



An analysis of adoption of crossbred poultry and its impact on well-being among rural poultry-keeping households in Ethiopia.

Background and Objectives

- ✓ Poultry products are predicted to gain a substantial increase in demand in all regions of the world by 2030. [1]
- ✓ The potential of rural family poultry is perceived to be significant in terms of poverty alleviation and food security. [2]
- ✓ Ethiopia Livestock Master Plan (LMP) aims to improve semi-scavenging rural family poultry systems utilizing crossbreeding. [3]
- ✓ Poultry package embedded in nutrition and livelihood interventions transferred to women increased egg sales and consumption among women and children. [4]

Considering increasing efforts to achieve improved semi-scavenging rural family poultry systems, and a significant spike in the adoption rates, the objectives are to study:

- gender-specific perceptions and determining factors of crossbred chicken adoption.
- potential gains from crossbred versus local breed adoption.

Data

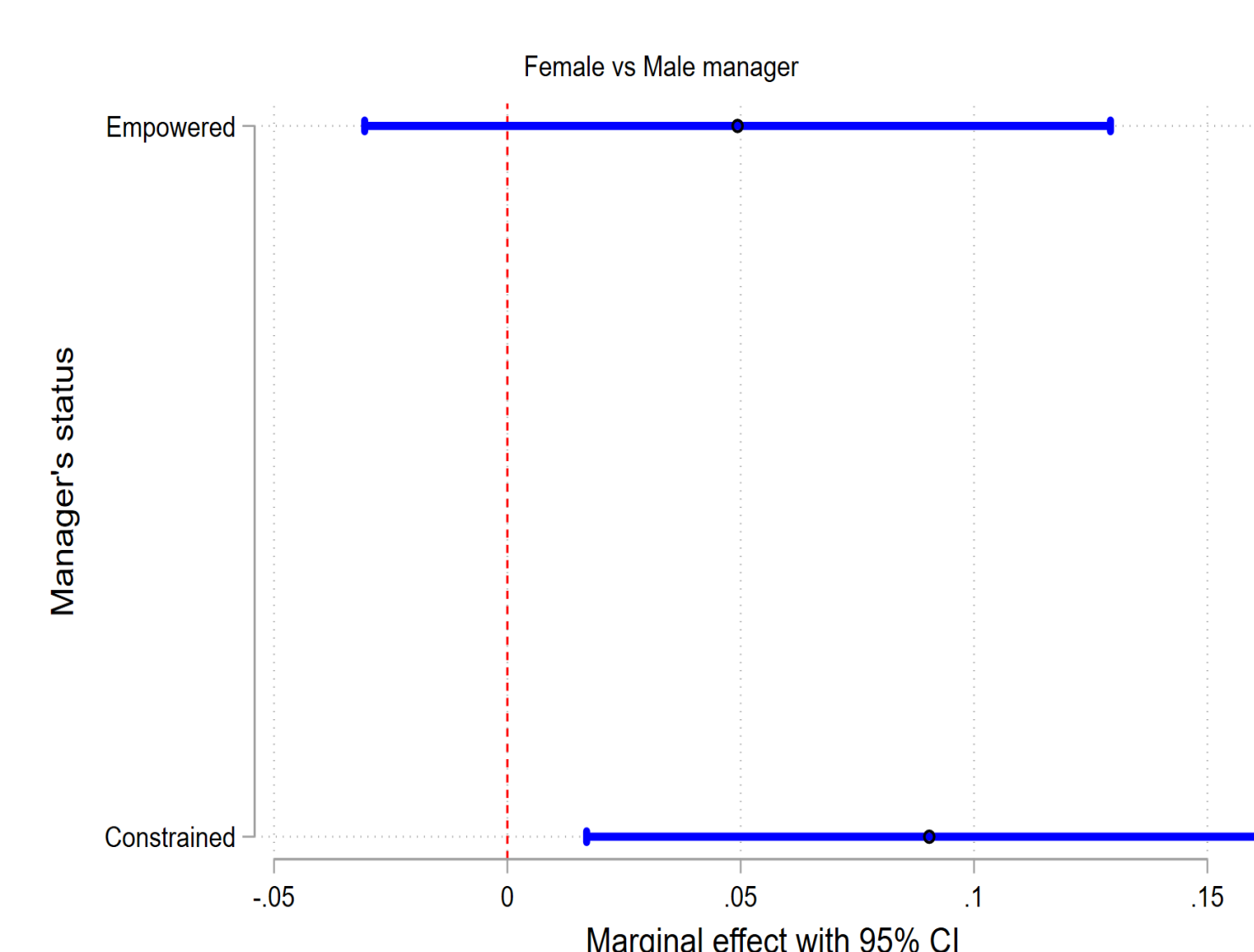
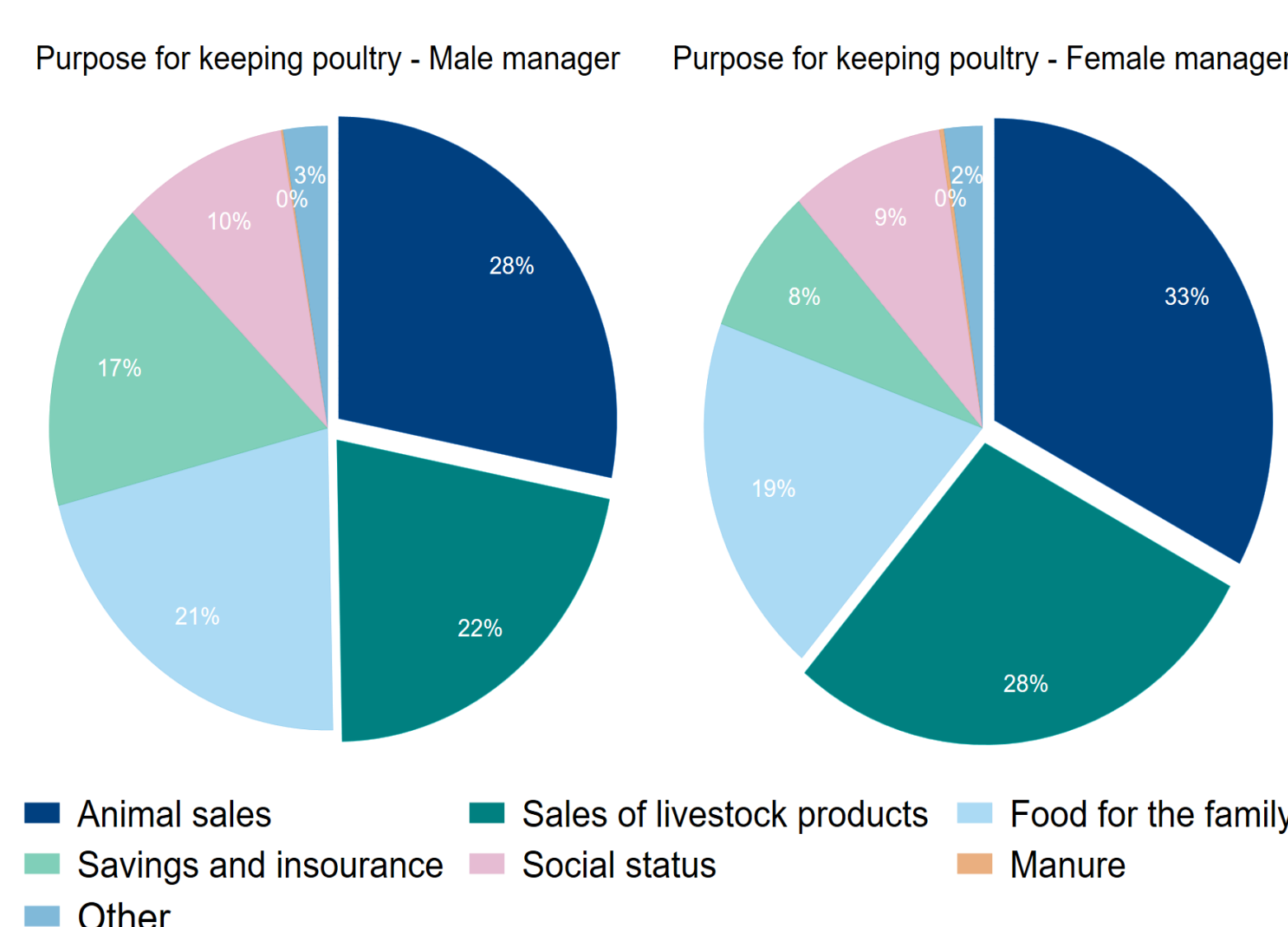
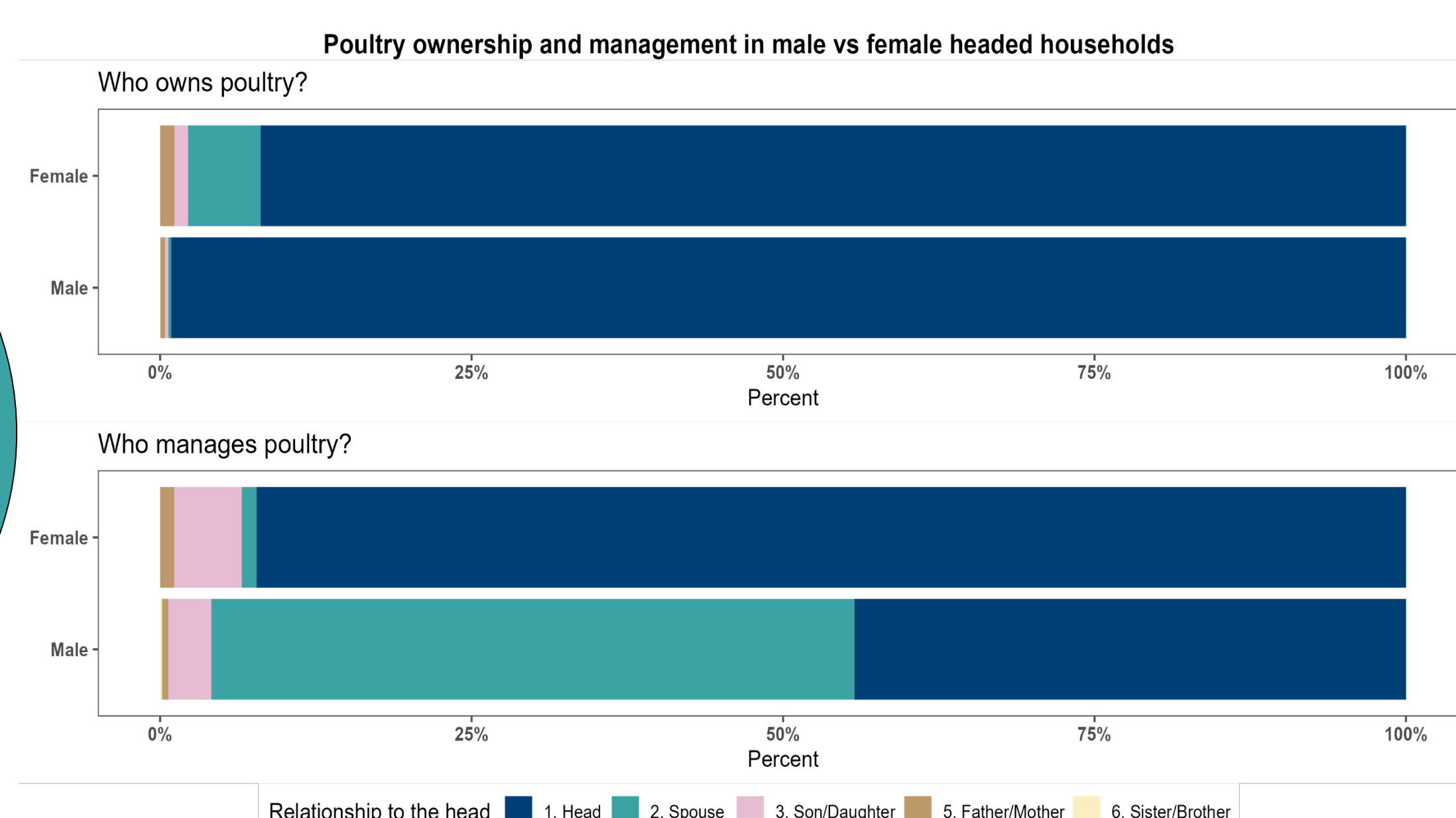
- ✓ The study employed the baseline survey data of second panel Ethiopian Socioeconomic Survey (ESS) happened between September 2018 and August 2019. [5]
- ✓ The data is a product of collaborative efforts to improve available agricultural data by the World Bank Living Standards Measurement Study-Integrated Surveys on Agriculture (LSMS-ISA) team and the Central Statistics Agency of Ethiopia (CSA).
- ✓ Data contains 1252 poultry-keeping households - 1177 have complete information.

Methods

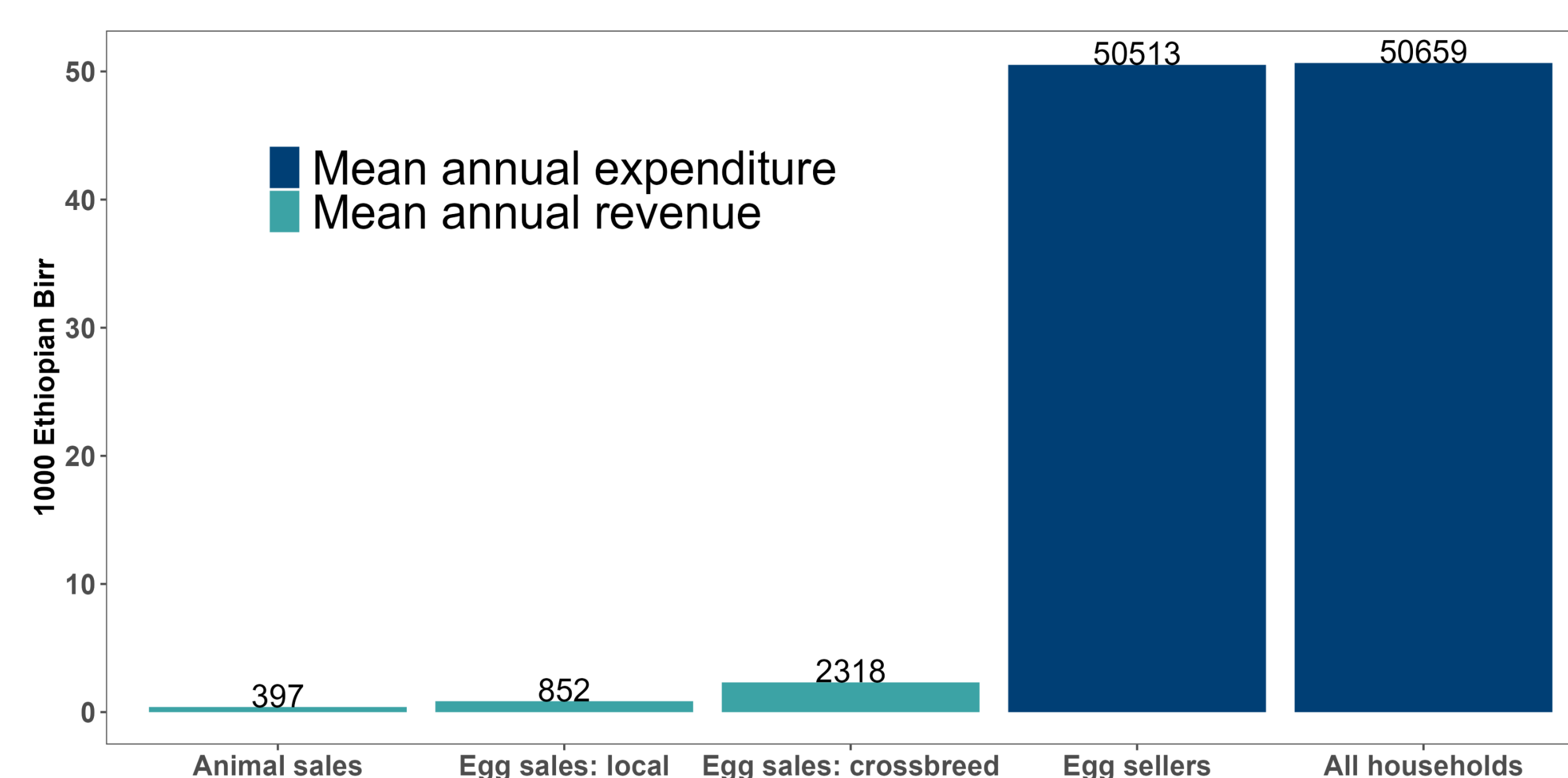
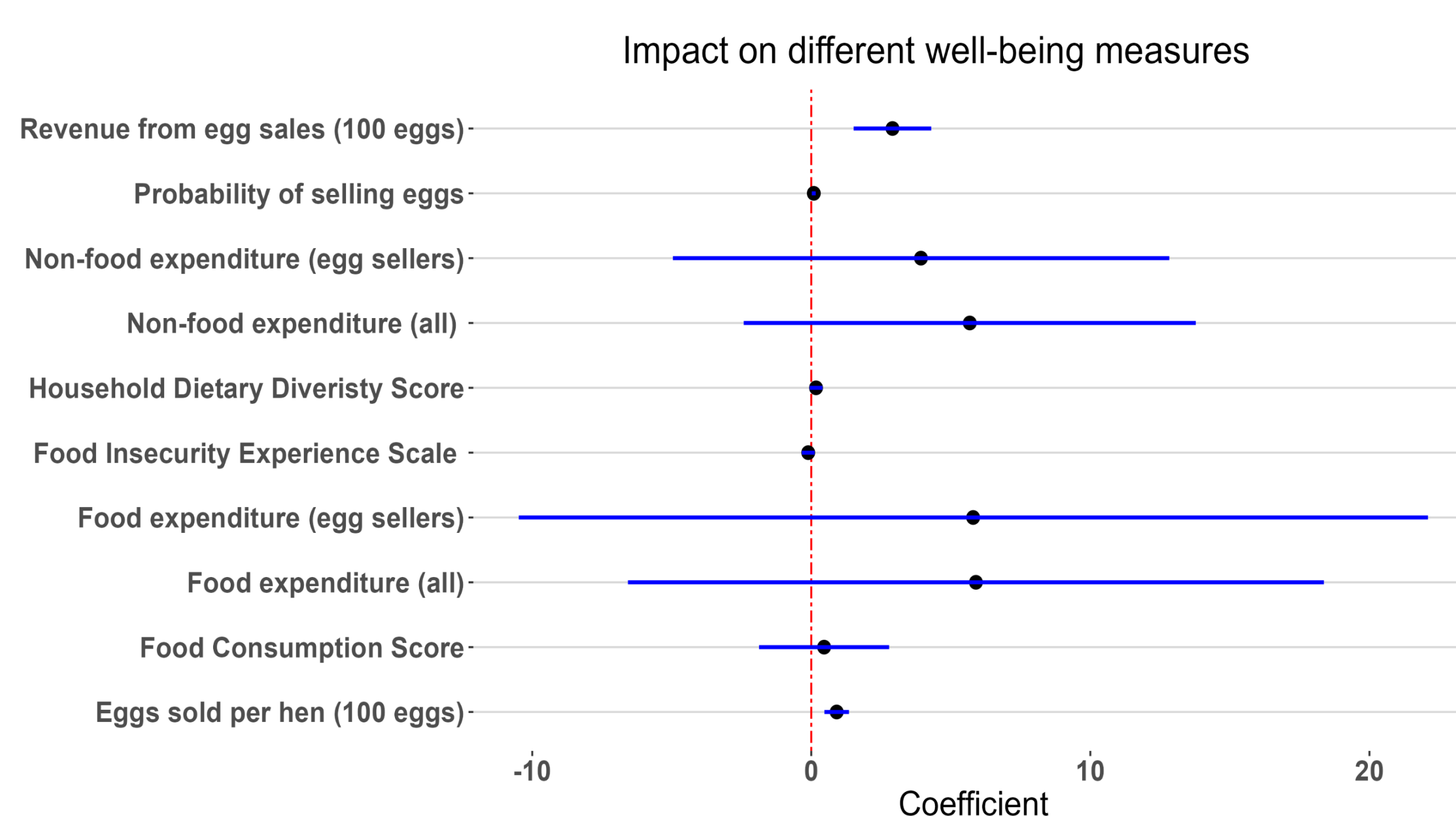
- ✓ Missing counterfactual and potential endogeneity are fundamental challenges here.
- ✓ We resort to matching methods and construct counterfactual using non-treated (i.e. local breed adopters) observations.
- ✓ Doubly robust Inverse-Probability-Weighted Regression Adjustment (IPWRA) is employed:
 - 1st step: Probit model - inverse probability weights are computed.
 - 2nd step: Weighted regression models are run.
 - 3rd step: Average treatment specific outcomes are estimated.

Results

Gender-specific perceptions



Potential gains



Conclusions

- ✓ Dissemination and animal health services should target women.
- ✓ An average household has around 3 layer chickens; flock sizes need to be increased to sustain household incomes in a way that significantly contributes to their livelihoods.
- ✓ Poultry development roadmap in Ethiopia LMP could significantly contribute to poverty alleviation if traditional family poultry productions are successfully improved with more crossbred birds.



References

- [1] FAO (2011). Mapping supply and demand for animal-source foods to 2030: Animal Production and Health Working Paper 2. Ed. by T. P. Robinson and F. Pozzi.
- [2] Gueye, E. Fallou. (2000). "The Role of Family Poultry in Poverty Alleviation, Food Security and the Promotion of Gender Equality in Rural Africa". In: Outlook on Agriculture 29.2, pp. 129–136. issn: 0030-7270.
- [3] Shapiro, Barry et al. (2017). Ethiopia livestock sector analysis: A 15-year livestock sector strategy. ILRI Project Report. Nairobi, Kenya.
- [4] Alderman, Harold et al. (2022). "The role of poultry transfers in diet diversity: A cluster randomized intent to treat analysis". In: Food Policy 107, p. 102212. issn: 03069192.
- [5] Central Statistical Agency of Ethiopia. Ethiopia Socioeconomic Survey (ESS4) 2018-2019. Public Use Dataset. Ref: ETH_2018_ESS_v01.

