



## *South Africa's Fragmented Cities: The Unequal Burden of Labor Market Frictions*

*Second Submission: RR\_ZAF\_2025\_490*

*Kunal Singh, Mahin Tariq*  
*reproducibility@worldbank.org*

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This review verifies the reproducibility of the exhibits included in the paper “*South Africa's Fragmented Cities: The Unequal Burden of Labor Market Frictions*”.

### **Contents in this review:**

1. Main findings
2. List of exhibits and reproducibility status
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### *Main findings*

- **Every exhibit of the paper has been reproduced accurately.**
- The code was successfully executed on a new computer after:
  1. Changing the file paths in the main do file and R script
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 3 hours to run.
- We conducted our reproducibility analysis based on the paper shared by the authors in the reproducibility package.
- **Verification Process and Data Handling:**
  - The reproducibility package relies on 2 types of data: open and limited-access (available to registered users).
  - Reviewers used limited-access data provided directly by the authors to conduct the reproducibility verification, and this is not included in the public reproducibility package.
  - *data\_hash\_report.csv* lists the SHA256 hashes of all files in the Data folder to support data integrity checks. Users who acquire the restricted data can use this file to verify that the data has not been altered.
- **Reproducibility Summary:**
  - **Data:** All data is restricted and has not been included in the reproducibility package. For more details, please refer to the README file.

- **Code:** All code files (from cleaning to analysis) are included in the reproducibility package.
- **Outputs:** All outputs are generated by code included in the reproducibility package.
- **Dependencies environment:** The reviewers created a new environment using the latest versions of dependencies available at the moment of the review.

### *List of exhibits and reproducibility status*

#### **Results in the Main Section of the Paper**

- **Figure 1** Reproduced.
- **Figure 2** Reproduced.
- **Figure 3** Reproduced.
- **Figure 4** Reproduced.
- **Figure 5** Reproduced.
- **Figure 6** Reproduced.
- **Figure 7a** Reproduced.
- **Figure 7b** Reproduced.
- **Figure 7c** Reproduced.
- **Figure 8a** Reproduced.
- **Figure 8b** Reproduced.
- **Table 1** Reproduced.
- **Table 2** Reproduced. Values reproduce accurately but city names (Johannesburg, Cape Town, Tshwane, eThekweni, NM Bay) are missing from the code output.
- **Table 3** Reproduced. Values reproduce accurately but city names (Johannesburg, Cape Town, Tshwane, eThekweni, NM Bay) are missing from the code output.

- **Table 4a Reproduced.** Values reproduce accurately but city names (Johannesburg, Cape Town, Tshwane, eThekweni, NM Bay) are missing from the code output.
- **Table 4b Reproduced.** Values reproduce accurately but city names (Johannesburg, Cape Town, Tshwane, eThekweni, NM Bay) are missing from the code output.
- **Table 5a Reproduced.**
- **Table 5b Reproduced.**

#### Results in the Annex

- **Figure A1 Reproduced.**
- **Figure A2a Reproduced.**
- **Figure A2b Reproduced.**
- **Figure A2c Reproduced.**
- **Table A1 Reproduced.**
- **Table A2 Reproduced.** Coefficients and t-stats values were verified.

#### *Reproduction Environment*

Paper exhibits were reproduced on a computer with the following specifications:

- OS: Windows 11 Enterprise
- Processor: Intel(R) Core(TM) i5-1145G7 CPU @ 2.60GHz
- Memory available: 15.7 GB
- Software version: Stata 18.0 MP, R 4.4.1