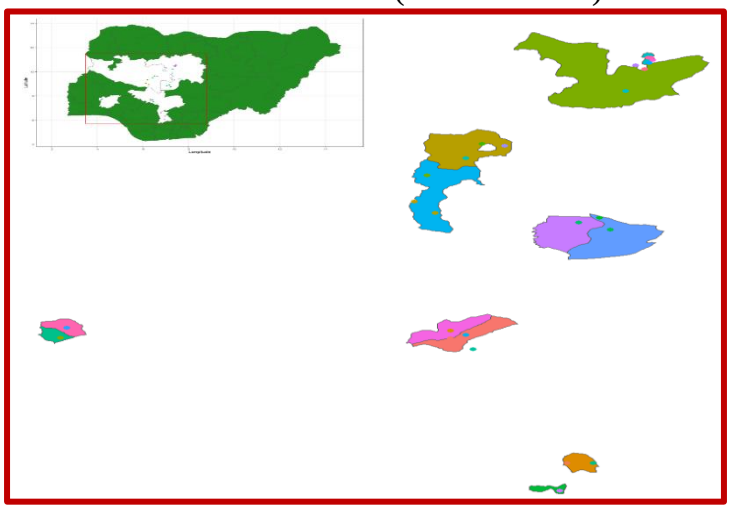

Fig. 1 Geographical location of the Nigerian states included in this study

Table 1: Location and description of the Nigerian states included in this study

State	Location		Number of LGAs	Major tribes	Major Economic activities	Population	LGAs in the study	Communities in the Study	Annual Rainfall	Annual temperature	Major crops produced
Osun	7°30′-8°00′N	4°00′-4°45′E	30	Yoruba	Farming	44,350,800	Iwo, Ola-oluwa	Agbelere , Binukonu, Ifalere, Kajola	1100-800 mm	21.10C-31.10C	Cocoa, kola, citrus, oil palm, maize, yam, rice, cassava, tomato, pepper
Kogi	7°20′-8°10′N	6°20′-7°10′E	21	Igala, Ebira, Okun	Farming, Mining	5,685,864	Adavi, Okehi	Eganyi, Kuroko, Ohuogogo, Okuha-ovo, Iruvu-papanchi, Eganyi, Iresuegeze, Abobo, Atami, Aku	1016-1524 mm	24-27°C	yam, cassava, maize, cowpea, melon, bambara nut, beniseed, oil palm, castor, cashew, citrus
Niger	9°00′-10°30′N	5°30′-7°10′E	25	Nupe, Gbagyi, Hausa	Farming, Fishing	6,783,300	Bosso, Katcha	Badeggi, Bakeko, Bisanti, Garatu, Maitumbi, Bosso	1219 mm	26.10-30.30°C	rice, guinea corn, maize, yam, beans, groundnut, sugarcane
FCT	8°30′-9°30′N	6°30′-7°30′E	6	Gbagyi, Koro	Administration, Tourism, Farming	3,278,779	Kwali, Kuje	Kilankwa, Dafa, Yangoji, Gwagwalada	1100-1600 mm	25-28°C	Maize, Rice, Cassava, Yam, Potatoes, Sweet potatoes, Tomatoes, Peppers, Cucumbers, Vegetables
Kaduna	9°30′-11°00′N	7°30′-8°30′E	23	Adara, Bajju, Atyap, Kamantan, Ham, Gbagyi, Gwong, Berom	Farming, Mining	9,032,200	Chikun, Kaduna North	Kabala Costain, Ungwan Rimi, Ungwan Shanu, Ungwan Sarki, Goin Gora, Ungwan Romi, Ungwan Yelwa, Nassarawa	1000-1300 mm	23-26°C	maize, rice, cowpea, groundnut
Anambra	5°30′-6°30′N	6°30′-7°30′E	21	Igbo	Farming, Trading	6,358,311	Awka North, Idemili South	Achalla, Ebenebe, Nnewi, Nnobi	212.36 mm	26.99°C	yams, taro, oil palm products, rice, corn, cassava, citrus fruits

Table 2 Sampling frame and samples drawn from the states included in the study

State	LGA	Sample frame	Member	Non-member	Total	%
Anambra	Awka North	50	30	11	41	5.00
	Idemili South	70	47	22	69	8.41
State total		120	77	33	110	13.41
FCT	Kuje	2525	80	20	100	12.20
	Kwali	778	37	13	50	6.10
State total		3303	117	33	150	18.29
Kaduna	Kaduna North	153	56	25	81	9.88
	Chikun	151	55	14	69	8.41
State total		304	111	39	150	18.29
Kogi	Adavi	90	59	18	77	9.39
	Okehi	80	38	5	43	5.24
State total		170	97	23	120	14.63
Niger	Katcha	415	38	20	58	7.07
	Bosso	635	50	28	78	9.51
State total		1050	88	48	136	16.59
Osun	Iwo	150	33	33	66	8.05
	Ola-Oluwa	200	44	44	88	10.73
State total		350	77	77	154	18.78
Grand total		5297	567	253	820	100

Table 3 Constraints to participation in off-farm activities

Constraint	Description
x01	State
x02	Poor transportation system
x03	Poor communication services
x04	Inadequate access to capital
x05	Lack of skill training and ability
x06	Rainfall variability
x07	Declining farm size
x08	Inadequate credit facilities
x09	Inadequate input delivery system
x10	No urban centre in proximity
x11	Lack of access to market
x12	Restriction on trade and movement
x13	Government policy
x14	Inadequate infrastructure
x15	Inadequate labour
x16	Terms of trade
x17	Limited availability of education
x18	Shortage of time

x19	Norms and religion
x20	Poor asset base
x21	Lack of awareness and training facilities
x22	Shortage of animal feed
x23	Unstable price of transportation cost

Table 4 Constraints to membership of cooperatives

Constraints	Description
x01	state
x02	Poor leadership
x03	Lack of commitment among members
x04	Lack of government support
x05	Corruption among members
x06	Lack of equal opportunities of members in taking decisions
x07	Inefficient cooperative employee
x08	Unqualified Management Committee Member
x09	Poor cooperative financial management and governance
x10	Lack of transparency and accountability of the Management Committee
x11	Weak economic status
x12	Difficult channel services
x13	Lack of cooperation among members

Results

The distribution of the respondents is presented on Table 3, Fig. 2 & Fig. 3 while Fig. 4 & Fig. 5 are the path diagram of the various constraints inter-connected with their respective latent variables. The results (Fig. 2 & Fig. 3) shows that those who are members and non-members of cooperatives are significantly different, but those who are members of cooperative are generally higher across all categories and states. Furthermore, adult males have the highest number among both members and non-members. Youth and elderly males are generally less represented compared to adult males and females. Kogi has the highest number of adult male members, followed by Osun and Kaduna. FCT and Niger also show significant numbers for adult males. Youth and elderly are lower across all states. Similar trends are observed with adult males being the highest in most states. Osun has a notably high adult males among non-members, followed by Niger and Kogi.

The factor analysis of the constraints to membership of cooperatives determined four latent variables as follows:
MR1 (Lack of commitment among members): When members are not committed, cooperative activities can suffer from poor participation, reduced trust, and inefficiency.
MR2 (Lack of transparency and accountability of the Management Committee): Transparency and accountability are essential for trust and effective governance. Their absence can lead to mismanagement and corruption.

MR3 (Weak economic status): The overall economic weakness of the cooperative or its members can limit the cooperative's ability to invest, expand, or sustain operations.
MR4 (Inefficient cooperative employee): The efficiency of cooperative employees affects daily operations, member satisfaction, and overall productivity.

Table 3: Age Distribution of the respondents

State	Sex	Min	Max	Range	Mean	Variance
Anambra	Female	20	67	47	42	28.73
	Male	21	58	37	31	48.62
Sub-Total		20	67	47	36	38.68
FCT	Female	20	59	39	36	58.77
	Male	20	75	55	43	32.56
Sub-Total		20	75	55	39	45.67
Kaduna	Female	18	60	42	42	27.62
	Male	18	70	52	41	27.38
Sub-Total		18	70	52	41	27.50
Kogi	Female	35	45	10	39	4.35
	Male	22	62	40	37	25.27
Sub-Total		22	62	40	38	14.81
Niger	Female	33	72	39	56	25.38
	Male	31	77	46	55	38.47
Sub-Total		31	77	46	56	31.93
Osun	Female	30	55	25	46	65.17
	Male	25	64	39	44	42.62
Sub-Total		25	64	39	45	53.89
Total All States		18	77	59	43	35.41
Female		18	72	54	43	35.00
Male		18	77	59	42	35.82
Total		18	77	59	43	35.41

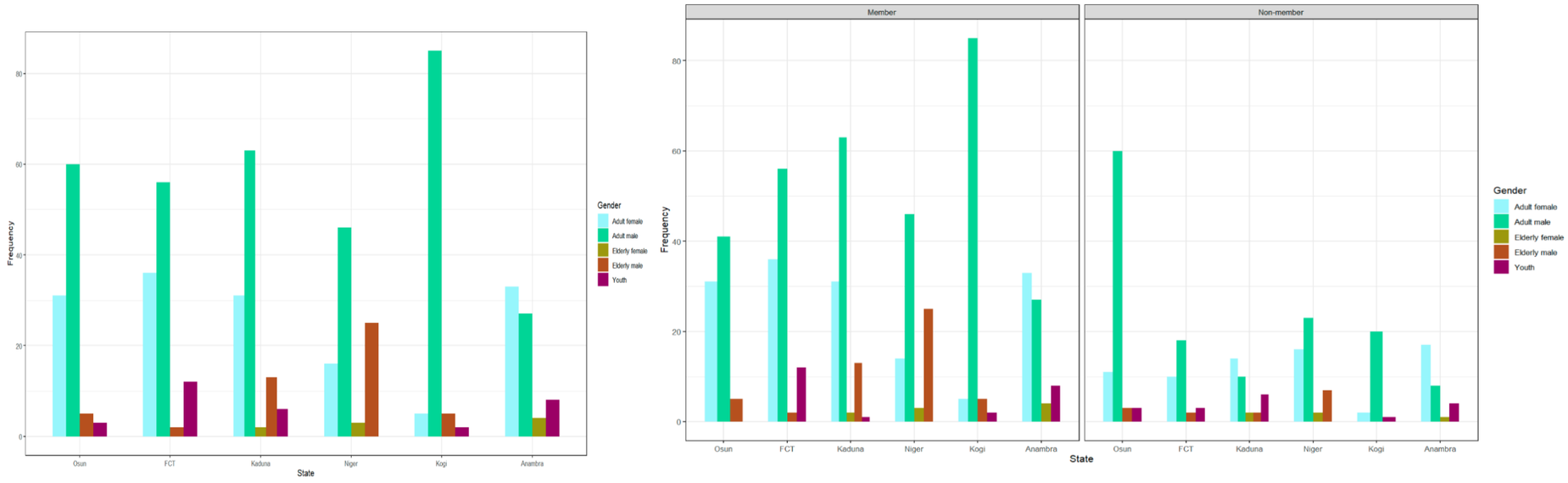

Fig. 2 Distribution of the respondents based on gender disaggregated by states and membership of cooperatives

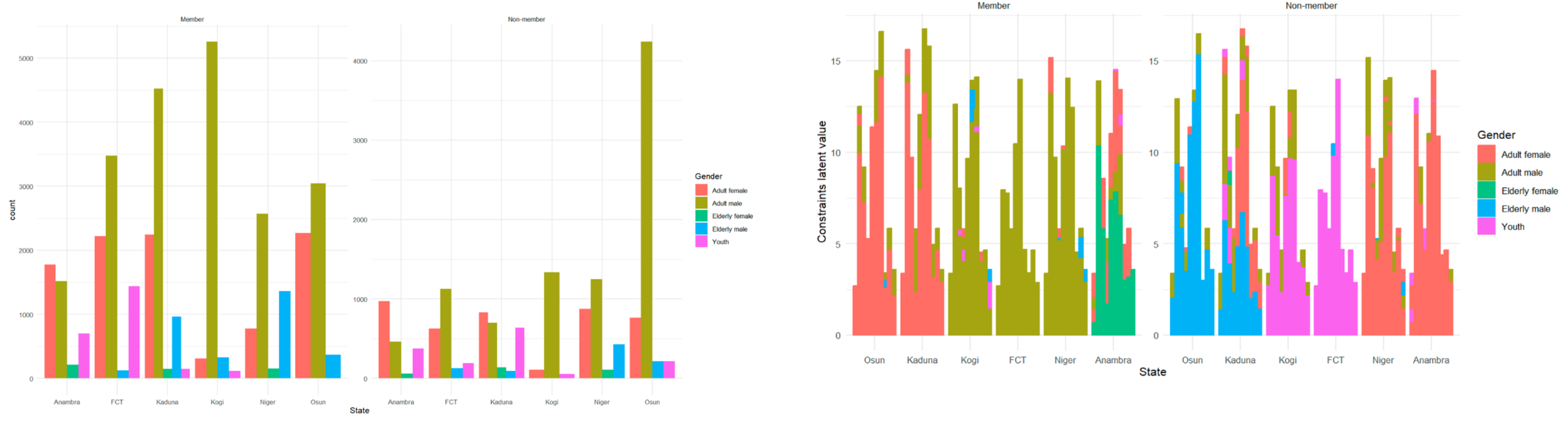

Fig. 3 Distribution of latent variables disaggregated by states, membership of cooperatives and gender

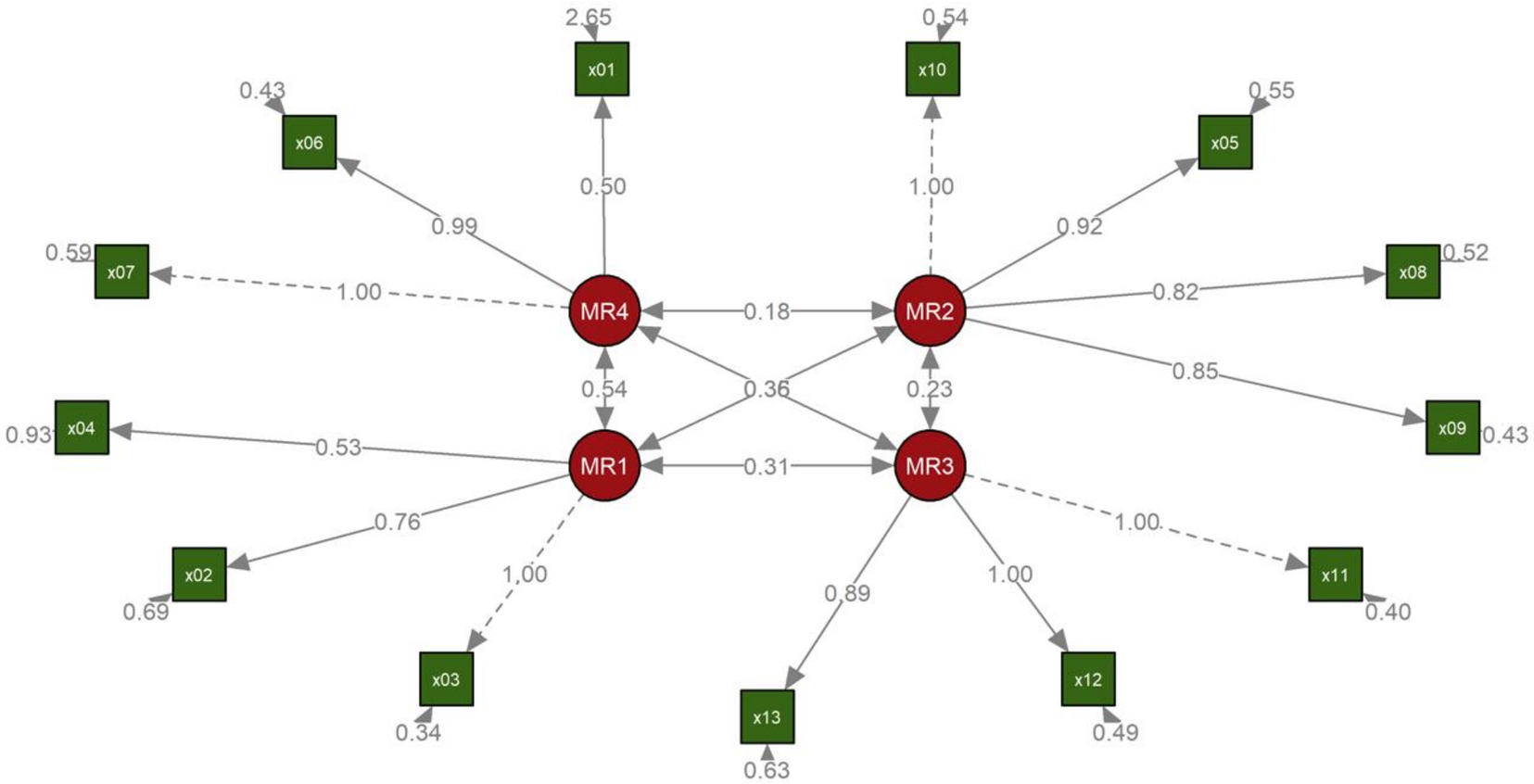

Fig. 4 Path diagram of the constraints to membership by the respondents in the study area

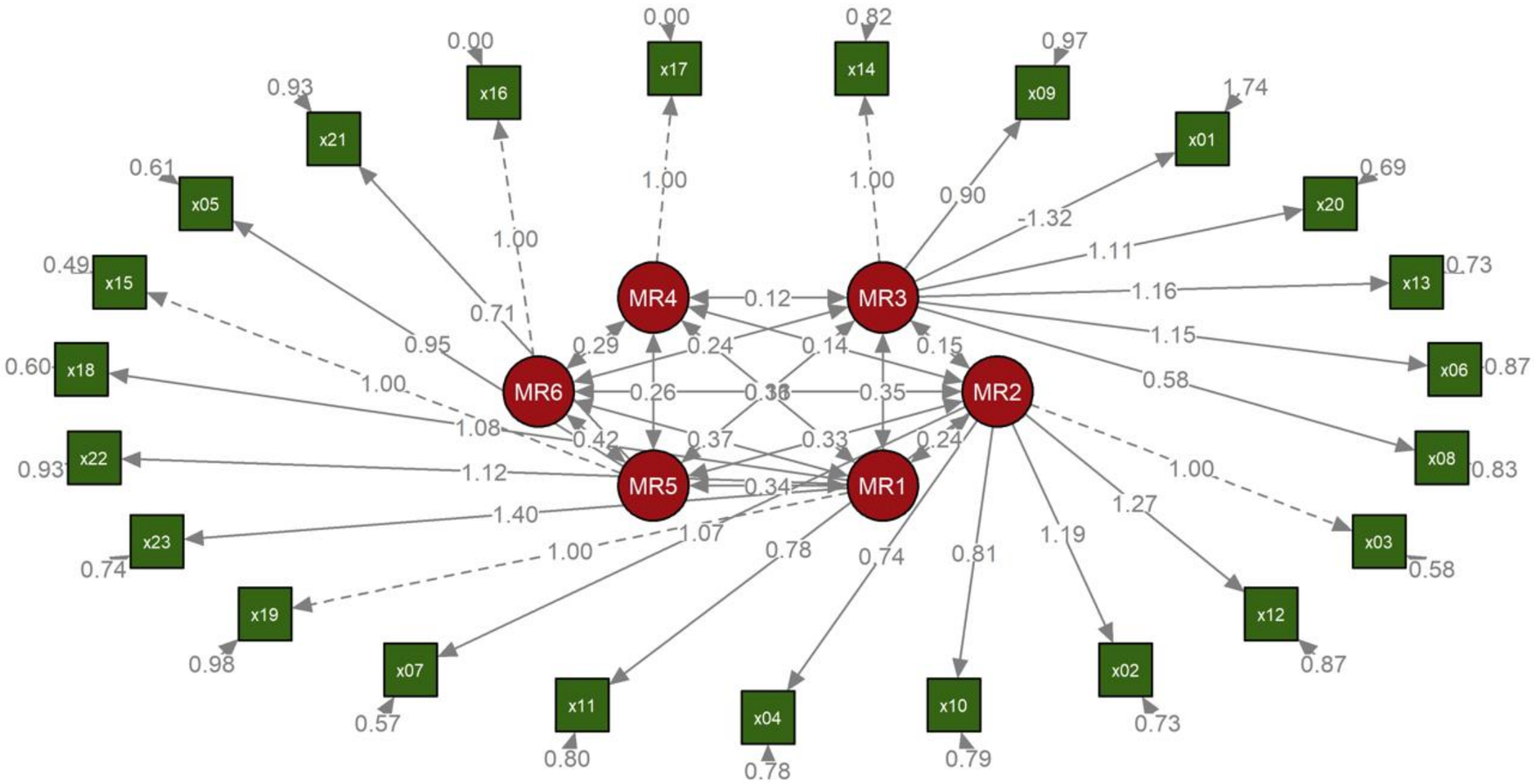

Fig. 5 Path diagram of the constraints to off-farm participation by the respondents in the study area

In the same vein, the constraints to off-farm participation contains six latent variables as follows:
MR1 (Norms and religion): Cultural and religious practices that may affect development activities, possibly influencing labor availability, market participation, or adoption of new technologies.
MR2 (Poor communication services): Limited access to reliable communication can hinder information flow, affecting market access, coordination, and education.
MR3 (Inadequate infrastructure): Poor infrastructure limits access to markets, healthcare, and education, and can reduce overall productivity.
MR4 (Terms of trade): Adverse terms of trade can affect the profitability and sustainability of agricultural activities.
MR5 (Inadequate labour): Shortages in skilled and unskilled labor can slow down development projects and reduce productivity.
MR6 (Limited availability of education): Lack of educational opportunities can stymie human capital development and innovation.
The inter-connectivity between the observed constraints and their inherent latent variables are further demonstrated in Fig. 4 & Fig. 5

Discussion
The results on Fig. 2 and Fig. 3 suggests a significant gender disparity, with adult males being the predominant group in both membership and non-membership categories. This trend aligns with existing literature that often finds men more involved in formal memberships and organizational activities, possibly due to sociocultural roles and economic opportunities (Kabeer, 1999). The variations across states could be attributed to different socioeconomic factors and the presence of institutions or programs that encourage membership. For instance, states like Kogi and Osun showing higher counts might have more active community programs or agricultural cooperatives that attract more members (IFAD, 2009). The lower counts of youth and elderly individuals highlight potential areas for intervention. Programs targeting youth and elderly participation could enhance community engagement and provide inclusive growth opportunities. Literature supports the need for inclusive policies that encourage participation across all age groups to foster balanced development (UNDP, 2015).

Based on the findings on Fig. 4 & Fig. 5, there is need for adequate infrastructure, particularly in rural areas to engender full participation in cooperative and off-farm activities absence of which severely limits economic growth and poverty alleviation (World Bank, 2020). Good infrastructure is crucial for accessing markets and services, which drives development. Also, Effective communication networks are essential for modern agriculture, enabling farmers to access market information, weather forecasts, and extension services (FAO, 2017) as poor communication services can isolate communities and limit their economic potential. UNESCO (2015) also stressed that education is a critical factor for development. A well-educated workforce is more productive and innovative. Limited availability of education restricts skill development and can perpetuate cycles of poverty. In the same vein, UN Women (2018) also opined that cultural and religious practices can significantly impact economic activities. For example, norms around gender roles may restrict women's participation in the workforce or limit the types of activities deemed acceptable.

Conclusion

This study shows significant gender disparities and regional variations in membership across different states in Nigeria. Adult males dominate membership and non-membership categories, with notable regional differences. Addressing the lower participation rates among youth and elderly through targeted programs could enhance overall community engagement and development. These findings align with broader literature on gender roles, regional socioeconomic factors, and the importance of inclusive development strategies. Furthermore, the determined latent variables provided a comprehensive set of constraints impacting development. By focusing on the highlighted major constraints and integrating efforts across various domains, sustainable development and improved livelihoods can be achieved. Collaboration between government bodies, NGOs, and the private sector will be essential in addressing these multifaceted challenges. The study therefore recommended that Governments and development practitioners can design more effective and inclusive cooperative programs that consider the unique needs and challenges of different groups within the population and create policies that improve infrastructure, enhance education systems, and provide incentives for private sector investments.

References

Bhuyan, S. (2007). The "people" factor in cooperatives: An analysis of members' attitudes and behavior. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie*, 55(3), 275-298.

Birchall, J. (2004). Cooperatives and the Millennium Development Goals. International Labour Organization.

Birchall, J., & Ketilson, L. H. (2009). "Resilience of the Cooperative Business Model in Times of Crisis". International Labour Organization.

Birchall, J., & Simmons, R. (2009). Cooperative membership: A practical guide. ILO.

Chaddad, F. R., & Cook, M. L. (2004). Understanding new cooperative models: An ownership-control rights typology. *Review of Agricultural Economics*, 26(3), 348-360.

Food and Agriculture Organization (FAO). (2017). Information and Communication Technology (ICT) in Agriculture. Retrieved from FAO

International Co-operative Alliance (ICA). (2020). Co-operative Governance Fit to Build Resilience in the Face of Complexity. Retrieved from ICA.

International Fund for Agricultural Development (IFAD) (2009). Gender in Agriculture Sourcebook. International Fund for Agricultural Development.

Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of women's empowerment. Development and Change, 30(3), 435-464.

UN Women. (2018). Gender Equality and Women's Empowerment. Retrieved from UN Women

UNDP (2015). Human Development Report 2015: Work for Human Development. United Nations Development Programme.

UNESCO. (2015). Education for Sustainable Development. Retrieved from UNESCO

World Bank. (2020). Infrastructure for Development. Retrieved from World Bank