

# Replication results

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## Recommendations

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See below for details.

- A small part of Table 1 stems from public-use data. The data and code should be provided, and sources documented/cited (Census Bureau, IRS).
- Access to the confidential HMDA data is insufficiently documented. See below for suggested description.
- Precise nature of the HMDA data is insufficiently documented. The distinction between restricted-access HMDA data, to which Fed Reserve researchers have access, and public-use HMDA data, to which everybody else has access, should be made clearer.

## Replication steps

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1. Downloaded code from repository aejpolicy-13
2. Looked at data in the README. The README indicated that loan-level data from CoreLogic required further steps that we cannot take, and did not provide a URL for the HMDA data.
3. Given the data restrictions (the data is not publicly available), it is not possible to run any of the do files. This is not replicable without access to the CoreLogic Loan Performance Data.
4. Data for Table 1a is public-use, but is not provided. No code for Table 1a is provided.

## Findings

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- US Census Bureau data is used for Table 1, but not identified (source, citation)
- IRS data is used for Table 1, but not identified (source, citation)
- HMDA data is noted (generically in manuscript, "supervisory" HMDA data in README, "non-public version of version of mortgage applications" in DO file), but not identified (source, citation). This could be better clarified.
- README needs to be in PDF
- Data for Table 1a is public-use, but is not provided. No code for Table 1a is provided.
- Tables do not make a note of the data used in each. While they are all based on CoreLogic data, and standard table note should be added, along the lines of "Note: Based on CoreLogic data, authors calculations. For more information, see text."
- It wasn't clear to me whether Table 7 is based on confidential HMDA data or public HMDA data.

## Sample description of access to CoreLogic and HMDA data

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Please see the description of HMDA (and CoreLogic) data at <http://qed.econ.queensu.ca/jae/forthcoming/anenberg-et-al/readme.ahkm.txt> (from Elliot Anenberg, Aurel Hizmo,

Edward Kung, and Raven Molloy, "Measuring Mortgage Credit Availability: A Frontier Estimation Approach", *Journal of Applied Econometrics*, forthcoming.):

[The] confidential version of the Home Mortgage Disclosure Act data maintained by the Federal Reserve Board. The confidential version of the data is available for use by employees of the Federal Reserve System. We use the confidential version to obtain the origination date of each mortgage in the HMDA data. A public version of the HMDA micro data is available. The public version of the data reports the origination year, but not the exact origination date. The public version of the data can be accessed here: <https://www.consumerfinance.gov/data-research/hmda/explore>

## Classification

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- full replication
- partial replication (see above)
- not able to replicate (reasons see above)