Impacts of tenure insecurity and disputes can undermine the ambiguity over rights. Triggering investors, with legal pluralism adding to with outsiders – migrants or foreign face are population pressure, and working New challenges that customary systems tenure security and flexibility at a cost govern land access in most African Customary tenure systems continue to of tenure security. Malawi has special systems (77%) and has both patrilineal of tenure security. Malawi has special systems, and high as most of its land is under customary inheritance regimes (matrilineal vs patrilineal). Malawi is embarking on a significant institutional reform to enable registration land and productivity. Another issue is women’s position in customary systems and their perception of tenure security. Malawi has special advantages for analyzing these challenges as most of its land is under customary systems (77%) and has both patrilineal and matrilineal tenure systems, and high female engagement in farming. Moreover, Malawi is embarking on a significant institutional reform to enable registration of customary land for the first time.

Most farm land in Malawi is under customary systems, holding a high female engagement in farming.
INNOVATION
Despite its relevance for policy, perceived tenure insecurity and its impact on investment has received surprisingly little attention in research. From an economic perspective, interventions programs in land administration are warranted only if the impacts of tenure insecurity are larger than the cost of implementing a program to reduce tenure insecurity. Identifying the determinants of tenure security, assessing the size of productivity impacts, and estimating the extent to which they vary by gender make it possible to put this into context, and draw out policy implications. This study successfully tested a methodology for analyzing perceptions of tenure security, applied to an existing household survey data set.

DATA SOURCES & ANALYSIS
Deininger and Xia (2019) revisited data from the 2006/07 National Census of Agriculture and Livestock (NACAL) implemented by Malawi’s National Statistical Office (NSO). Household-, individual-, and village-level data collection instruments were administered to a sample of smallholders, stratified by agro-ecological zone and farm size. The survey also collected parcel-level data on land tenure and investments. Complete information was available for 17,672 smallholders, including 6,525 women.

RESULTS
The empirical analysis focused on land-related determinants of perceived tenure insecurity and impact on investment. Perception is a dynamic process with past experiences shaping the current perception. The study tested for past

For female farmers, output declined by 12% because of tenure insecurity, no impact was perceptible for males.
FEAR OF LAND BEING TAKEN AWAY IS INFLUENCED BY:

- 15% to 23% disputes in the past
- about 10% followed by past encroachment and past loss
- 7% working on borrowed land
- 3% renting out land

experiences of land loss, land conflicts, participation in land transactions and land scarcity at the village level. Individual-level characteristics are used to control for respondent’s general risk attitudes.

The authors find that fear of land being taken away is influenced mostly by having had disputes in the past (increased perceived risk of 15 percent to 23 percent), followed by past encroachment and past loss (about 10 percent); working on borrowed land (7 percent); and renting out land (3 percent), irrespective of gender. The presence of estates (cultivating converted customary land) within walking distance increased the fear of land loss only for male respondent. Parcel tenure and respondent’s attributes exhibit gender-differentiated impacts. Female respondents seemed to feel more secured in a familiar environment (customary land systems and having been born within the village reduced the fear). No effect was found for the inheritance regime (matrilineal or patrilineal).

The impact of perceived tenure insecurity on production was quantified using a plot-level production function. The fear of land loss differs across gender. For female operators, output declined by 12 percent because of tenure insecurity. However, for males, perceived tenure insecurity has no perceptible impact on productivity. The estimated present value of fear-induced productivity losses exceeds the amount of resources required to implement a low-cost systematic tenure regularization program at a cost of US$5-6 per parcel (as was done in Rwanda) to greatly reduce tenure insecurity.
The study demonstrates that the benefits of low-cost systematic registration of customary land would be more than enough to recoup the costs.

**POLICY IMPLICATIONS AND FOLLOW UP**

Data from Malawi confirm that research on perceptions of tenure insecurity are relevant. Perceptions of tenure insecurity are increasingly included in household surveys and impact evaluations and now even included in the sustainable development goals.

The research also supported policy design in Malawi. Firstly, it showed that for inheritance regimes (matrilineal vs patrilineal), which is the subject of a lively policy debate, did not affect tenure insecurity significantly, while the overall likelihood of planting fruit trees actually is significantly higher in matrilineal systems, and mainly for female operators supported by World Bank operations.

In addition, the research shows the value of the customary regime and the economic relevance of strengthening security of tenure as envisaged by the 2016 land bills. The study demonstrates that the benefits of low-costs systematic registration would be more than enough to recoup the costs. Piloting of approaches to secure tenure especially for women, accompanied by careful design and real-time evaluation, could help inform next steps and is now supported by World Bank supported operations.