



# Female Farmers' Participation in Off-farm Activities and their Determinants in Rural Bauchi State, Nigeria

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## Introduction

- Women have inadequate access to and control over the productive resources such as land, capital, agricultural inputs and technology (Fletschner and Kenney, 2014, SDG, 2018).
- African women farmers participate in off-farm activities mainly to augment their small agricultural income to ensure they meet their household livelihood responsibilities and needs (AfDB, 2015).
- The off-farm income refers to all income-generating activities except crop and livestock production (Barette et al., 2001; Lanjouw and Lanjouw, 2001).
- Thus, off-farm women activities contribute to the achievement of several Sustainable Development Goals (SDGs), particularly to the goals "No poverty", "Zero hunger", "Gender equity" and "Life on land".
- The aim of the study was to identify the major off-farm livelihood activities engage by rural women and its determinants in rural Bauchi state, Nigeria.

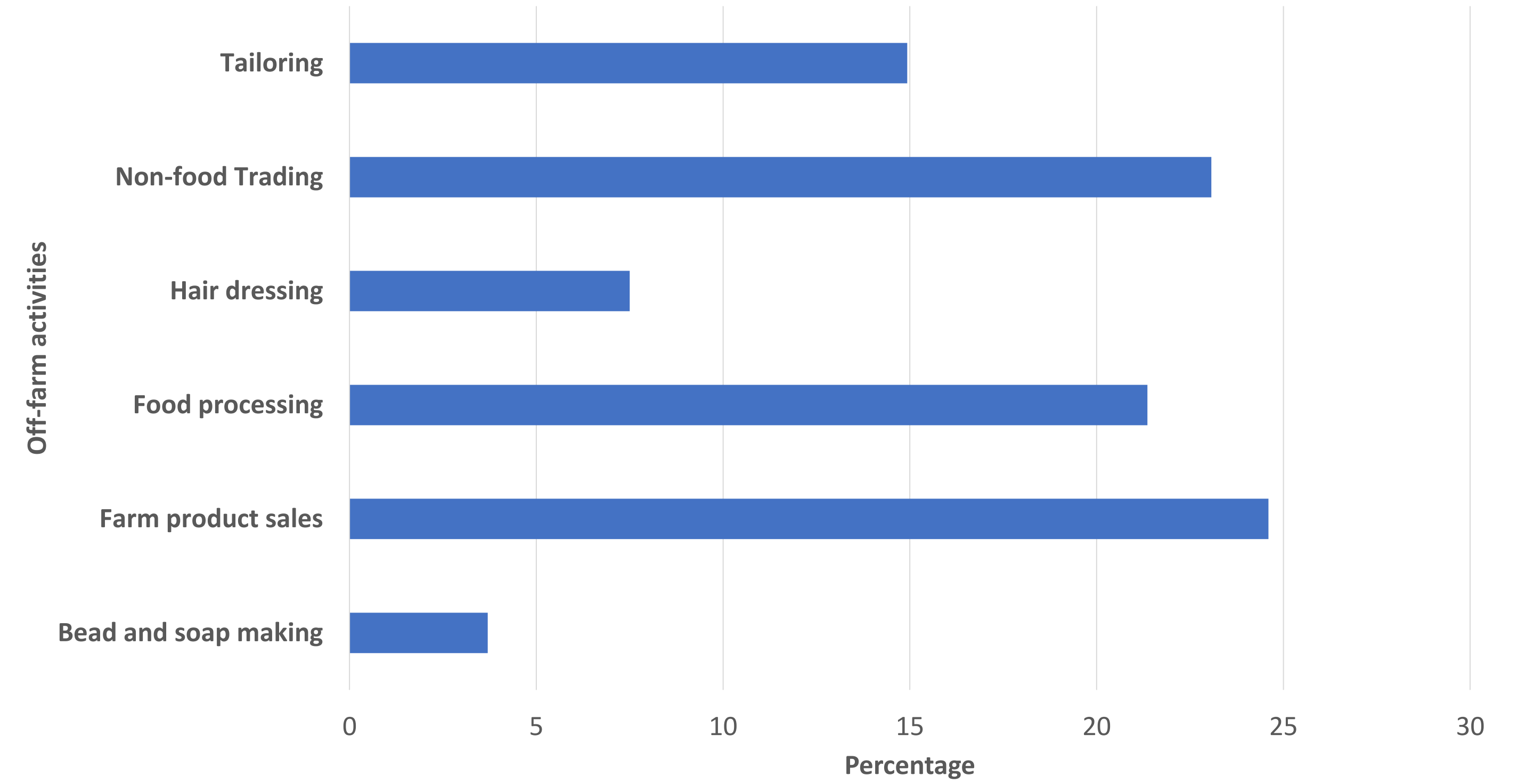


Figure 3. Different off-farm activities participated by rural women farmers

## Methodology

- The study was carried out in rural Bauchi state of Nigeria, 5% (134) of registered rural women farmers were selected using multi-stage sampling process.
- Data were collected on socio-economic characteristics, rural infrastructures and off-farm activities participated by women farmers using questionnaire survey in 2017.
- Descriptive statistics and logistic regression models were used for the analysis.

Table 1 shows that:

- Tailoring and food processing off-farm activities participation are found to significantly influence by access to credit, road and electricity, while trading is significantly influence by access to market.
- Married women, having high level of education, land ownership and access to extension contact significantly influence the women farmers likelihood to participation in tailoring, trading and food product sales.
- Having access to credit, road and electricity significantly influence their participation in tailoring and food processing while access to rural market influence their trading off-farm participation.

Table 1: Logistic regression result of factors influencing women off-farm participation

Variable	Tailoring	Non-trading	Food processing	Food product sales
Age	0.0263 (0.309)	-0.0016 (0.198)	0.0124 (0.188)	-0.0673 (0.207) *
Married	-0.1342 (0.749) **	0.1881 (0.877) **	0.0889 (0.652)	0.2919 (0.963) **
Level of education	0.0063 (0.438)	0.0183 (0.359)	0.0577 (0.331) *	0.1125 (0.369)
Number of dependents	-0.0046 (0.124)	-0.0195 (0.111)	0.0269 (0.130) **	-0.0219 (0.136)
Remittance	0.1826 (1.241) *	0.0302 (0.866)	0.0776 (1.056)	0.2143 (0.421)
Land ownerships	0.0209 (0.973)	0.1854 (0.769) **	-0.1187 (0.705) *	-0.1017 (0.785) *
Farm size	-0.0145 (0.255)	-0.4167 (0.199) *	0.0031 (0.114)	-0.5969 (0.158) **
Extension contact	0.0294 (0.279) **	-0.0239 (0.223)	0.0368 (0.247)	-0.0441 (0.282)
Access to credit	-0.1127 (0.289)	0.0159 (0.218)	0.0749 (0.326) **	0.0097 (0.229)
Access to road	0.1363 (0.409) **	-0.2116 (0.189)	0.1430 (0.177) **	-0.0763 (0.307)
Access to electricity	0.0634 (0.714) *	0.0012 (0.531)	0.1450 (0.595) **	0.1019 (0.587)
Access to market	0.0245 (0.781)	0.1790 (0.607) **	-0.0312 (0.659)	0.0693 (0.689)
Number of observations	134	134	134	134
Prob>Chi <sup>2</sup>	0.0084	0.0099	0.0029	0.0036
Pseudo R <sup>2</sup>	0.3259	0.2500	0.2971	0.2884

Marginal effect and standard error are reported (figures in parenthesis are standard error)  
\*\*significant at 0.05 and \*significant at 0.10

## Results

- The result (figure 1a) revealed that 42% of the rural women farmers are within the age bracket of 40-49 years followed by 30-39 years age bracket which constituted 29% of them.
- Figure 1b shows that 39% of the rural women farmers had secondary education and 33% of them had primary education.
- Result (figure 1c) depict that 43% of the respondents cultivated less than 1 hectare of land and only 17% of them cultivated more than 4 hectares of land.
- Figure 1d indicates that majority (63%) of the respondent earns between \$27.8-55.5 monthly and only 20% of them earns more than \$55.5 in a month.

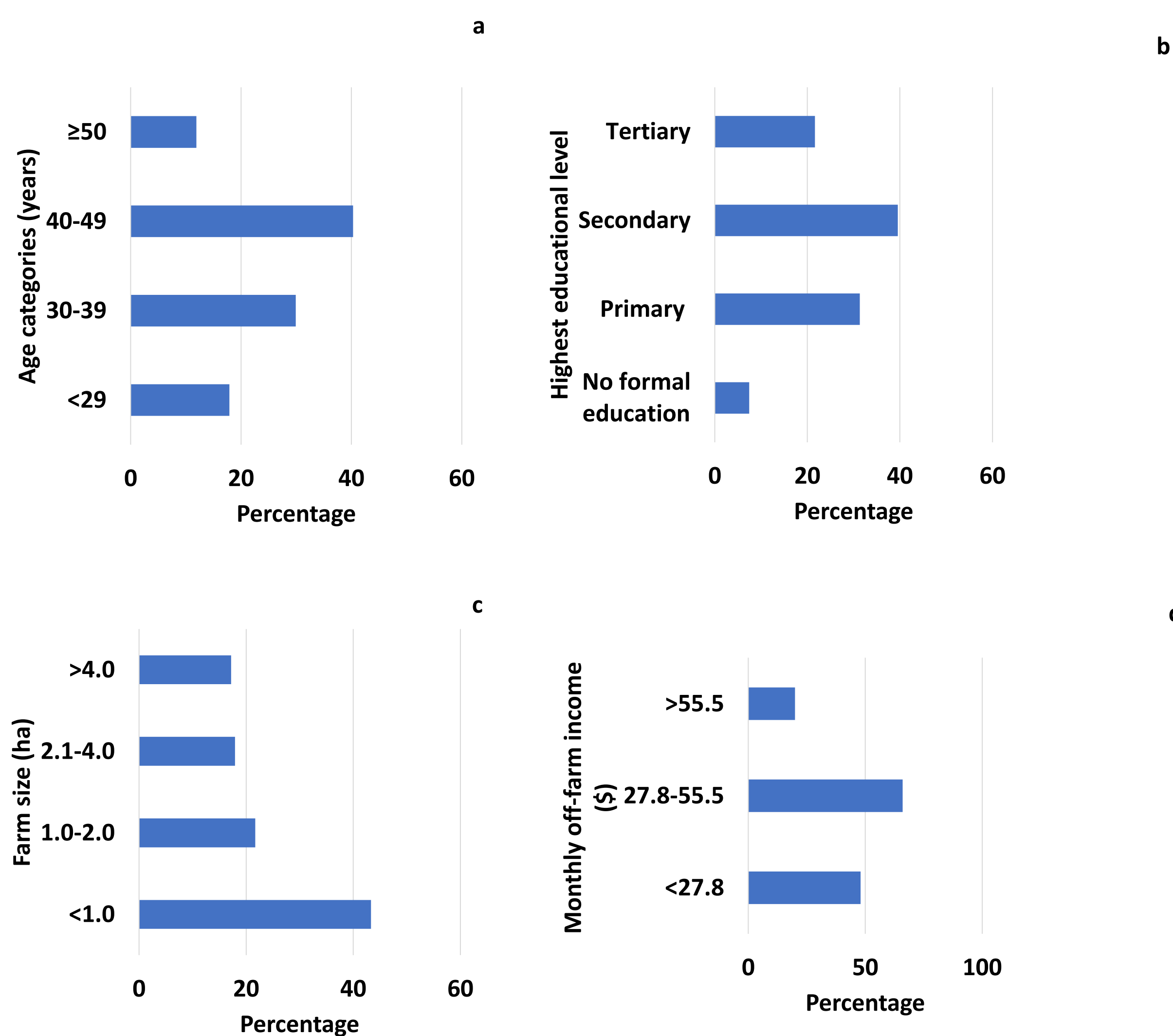


Figure 1. Socio-economic characteristics of rural women farmers

- The result (figure 2) shows that 58% of the rural women farmers owned a land and majority (76%) are married

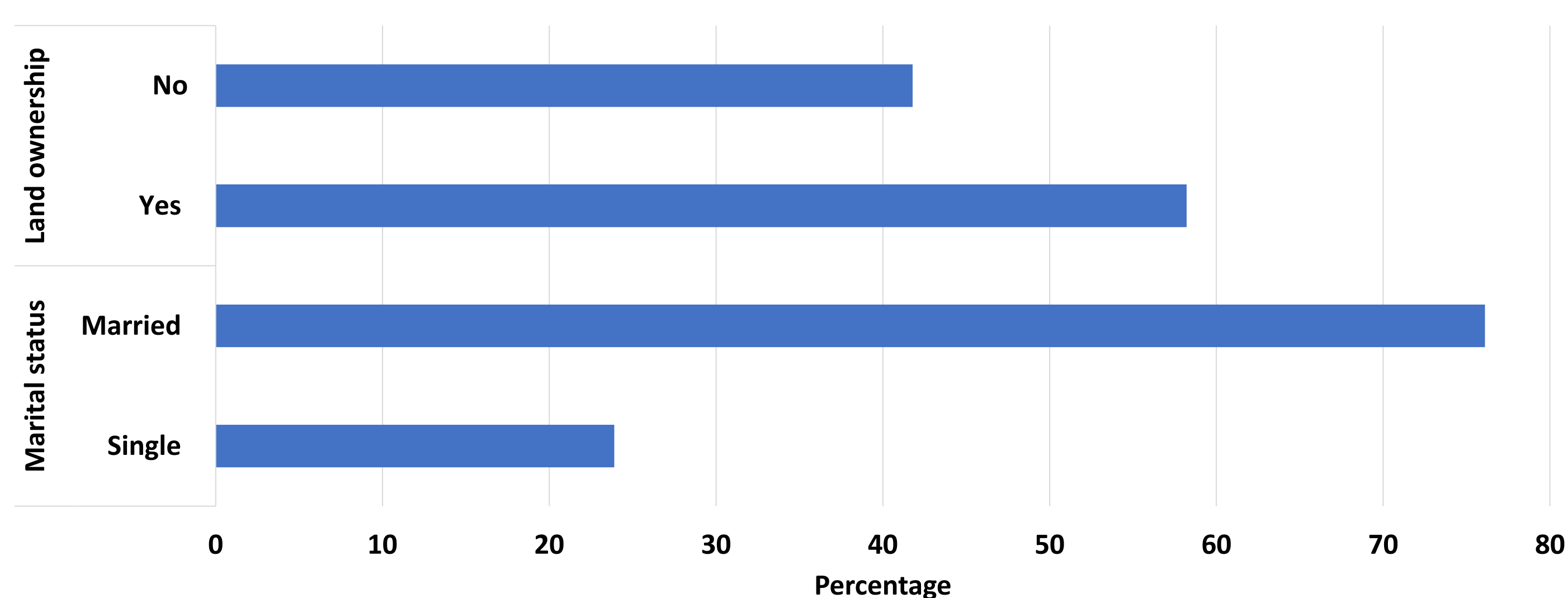


Figure 2. Land ownership and marital status of rural women farmers

- Figure 3. reveals that the major off-farm activities participated by rural women farmers are food product sale (24.63%), trading (23.13%), food processing (21.36%) and tailoring (14.93%).

## Conclusions

- Food processing, non-food trading and farm product sales are the most common off-farm activities engaged by rural women farmers.
- Being married, high level of education, land ownership are the main socio-economic characteristics significantly affecting the off-farm participation (non-food trading, food processing and food product sales) of rural women farmers, unlike farm size which affecting it in a negative way.
- Extension services, access to credit, are the major institutional factors influence their participation into tailoring and food processing.
- Access to road, electricity and market influence their participation into tailoring, non-food trading and food processing off-farm livelihood activities in a positive way.
- Focus should be directed to women with low level of education, landless women in programmes promoting off-farm activities in rural areas.
- As the study found out the significant influence of access to extension services, credit, electricity and market, we hereby emphasize the provision of extension services, facilitating rural credit programmes, provision of rural electricity, roads and markets.

## Bibliography

AfDB (2015). Empowering African women: An agenda for action, Africa gender equality index 2015.

Barrett, C. B., Reardon. T. and Webb, P. (2001). Non-farm income diversification and household livelihood strategies in rural Africa: Concepts, dynamics and policy implications. *Food Policy*, 26 (4), 333-350.

Fletschner, D., Kenney, L. (2014). Rural women's access to financial services: credit, savings, and insurance. In: Quisumbing, A.R., Meinzen-Dick, R., Raney, T.L., Croppenstedt, A., Behrman, J.A., Peterman, A. (Eds.), *Gender in Agriculture*. 187-208. [https://doi.org/10.1007/978-94-017-8616-4\\_8](https://doi.org/10.1007/978-94-017-8616-4_8).

SDG. (2018). Snapshot of gender equality across the Sustainable Development Goals. <https://www.unwomen.org//media/headquarters/attachments/sections/library/publications/2019/progress-on-the-sdgs-the-gender-snapshot-2019-two-page-spreads-en.pdf?la=en&vs=5814>