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Determinants of Household Dietary Diversity in the Yayo Biosphere Reserve of Ethiopia: an Empirical Analysis

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Abstract

Household dietary diversity (HDD) is an important nutrition outcome measuring the economic ability of a household to access a variety of foods during a determined period. For this, it has been increasingly used as indicator of food security. This paper examines the determinants of HDD. Data for this paper comes from the cross-sectional survey collected in March and April 2016 in two districts of Illu Ababora Zone, Oromia region of Ethiopia. Overall, 334 farm households of which 71 female headed households and 263 male headed households were surveyed. However, excluding those cases with missing of important data, we restricted our analysis to 306 observations. Following international guideline, 12 different food groups were used to calculate the household dietary diversity score, which is a continuous score ranging from 0 to 12. This score was then recoded to a three-level ordered categorical variable. A number of econometric modelling techniques were used to check for robustness and consistency of the results. Ordered probit, OLS regression and Poisson regression were used. Finally, sustainable livelihood framework of analysis was used to explain the results. The result shows that human capital, natural capitals and physical capitals are the main explanatory factors for HDD variations in the study context. Mediating the utilisation of livelihood assets, social relations, institutions, organisations, shocks and seasonality are also explaining variations in HDD. Livelihood strategies such as farm production diversity and non-farm income are significantly and positively influencing household dietary diversity. Similarly, livelihood outcomes such as meal frequency and household wealth status are also positively influencing household dietary diversity. Finally, it was argued that nutrition-sensitive agriculture interventions which promote production diversity would be more effective in improving household dietary diversity than the current push for market led production. The current promotion of export crops at the expense of crops diversity will hurt household dietary diversity given the apparent poor market-integration, rugged terrain, poor infrastructure development and fragmented institutional arrangements at the study areas.

Keywords: Biosphere reserve, dietary diversity, farm diversity, livelihood, ordered probit