Structural Constraints and Women's Agency in Agriculture: Micro-Evidence from Indonesia

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Abstract

Women's contributions to agricultural production in low- and middle-income countries are well documented, yet their decision-making power, access to resources, and ability to influence economic outcomes remain structurally constrained. In rural economies with limited mechanization and heavy reliance on household labor, women not only shoulder substantial agricultural work but also bear disproportionate domestic and caregiving responsibilities. These dual burdens contribute to persistent gender gaps in productivity, time allocation, and intra-household bargaining—patterns that critically shape women's agency in the context of broader structural transformation. Despite rapid economic transitions underway across Southeast Asia, rigorous micro-level evidence on the mechanisms through which such constraints operate within agricultural households remains limited.

Indonesia represents an important case for understanding these dynamics, given its large agricultural workforce and significant regional diversity in gender norms, cropping systems, infrastructure access, and institutional environments. Yet empirical research linking women's empowerment to concrete structural determinants remains scarce. Existing studies tend to examine single factors—such as education, land rights, or participation in extension programs—rather than analyzing how multiple structural constraints interact to shape empowerment and decision-making. Furthermore, there is limited quantitative evidence based on standardized empowerment indices that capture multidimensional agency across agricultural and household domains.

This study addresses these gaps by drawing on original microdata from 1,500 female farmers surveyed across four diverse agricultural regions: Lahat (South Sumatra), Kolaka (Southeast Sulawesi), Garut (West Java), and Hulu Sungai Utara (South Kalimantan)**.** These districts represent distinct agro-ecological zones, market access conditions, and sociocultural environments, enabling comparative insight into how structural barriers shape women's empowerment across varied rural contexts. We construct a multidimensional empowerment index consisting of ten indicators across five domains—production, resources, income, leadership, and time allocation—each weighted equally to capture granular variation in women's agency.

The findings reveal substantial empowerment deficits: only 16% of women are classified as empowered, with an average empowerment score of 0.72 and a disempowerment score of 0.33. Information access emerges as one of the strongest predictors—participation in civil-society organizations significantly reduces disempowerment, underscoring the role of networks in easing mobility constraints and improving women's access to productive knowledge. Education at both secondary and tertiary levels also enhances empowerment.

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Financial inclusion shows encouraging but statistically weak effects. Formal savings and participation in financial training display negative coefficients—consistent with empowerment improvements—but their lack of significance suggests that current financial services have not yet translated into meaningful shifts in decision-making or economic control. This finding points to a gap between financial access and effective financial agency.

Demographic patterns present nuanced life-cycle dynamics. Age is a strong predictor and follows a quadratic form: empowerment improves as women age, but the positive coefficient on age squared indicates diminishing gains at older ages. This pattern reflects shifting time-use pressures—from childcare and household labor in early adulthood to evolving social roles later in life. The number of children is not significant in the full sample but shows heterogeneous regional effects, highlighting variations in childcare burdens and community support systems. The number of dependents is consistently insignificant, suggesting limited influence on women's economic agency.

Labor and asset variables remain powerful structural indicators. Wage labor participation reduces disempowerment, while home ownership significantly increases empowerment. A husband's employment status similarly strengthens agency, likely by easing liquidity constraints and stabilizing household economic conditions.

Overall, the results illuminate how structural determinants—information systems, life-cycle dynamics, labor arrangements, and asset control—shape women's economic empowerment within agricultural households. By linking micro-level measures of agency to broader processes of structural transformation, this study contributes new evidence to the understanding of how gendered time-use patterns and household constraints interact with economic transition. The findings identify policy priorities centered on improving information access, strengthening mobility rights, and expanding equitable asset ownership as essential pathways for enhancing women's economic participation during periods of structural change.