Price and Tax Policy for Semi-Subsistence Agriculture in Ethiopia

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Tax and food price policies are important mechanisms for affecting smallholder food supply.
In the case of semi-subsistence agriculture where wage employment is not available, the role played by prices and taxes in determining production and consumption decisions is not clearly established by economic theories of household choice. This study demonstrates that where choices in production, consumption, and leisure can be made independently, farmers will decide what to grow on the basis of their preferences for marketed goods, and will also be affected by the level and type of taxation.

The model shows the impact of four taxes — agricultural revenue, land (either a head tax or a tax based on land area), production, and marketed goods consumption — on crop production and tax revenues. The results demonstrated that a production tax curtailed output while a lump-sum land tax expanded production. The impact of a tax on agricultural revenue or on products sold in the market depends on the farmers' preferences for marketed goods.

For Ethiopia, a model of production was estimated for eight food crops for semi-subsistence households. In general, production responded to changes in relative expected prices, land availability, level of household demand, and sowing period rainfall. Production of teff, wheat, chick peas, and sorghum was found to increase with higher prices, and production of field peas was found to fall. Evidence suggests that expanding the amount of arable land will raise farmers' output of wheat, chick peas, maize, and sorghum.

These results give strong evidence of the role of producer and consumer prices in semi-subsistence agriculture. In addition, the results show the importance of production capacity, household demand, and climatic factors, supporting a balanced approach to agricultural development that recognizes the joint roles of prices, production capacity, and demand.

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