

# REDUCING THE AGRICULTURAL GENDER GAP IN CÔTE D'IVOIRE: HOW HAS IT CHANGED?

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## MAIN MESSAGES

- Over the last decade, Côte d'Ivoire has witnessed a remarkable shrinking of its gender gap in agricultural productivity. When comparing similar households, the gender gap has been reduced by 32%.
- In the most recent data from 2016, women's lower adoption of export crops is the key driver of the remaining agricultural productivity gap.
- Poorer households have not seen as large of a closing in the gender gap in agricultural productivity. Indeed, factors that have prevented the gap from closing, including a lower number of fields managed by the household, lower adoption of export crops, and lower use of pesticides, more strongly increase the agricultural productivity gender gap among households that have lower levels of income. Lowest-productivity households are also the most impacted by low access to male household labor.
- Women-headed households are using more pesticides and more female household labor than they were in 2008.
- However, results indicate that part of the increase in agricultural productivity observed during the past decade is due to lower landholdings by female-headed households.
- Strengthening women's land rights – along with increasing their access to labor and facilitating their adoption of export crops – should be key policy priorities in Côte d'Ivoire for improving women farmers' livelihoods.

## GENDER INNOVATION LAB

The Gender Innovation Lab (GIL) conducts impact evaluations of development interventions in Sub-Saharan Africa, seeking to generate evidence on how to close gender gaps in earnings, productivity, assets, and agency. The GIL team is currently working on over 70 impact evaluations in more than 25 countries with the aim of building an evidence base with lessons for the region.

The impact objective of GIL is increasing take-up of effective policies by governments, development organizations, and the private sector to address the underlying causes of gender inequality in Africa, particularly in terms of women's economic and social empowerment. The Lab aims to do this by producing and delivering a new body of evidence and developing a compelling narrative, geared towards policymakers, on what works and what does not work in promoting gender equality.

## CONTEXT

Agriculture plays a critical role in economies across Africa: farming provides up to 65% of all jobs on the continent. Women account for half of the agricultural workforce—but a gap between male and female farmers in terms of both output and productivity has been largely documented across the region. Closing this gender gap can help to improve productivity overall on the continent.

This policy brief examines how the gender gap in agricultural productivity in Côte d'Ivoire and the factors which drive it have changed over time—providing critical insights on the successes and limitations of policies that have sought to address this challenge, and pointing out opportunities to design effective policy to close the gender gap going forward.

## WHAT WE DID

To pinpoint changes in women's agricultural productivity, researchers at the Gender Innovation Lab examined data from two nationally representative surveys in Côte d'Ivoire—one from 2008, and the one from 2016. The two surveys allowed the team to compare detailed agricultural information, including production and input data at both the plot and the crop level, to determine changes across the eight years.

Data from 2008 came from a traditional household living standards survey, the Enquête Niveau de Vie des Ménages. Data from 2016 was drawn from the latest employment survey, the Enquête Nationale sur la Situation de l'Emploi et le Secteur Informel. Among other characteristics and details, the surveys yielded information on productivity, land area cultivated, household characteristics, labor use, and fertilizer use.

Using a traditional Oaxaca-Blinder technique that is commonly employed in the gender wage gap literature, researchers estimated the proportion of the gender productivity gap that results from the different characteristics of household heads, land inequities, and unequal access to productive inputs—as well as the proportion of the gender gap stemming from unequal returns to the productive components.

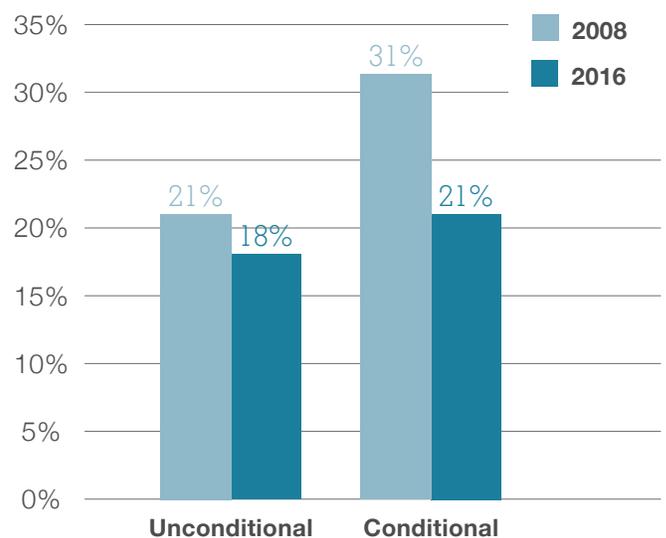
For example, researchers could control for characteristics including levels of education, amounts of agricultural inputs like fertilizer and labor, the age of the household head, the total number of crops produced, and marriage status of the household head, to more deeply examine what was truly causing the variation in agricultural productivity.

This method allowed researchers to identify the main drivers in each year that explain the gender differences in productivity. Researchers used this composition for each decile of the productivity distribution, which enabled the examination of drivers for everyone from the least to most productive households, to achieve a more in-depth understanding of what factors matter most for agricultural productivity along the income distribution.

## RESULTS

Côte d'Ivoire has witnessed a remarkable shrinking of its gender gap over the past decade in both export crop and food crop productivity. Between 2008 and 2016, the unconditional difference in productivity dropped from 21% in 2008, to 18% in 2016—a reduction of 14%. When comparing only similar households, the reduction in the gap is even larger: it is reduced by 32%.

THE GENDER GAP: HOW HAS IT CHANGED BETWEEN 2008 AND 2016?



This reduction is driven by several factors. Notably, female-headed households are starting to catch up to male-headed households in their fertilizer and pesticide use. Women's use of pesticides, compared to men, more than doubled between 2008 and 2016—perhaps related to a substantive government push to better address the needs of women farmers in agriculture programs over the course of the decade, such as the West Africa Agricultural Productivity Program and the Côte d'Ivoire Agricultural Support Project. Compared to male-headed households, female-headed households also increased their use of female household labor.

In 2008, the single largest driver of female-headed households' lower agricultural productivity was their low number of male household workers, closely followed by lower adoption of export crops, and lower use of other farming inputs, like pesticides and chemical fertilizer. The low number of household male laborers hurt poorer female-headed households more than those on the upper levels of the productivity distribution. The poorest female-headed households also faced the lowest returns on what they put into their farm.

In 2016, the drivers have changed: lower adoption of export crops is the key driver of the gender gap in agricultural productivity. Other key drivers are lower use of pesticides and of chemical fertilizer. A new factor that emerges in 2016 is the lower number of fields managed by female-headed households, which matters in particular for food crop productivity. Overall, a gender difference in productivity favoring men is still found for the lower half of

the productivity distribution, among poorer households.

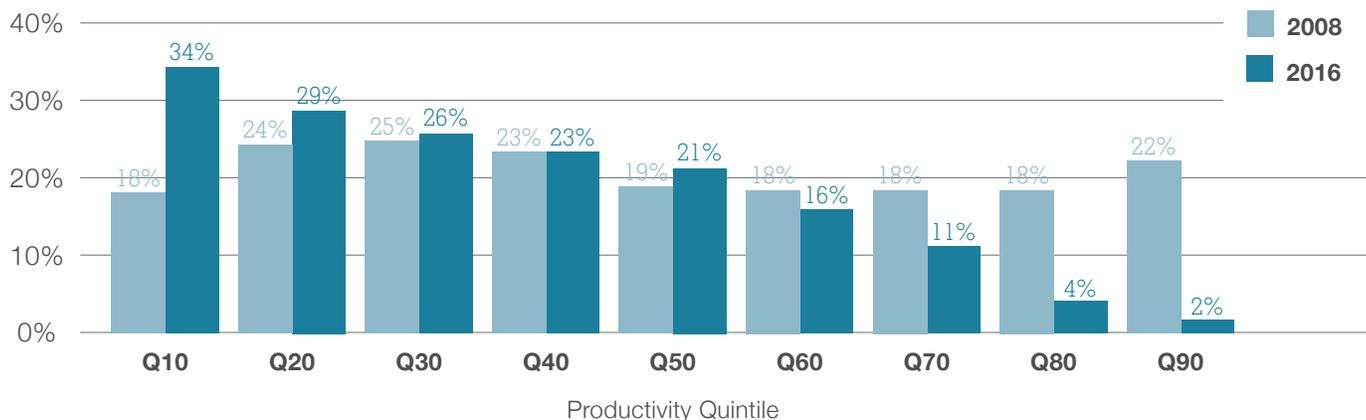
While the reduction in the gender gap is due to decreases in both export crop and food crop production, the decrease of the export crop agricultural productivity gap bears much of the responsibility for the overall reduction. In food crops, the gap in agricultural productivity went from 40% in 2008 to 19% in 2016. Within export crops, the gap went from 17% to no longer being significant.

Together with a key finding that while labor inputs matter more for food crop productivity, non-labor inputs are key for export crop productivity, the demonstrated increase in women's use of non-labor inputs like pesticides helps to explain the disappearance of the export crop productivity gap.

Some aspects of agricultural productivity stay consistent over the decade. In both 2008 and 2016, lower levels of total land cultivated by female-headed households reduce the gender gap in every single decile. Female-headed households' lower use of pesticides increases the gender gap across the income distribution in both years.

Digging deep into the data reveals some of the limitations of using head-of-household status as an identifying variable. Gaps in productivity are larger for female household owners and managers. The granularity of the data from these surveys has allowed for more detailed analysis and more specific policy recommendations; better gender integration into national surveys can yield even more helpful insights.

### THE GENDER GAP ACROSS THE PRODUCTIVITY DISTRIBUTION, 2008 & 2016





## POLICY IMPLICATIONS AND NEXT STEPS

Though the agricultural productivity gender gap has been significantly reduced, this data still masks heterogeneity and underlying issues for women-headed households that policymakers will need to address in the coming years.

The lower use of male household labor for female-headed households remains a key driver for the gender gap in agricultural productivity. The lower levels of male labor keep female-headed households who are in the bottom half of the income distribution disadvantaged, as these households are in critical need of the additional labor. As drivers of the gender gap can vary depending on household income or other characteristics, close analysis of available data is critical as it can point to the specific issues that matter for female-headed households across the income distribution.

It is additionally critical to note women's land loss over this period. Women-headed households have become more efficient, but are given less land to work with. Women's land loss is starting to impact food crop productivity—where the gender gap remains high. Strengthening women's land rights, either through spousal co-titling, direct land transfers, or safeguarding of inheritance rights, should be a key policy priority for the country.

In addition, policymakers in the agriculture sector should target gender integration within export crop cultivation. Occupational segregation across crop types is a key driver of the productivity gap in Côte d'Ivoire; by targeting export crop female producers—notably by increasing their use of inputs—agricultural policies have been successful at reducing gender inequality.

Additional policies that can help to integrate women into the export crop sector include tailoring extension services to women farmers' needs, facilitating women farmers' access to markets, and engaging husbands as allies to encourage women to cross over into high-value export crop cultivation.

For more information on this study, see the Policy Research Working Paper:

<https://openknowledge.worldbank.org/handle/10986/33227>

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