

UNCTAD

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Extractive Industries and Sustainable Job Creation

**Women and Extractive Industries:
What does recent evidence show?**

By

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The views expressed are those of the author and do not necessarily reflect
the views of UNCTAD.

Women and Extractive Industries: What does recent evidence show?

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Oil, Gas and Mine, Khartoum, 26 November 2015

Development and gender norms

- Industrialization and industry specialization matter for women
 - Cross-sectional pattern (Jayachandran, 2014)
 - Development and equality: reinforcing? (Duflo, 2012)
 - Natural resource rich countries less gender equal
- Female labor force participation
 - Jobs are important for women's empowerment (Jensen, 2012; Heath and Mubarak, 2015)
 - Evidence from manufacturing, IT-sector, Export Proc. Zones
 - Are extractive industries different?

Recent studies and theoretical predictions

Extractive industries, in particular mining, can affect women through:

- Stimulate direct and indirect employment
 - Crowd out of women through Dutch Disease (Ross, 2008)
 - Men dominate direct employment
 - Are women free to work in services?
- Change women's bargaining power
 - Negative: Relative wages decrease (African Mining Vision)
 - Positive: Absolute income might increase
- Change environmental quality
 - Negative: Pollution affect mothers' and children's health
 - Positive: Income can increase health
 - HIV risk among transient migrants (Corno and de Walque, 2013), but jobs reduce young women's risk taking (Wilson, 2012, Zambia)

Competing forces

Effects are not clear ex ante

Increased income can make women better off;

Decrease in relative earnings and changes in environmental quality can make women worse off

- Need to evaluate empirical evidence:
 - Limitation 1: With competing forces, the net effect is likely to vary across areas and industries
 - Limitation 2: No investigation of the ASM sector

This Paper

Question

Does extractive industries create local jobs for women?

What happens with women's welfare and empowerment?

Strategy:

- Map the expansion of the mining industry across Africa
- Use time and geographic variation in mining activity 1982 - 2012

Map of mines in Africa

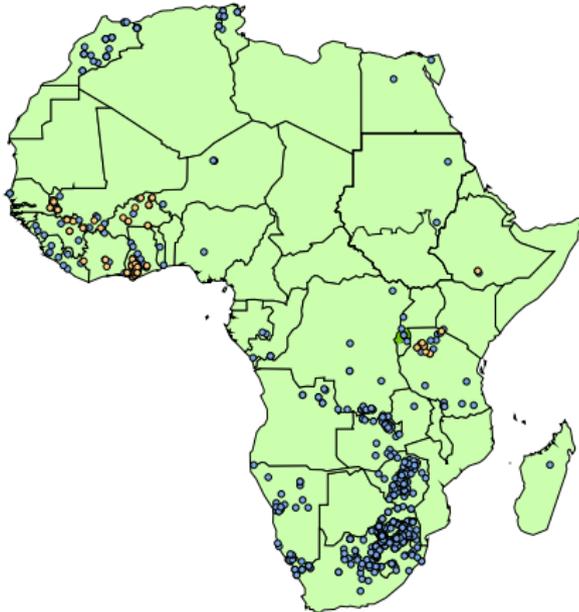


Figure: Large scale mines in the data set that were ever actively extracting minerals between 1975-2012. All mineral types.

Map of mines in Africa

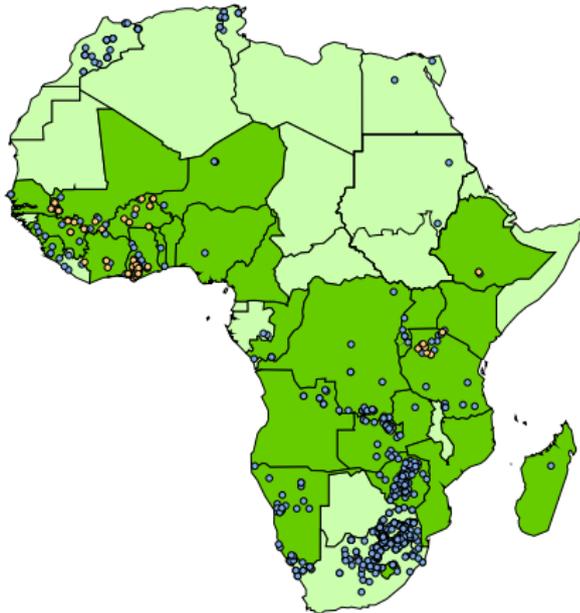


Figure: African Mining, Gender and Local Employment (The World Bank Working Papers, 2015). Joint with Dr. Andreas Kotsadam.

African gold mines studied

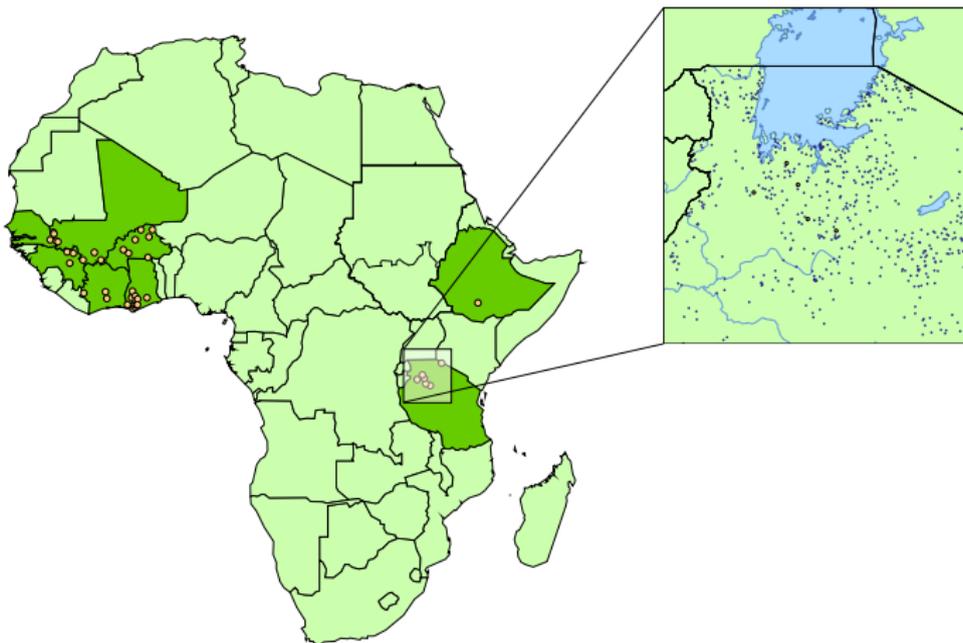


Figure: Illustration of Identification Strategy. DHS Clusters and Gold Mines in Tanzania.

African gold mines studied

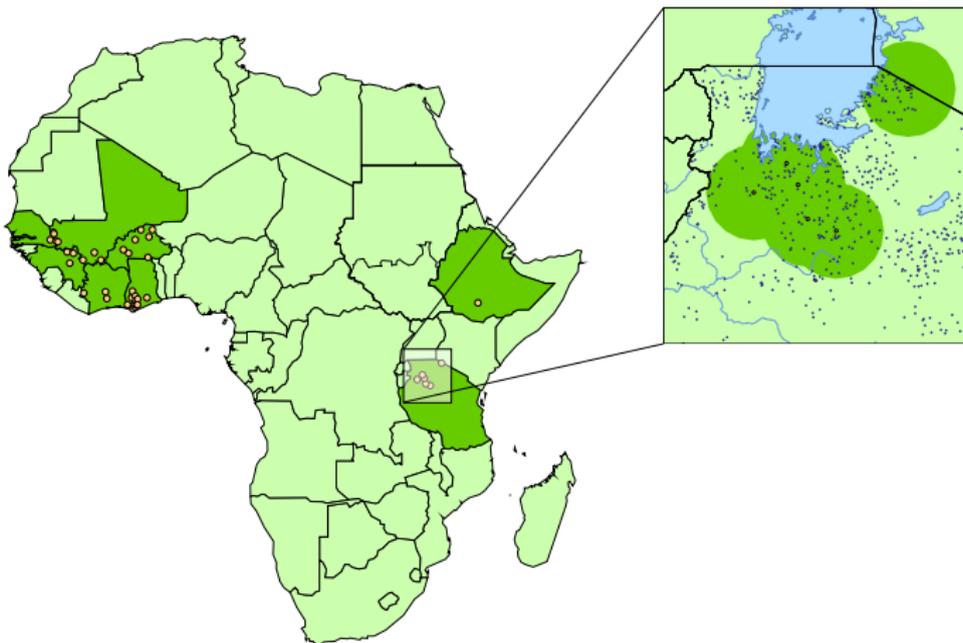


Figure: Illustration of Identification Strategy. DHS Clusters and Gold Mines in Tanzania.

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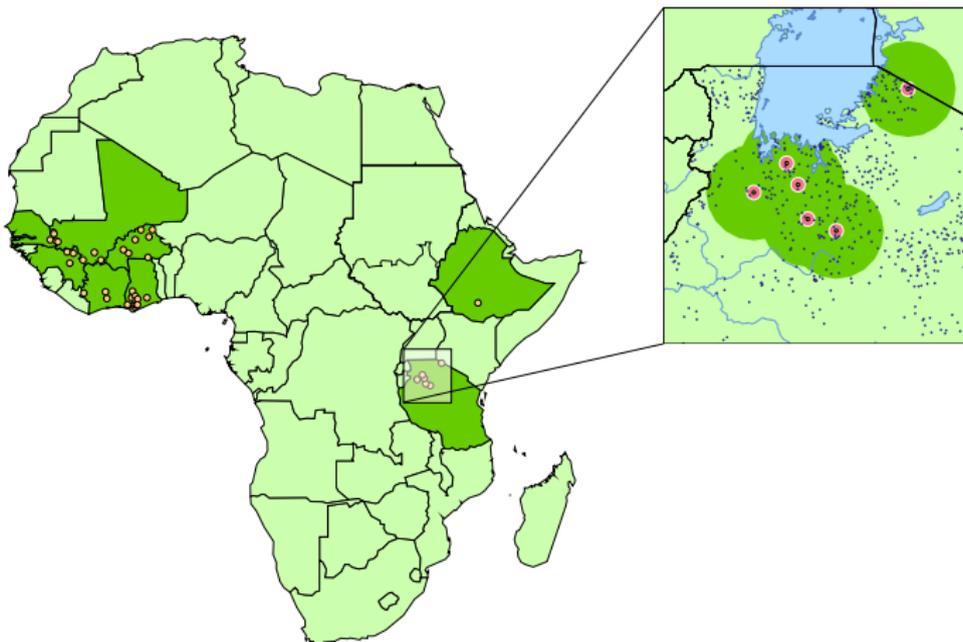


Figure: Illustration of Identification Strategy. DHS Clusters and Gold Mines in Tanzania. Defining the local area.

African gold mines studied

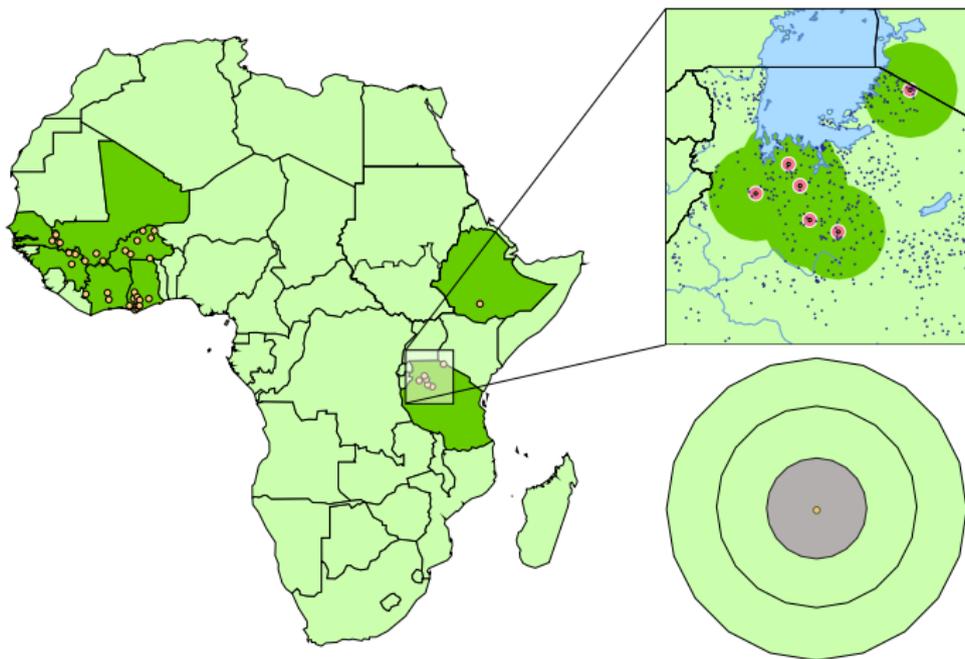


Figure: Illustration of Identification Strategy. DHS Clusters and Gold Mines in Tanzania. How large is the local area? 10km?

African gold mines studied

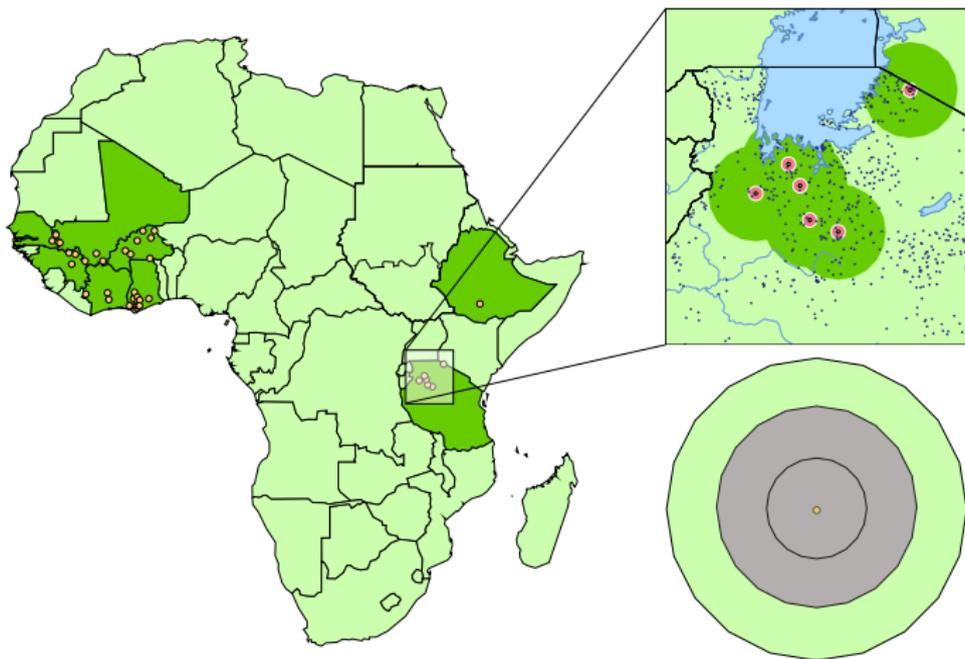


Figure: Illustration of Identification Strategy. DHS Clusters and Gold Mines in Tanzania. How large is the local area? 20km?

African gold mines studied

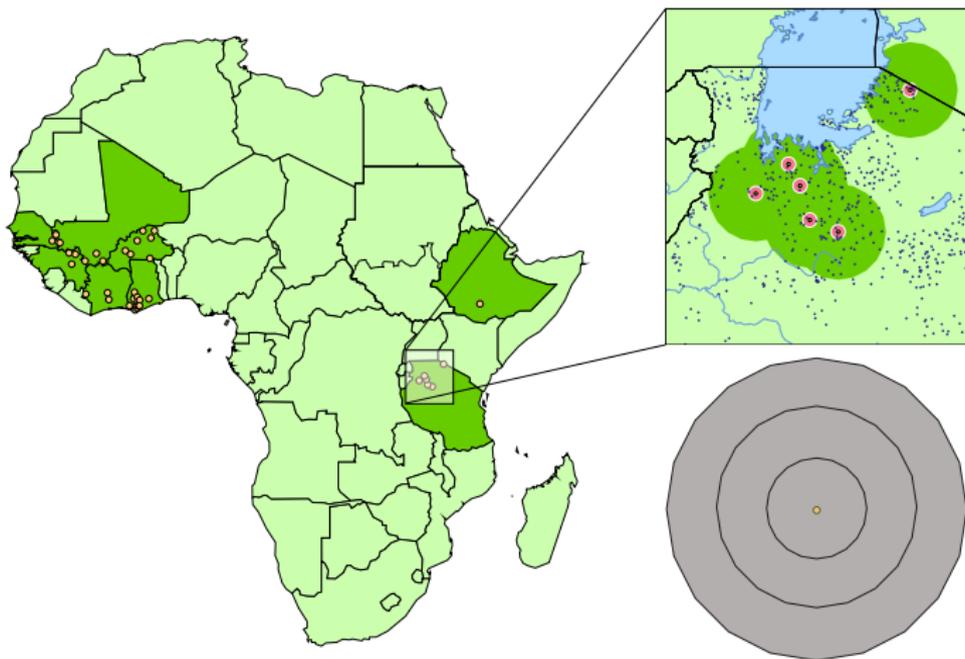


Figure: Illustration of Identification Strategy. DHS Clusters and Gold Mines in Tanzania. How large is the local area? 30km?

African gold mines studied

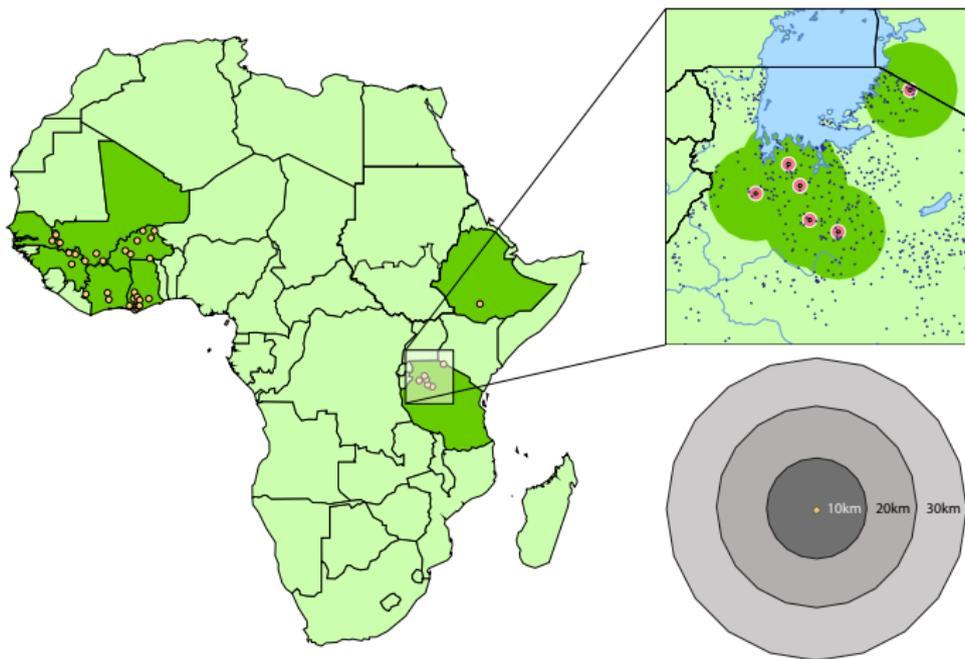


Figure: Illustration of Identification Strategy. DHS Clusters and Gold Mines in Tanzania. Solution: Map the effects across a larger geographic area.

Paper 1: African Mining, Gender and Local Employment

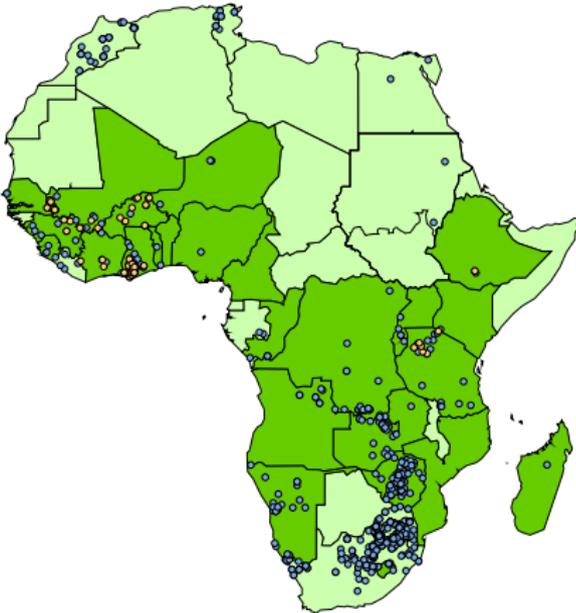


Figure: Data from 29 African countries over 30 years, 600,000 women and their partners.

Paper 1: African Mining, Gender and Local Employment

Data from 29 African countries over 30 years, 600,000 women

Findings

The opening of a new large scale mine creates structural shifts:

Agricultural employment decreases,

Men go to manual labor and mining,

Women to services or leave the labor force.

Not sustainable: Newly stimulated sectors contract at mine closure

Women do not go back to agriculture.

- Further results and implications
 - Highly gendered labor market effects within 20km from a mine
 - Reason to include gender mainstreaming
 - Service jobs not limited to sex work
 - Sustainable job creation for men and women is a challenge

Paper 2: Local Industrial Shocks & Empowerment

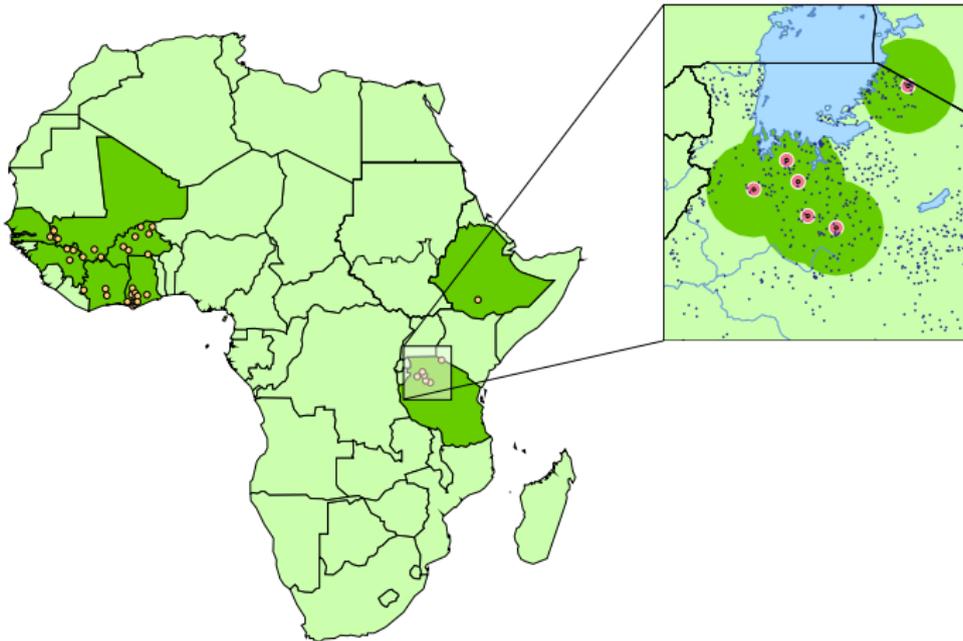


Figure: Data from 8 African countries over 30 years, with 60,000 women and 50,000 children within 100km from a mine

Main results

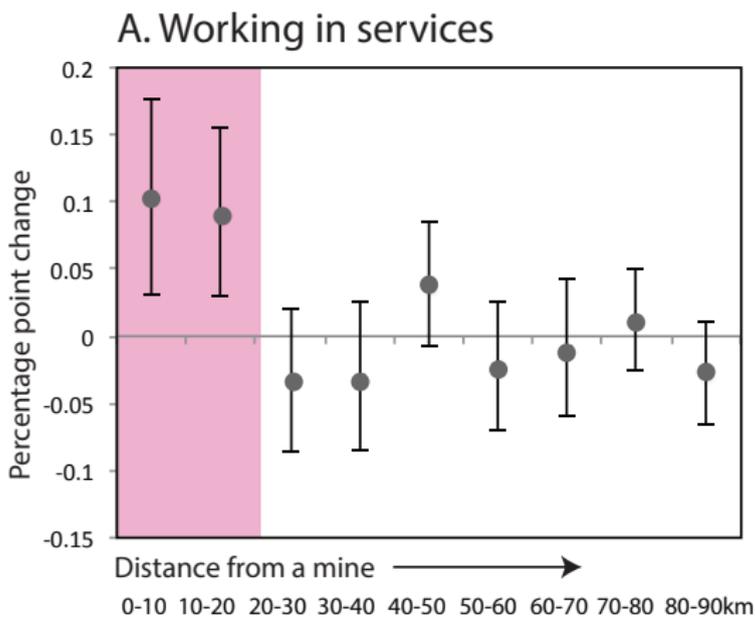


Figure: Service sector employment increases with 10 percentage points among women within 20km.

Main results

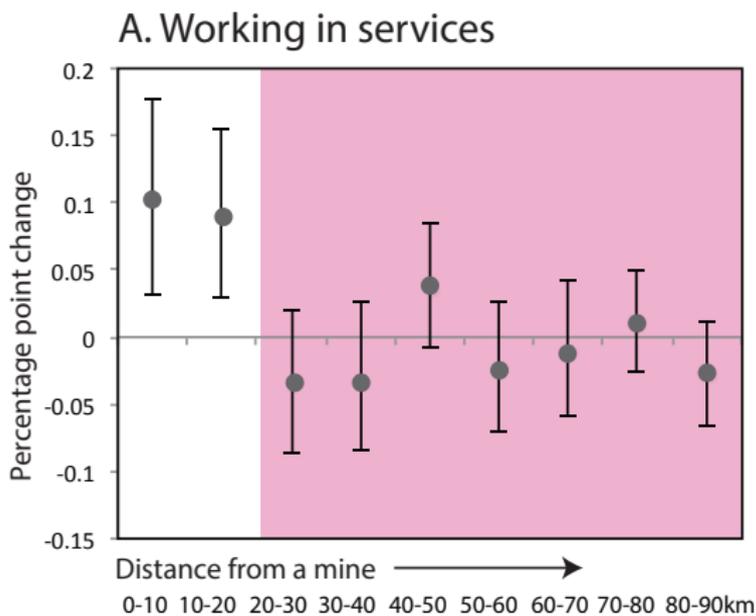


Figure: Beyond 20km there is no effect on service sector employment.

Main results

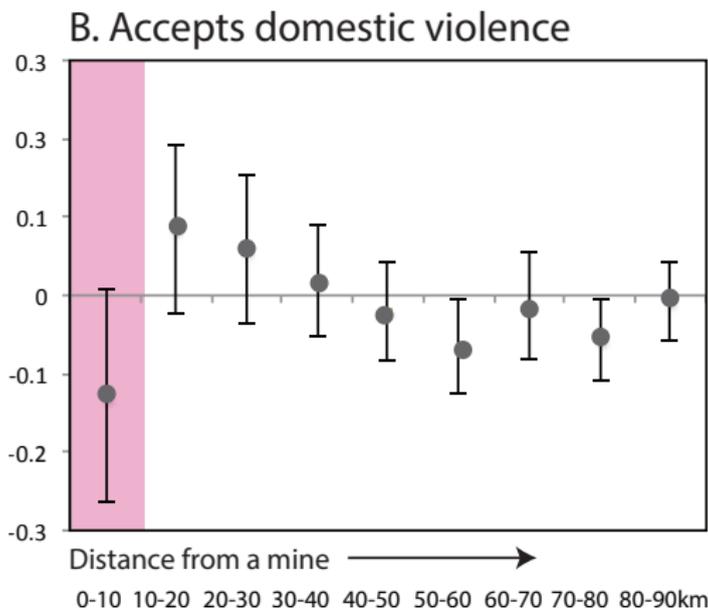


Figure: Within 10-15km from a mine, women are less likely to justify domestic violence

Main results

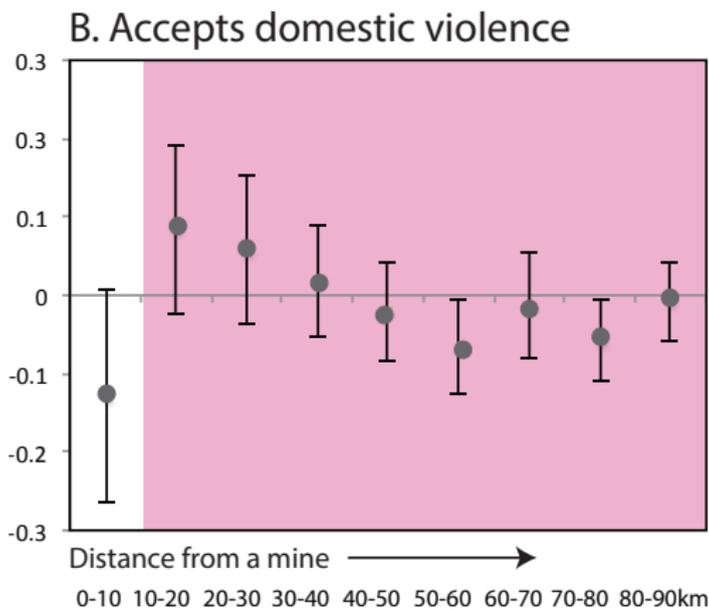


Figure: Further away, there is no change in attitudes

Main results

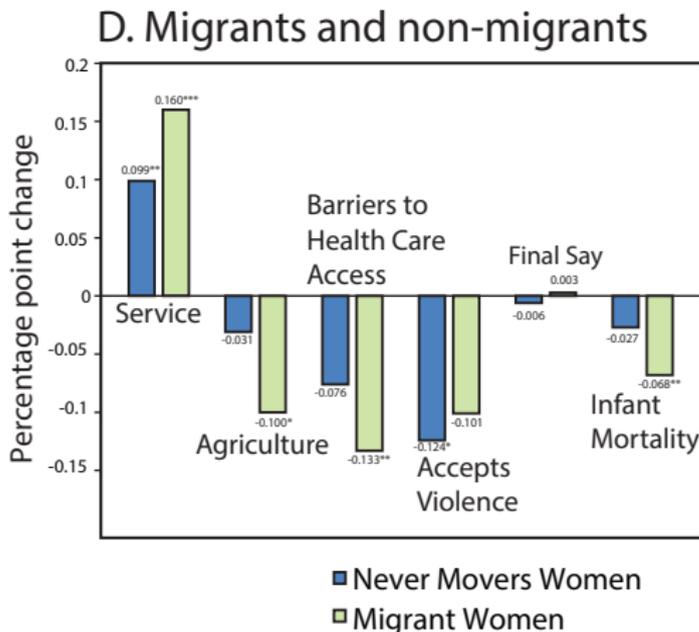


Figure: Overall, these effects are confirmed in the migrant population as well as the non-migrant population.

Paper 2: Local Industrial Shocks & Empowerment

Summary of findings

The opening of a new large scale gold mine changes women's welfare:

Women are 10 pp (41%) more likely to work in services

Women are 24% less likely to justify domestic violence

Women have better health care access, infant mortality decreases

- Potentially through income opportunities:
 - Increased service employment, no change in education
 - Women marry men with marginally more education
 - Effects are stronger the higher the gold price
 - No analysis of mine closure: not clear if effects are sustainable

Conclusions

Job creation and health in the short run

- In relatively disadvantaged areas (rural, subsistence farming, high infant mortality rate), investment in extractives can improve women's livelihoods.
- But can the industry do better and create more and more diverse jobs? Yes!
- Infant mortality decreases from a very high level: probably not true in areas where the return to income is lower.

Sustainability and mine closure

- Labor market effects disappear at mine closure: Ways to build sustainability?
- What happens with health, when the income opportunities disappear and pollution remains?

Conclusions



Thank you!