

# Female Wage Labour and Rural Development

## Evidence from Kenya's Cut-Flower Boom

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*Can a flower farm create a town? Kenya's cut-flower boom created wage jobs for women, spurred urbanisation and in-migration, and lowered fertility.*

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### Topic at a Glance

Structural transformation is often characterised as a reallocation of labour from agriculture to manufacturing and services. An equally important dimension, however, is the reorganisation of work from small-scale self-employment and family production to wage employment in larger firms. This transformation has proceeded slowly in sub-Saharan Africa, where self-employment dominates and large firms capable of generating stable wage jobs at scale remain rare. At the same time, attention has focused primarily on urban and manufacturing job creation, even though rural areas still house most of the population and will absorb a large share of new labour market entrants for decades to come. Whether stable wage jobs can emerge in rural areas and seed the growth of new towns and cities is therefore central to the region's development trajectory.

This brief summarises findings from a study of Kenya's cut-flower industry, which experienced significant growth from the late 1990s onwards. Flower farms entered originally rural, agrarian locations across the Kenyan highlands, creating large numbers of stable, year-round wage jobs. Because the industry also happens to be strongly female-biased, with women holding most of its salaried positions, the setting makes it possible to trace how new wage work shapes women's lives in particular, from employment to



*Greenhouses are highly visible from space. Satellite snapshot of a Kenyan flower farm: the bright rectangular structures are greenhouses, which the authors use to locate each farm and date its entry by searching backward through historical imagery.*

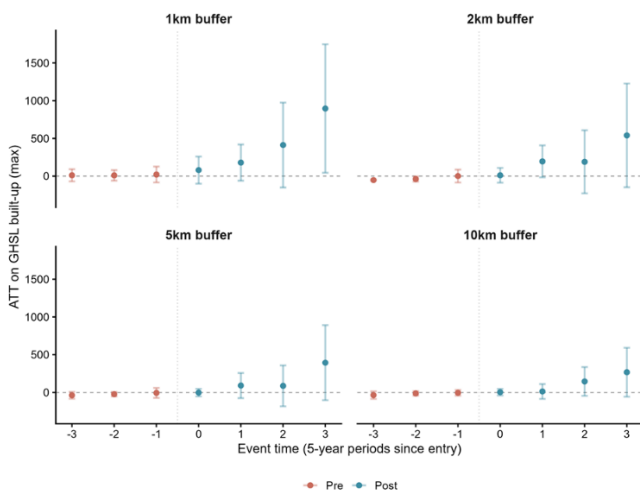
marriage and fertility, alongside the development of the local economy as a whole. The study tracks 238 farms, geo-located from satellite imagery and dated by their year of entry, and compares locations that receive a farm with control locations that looked similar beforehand on key predictors of rural development (such as market access through the road network and suitability for revenue-generating cash crops like coffee and tea), across the 1999, 2009 and 2019 Kenyan censuses.

### New Insights

The study's main findings are threefold. First, the farms reshape local labour markets. After a flower farm arrives, women become substantially more likely to report engaging in paid work (an increase of roughly 15% relative to comparison locations) and less likely to run small family businesses. This effect is concentrated in private-sector wage employment according to the 2009 and 2019 censuses, consistent with direct job creation by the flower farms. The shock thus reorganises women's work away from own-account self-employment and into stable wage employment. Male employment and wage work also rise, albeit with a lag and to a

lesser degree, consistent with the fact that the farms also hire some men.

Second, the initial employment shock does not stay confined to the farm gate. The figure below tracks satellite-detected construction within circles of 1, 2, 5 and 10 km around each farm site, showing how far the growth reaches. Built-up area expands steadily after entry, and not before: the expansion is strongest closest to the farm and fades with distance, consistent with new towns growing up around the farms. Census-based outcomes mirror the satellite evidence: population grows, locations become more likely to be classified as urban, in-migration rises, and households move up the wealth distribution. Locations that began the study period as scattered agrarian settlements end it resembling small market towns that are denser, wealthier and more urbanised, vastly amplifying the initial employment shock.



*Flower-farm locations urbanise after entry, and not before. Event-study estimates of the effect of flower-farm entry on satellite-measured built-up area within 1, 2, 5 and 10 km of the farm site, in five-year periods relative to entry, compared to control locations.*

Third, the study documents fertility declines in locations that receive a flower farm: women observed in the census data are less likely to have given birth in the past one to three years. Because the shock hits an entire local economy, these estimates likely capture more than the behaviour of the women hired by the farms. The decline may arise among farm workers facing new time constraints or a reduced need for child labour, or through changes in the wider community: in the returns to women's time outside the home, marriage markets, prices and living costs, or expectations about the future. The study cannot attribute it to farm employees specifically.

These results contrast with G<sup>2</sup>LM|LIC Policy Brief No. 84 (Kotsadam, Pieters and Villanger, 2025), based on a long-term randomised controlled trial in Ethiopia in which women who had applied for factory jobs were randomly offered employment. There, a factory job did not reduce fertility: the job offers enabled previously childless couples to accumulate income and enter parenthood earlier than their control-group counterparts. The two findings speak to different objects. A job offer to an individual woman changes her income and time constraints while leaving her environment untouched; the entry of a flower farm transforms the local economy itself, and it is this broader transformation that is accompanied by lower fertility in the Kenya study. Read together, the two studies caution against assuming that female employment mechanically reduces fertility.

## Policy Recommendations

- Treat rural wage employment as a development engine.** A single, stable, female-intensive employer reshaped entire local economies. Industrial and agricultural policies that anchor stable wage employers in rural areas can seed broader structural transformation, not just farm output.
- Design for women's salaried work specifically.** The shock created salaried jobs women could take, drawing them out of low-productivity self-employment. Removing barriers to women's wage employment (transport, childcare, skills, safety) might magnify these gains.
- Plan for the towns that follow.** Rapid in-migration and construction place new demands on housing, services and infrastructure. Anticipatory investment in emerging farm towns can turn a private employment boom into durable, well-functioning local economies.

## Limitations

Because the shock operates at the level of the local economy, the study cannot identify which residents change their fertility behaviour, or through which of the many possible channels. These are also findings from one industry in one country and may not be representative of other populations in other settings.

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G<sup>2</sup>LM|LIC is a joint program by IZA and the UK Foreign, Commonwealth & Development Office (FCDO) – improving worldwide know-ledge on labor market issues in low-income countries (LICs) and pro-viding a solid basis for capacity building and development of future labor market policies.