# Replication Package README for

# Ask a Local: Improving the public pricing of land titles in urban Tanzania

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## 1. Overview

This readme file explains to readers how to reproduce the results in the paper "Ask a Local: Improving the public pricing of land titles in urban Tanzania". Overall, it describes what is included in the replication package, how to replicate results, and how to access the data used. In section 2 we outline how to replicate figures and tables. The data and code that are required for this replication are fully provided. All of the (anonymized) source datasets for replicating the analysis data are provided in the replication package. In section 3 we software and computational requirements.

## 2. List of replication files

The replication folder contains source data files and code (Stata and python) files. We list all these files below and for each of the code files we indicate the results that they correspond to in the paper.

### Code files

The folder ./code/ contains 12 code files that together replicate all of the figures and tables in the paper and appendix. The source data files listed below are required for these codes.

- 0_runme.do
    - This file runs all of the stata codes in one go and in order.
    - NB: this code must be updated with the absolute path name of the replication folder on your machine.
    - NB: the final code file (10x_policy_counterfactuals.py) must be run separately in python.
- 1_owner_attrition.do
    - Creates table A1
- 2_demand_curves.do
    - Creates Figures 1a-1d
- 2b_demand_curves_qqplot.do
    - Creates Figures A6a-A6d

- 3_wtp_heterogeneity.do
    - Creates table A3
- 4_predictions_standard.do
    - Creates table A4
- 5_predictions_treatment_effects.do
    - Creates Table 1
- 6_predictions_wtp.do
    - Creates Table 2
- 7_predictions_wtp_heterogeneity.do
    - Creates Table A5
- 8_predictions_wtp_observables.do
    - Creates Table A6
- 9_owner_leader_descript.do
    - Creates Table A2
- 10_policy_counterfactuals.do
    - Creates an excel spreadsheet to be run in the following python script
- 10x_policy_counterfactuals.py
    - Creates Table 3

## Source data files

The folder ./data/source/ contains all files needed for replication. All variables are labelled with their definition. All data is based on primary field data collection either from the Ubungo Municipal invoice registry, the leader survey, or the plot owner survey.

- Owners_cln.dta
    - Contains data from the property owner survey at the owner level.
- Owner_invited_list.dta
    - Contains an indicator for each owner whether they were invited to participate in the owner survey
- Sample_owners.dta

    - Contains data on the sampled invoices and invoice characteristics from the population of invoices.

- Leaders_and_Owners_cln.dta
    - Contains data from both the leader and property owner surveys at the leader-owner pair level.

- Merged_Invoices_cln.dta
    - Contains the population of property invoices and their registry status at the time the study began.

## 3. Software used and computational requirements

Software Requirements

- Stata 15, and additional packages:
    - estout: the commands 'eststo', 'estadd', and 'esttab' from this package are used to automatically compile tables from Jann (2007).
    - grstyle: this package is used to set default styles in graphs from Jann (2017).
- Python 3.8.3
    - pandas, version 1.4.3
    - numpy, version 1.23.1
- From windows command line (calling 'shell' from stata)
    - rmdir: is a command-line directory deletion command for Microsoft Windows. By specifying '/s' it deletes a directory tree (the specified directory and all its subdirectories, including all files), and by specifying '/q' it does not prompt for confirmation when deleting a directory tree.

Memory and Runtime Requirements

The code was last run on a Windows OS 8-core Lenovo laptop 16 GB of RAM, 500 TB of fast local storage. Computation takes less than 30 minutes.