Agricultural production diversity, dietary diversity, and nutritional status: Panel data evidence from Tanzania

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ABSTRACT

Household agricultural production for self-consumption is often highlighted by nutritionists as the main route to increasing household food security and nutritional status, especially for the poor in developing countries. At the same time, from an economic perspective, dependence on own production to meet consumption needs risks reducing income from agriculture, usually livestock, crops and poultry, which can also have negative effects on overall nutrition. Our study aims at analysing the linkages between the diversity of a household’s agricultural production, the quality and diversity of their diets, and the nutritional status of their children. Our study, which takes place in Tanzania, includes fish as a farming product because many households in the country supplement their dietary needs with fish. Using three waves of the Tanzania National Panel Data Survey and panel data estimation techniques, our preliminary results indicate that diversifying a household’s agricultural production significantly increased diversification in that household’s diet. However, the effect was small. This marginal effect implies that farmers would have to produce 11 additional agricultural products (livestock, crops, poultry or fish products) to increase their dietary diversity by one food group. We also found that market orientation in addition to own consumption of agricultural products had a significant effect on dietary diversity, but this effect was small as well. Instead, the effects of education and overall income are shown to be more
important than either diversity in, or market orientation of, agricultural production. At the same time, the nutritional status of children was not found to be linked clearly to general dietary diversity, which suggests that health interventions which focus on a few target measures to improve children’s nutritional status rather than on their overall well-being may be inappropriate.