# Overview

The code in this replication package can be used to reproduce the results of the working paper " Development acupuncture: The network structure of multidimensional poverty and its implications\*" by Viktor Stojkoski , Luis F. Lopez-Calva, Kimberly Bolch , and Almudena Fernandez.

To replicate the results of the working paper, please follow the steps below:

1. Download the repository folder. It includes the .ipynb files, additional .py files, and some the databases used to run all tables and figures of the working paper.
2. i) Register their projects with both MICS and DHS. ii) Use the OPHI do-files to process the data. iii) Obtain the final dataset used as the starting point for your research.
3. All data should be stored in a subfolder called /data.
4. Execute the lines of complexity-mp-analysis.ipynb to replicate all tables and figures.
5. All tables and figures are stored in the subfolder /output.

## Data Availability Statement

The paper uses data from the Demographic and Health Surveys (DHS) Program (<https://dhsprogram.com/>) and the Multiple Indicator Cluster Surveys (MICS) by UNICEF (<https://mics.unicef.org/>). Data is subject to a redistribution restriction, but can be freely downloaded from <https://dhsprogram.com/> and <https://mics.unicef.org/> upon registration. The reproducer should include a brief description of the project, and agree to the conditions of use. These data are then transformed to Poverty indicators using the .do files provided by the Oxford Poverty and Human Development Initiative (OPHI). Instructions on how to do this is available at <https://ophi.org.uk/global-mpi/2023> (together with the .do files).

The paper also uses:

1. World Bank’s list for the region and income classification of countries. This is public data that can be accessed at: [https:/helpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups](https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups).
2. Data on Ethiopia’s general government expenditure that is detrended and normalized to be in per capita USD constant 2021 (in PPP). This data can be downloaded from: [https:/.worldbank.org/indicator/NE.CON.GOVT.ZS](https://data.worldbank.org/indicator/NE.CON.GOVT.ZS) (government expenditure) and [https:/.worldbank.org/indicator/NY.GDP.PCAP.PP.KD](https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD) (gdp per capita in constant 2021 USD (PPI adjusted)
3. Data on Ethiopia’s World Governance indicators on Rule of Law and Control of Corruption in 2011 and 2021 (<https://www.worldbank.org/en/publication/worldwide-governance-indicators>)

The summary of the data is:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data.Name** | **Data.File** | **Location** | **Provided** | **Original Source** |
| Afghanistan 2011 Poverty Outcome by Indicator and Household | afg\_mics10-11.csv |  | FALSE | 2011 Afghanistan MICS Survey |
| Afghanistan 2016 Poverty Outcome by Indicator and Household | afg\_dhs15-16.csv |  | FALSE | 2016 Afghanistan DHS Survey |
| Albania 2009 Poverty Outcome by Indicator and Household | alb\_dhs08-09.csv |  | FALSE | 2009 Albania DHS Survey |
| Albania 2018 Poverty Outcome by Indicator and Household | alb\_dhs17-18.csv |  | FALSE | 2018 Albania DHS Survey |
| Armenia 2010 Poverty Outcome by Indicator and Household | arm\_dhs10.csv |  | FALSE | 2010 Armenia DHS Survey |
| Armenia 2016 Poverty Outcome by Indicator and Household | arm\_dhs15-16.csv |  | FALSE | 2016 Armenia DHS Survey |
| Bangladesh 2014 Poverty Outcome by Indicator and Household | bgd\_dhs14.csv |  | FALSE | 2014 Bangladesh DHS Survey |
| Bangladesh 2019 Poverty Outcome by Indicator and Household | bgd\_mics19.csv |  | FALSE | 2019 Bangladesh MICS Survey |
| Belize 2011 Poverty Outcome by Indicator and Household | blz\_mics11.csv |  | FALSE | 2011 Belize MICS Survey |
| Belize 2016 Poverty Outcome by Indicator and Household | blz\_mics15-16.csv |  | FALSE | 2016 Belize MICS Survey |
| Bolivia 2003 Poverty Outcome by Indicator and Household | bol\_dhs03.csv |  | FALSE | 2003 Bolivia DHS Survey |
| Bolivia 2008 Poverty Outcome by Indicator and Household | bol\_dhs08.csv |  | FALSE | 2008 Bolivia DHS Survey |
| Bosnia and Herzegovina 2006 Poverty Outcome by Indicator and Household | bih\_mics06.csv |  | FALSE | 2006 Bosnia and Herzegovina MICS Survey |
| Bosnia and Herzegovina 2012 Poverty Outcome by Indicator and Household | bih\_mics11-12.csv |  | FALSE | 2012 Bosnia and Herzegovina MICS Survey |
| Burundi 2010 Poverty Outcome by Indicator and Household | bdi\_dhs10.csv |  | FALSE | 2010 Burundi DHS Survey |
| Burundi 2017 Poverty Outcome by Indicator and Household | bdi\_dhs16-17.csv |  | FALSE | 2017 Burundi DHS Survey |
| Cameroon 2011 Poverty Outcome by Indicator and Household | cmr\_dhs11.csv |  | FALSE | 2011 Cameroon DHS Survey |
| Cameroon 2018 Poverty Outcome by Indicator and Household | cmr\_dhs18.csv |  | FALSE | 2018 Cameroon DHS Survey |
| Central African Republic 2010 Poverty Outcome by Indicator and Household | caf\_mics10.csv |  | FALSE | 2010 Central African Republic MICS Survey |
| Central African Republic 2019 Poverty Outcome by Indicator and Household | caf\_mics18-19.csv |  | FALSE | 2019 Central African Republic MICS Survey |
| Chad 2010 Poverty Outcome by Indicator and Household | tcd\_mics10.csv |  | FALSE | 2010 Chad MICS Survey |
| Chad 2015 Poverty Outcome by Indicator and Household | tcd\_dhs14-15.csv |  | FALSE | 2015 Chad DHS Survey |
| Colombia 2010 Poverty Outcome by Indicator and Household | col\_dhs10.csv |  | FALSE | 2010 Colombia DHS Survey |
| Colombia 2016 Poverty Outcome by Indicator and Household | col\_dhs15-16.csv |  | FALSE | 2016 Colombia DHS Survey |
| Congo 2005 Poverty Outcome by Indicator and Household | cog\_dhs05.csv |  | FALSE | 2005 Congo DHS Survey |
| Congo 2015 Poverty Outcome by Indicator and Household | cog\_mics14-15.csv |  | FALSE | 2015 Congo MICS Survey |
| Dominican Republic 2007 Poverty Outcome by Indicator and Household | dom\_dhs07.csv |  | FALSE | 2007 Dominican Republic DHS Survey |
| Dominican Republic 2019 Poverty Outcome by Indicator and Household | dom\_mics19.csv |  | FALSE | 2019 Dominican Republic MICS Survey |
| Egypt 2008 Poverty Outcome by Indicator and Household | egy\_dhs08.csv |  | FALSE | 2008 Egypt DHS Survey |
| Egypt 2014 Poverty Outcome by Indicator and Household | egy\_dhs14.csv |  | FALSE | 2014 Egypt DHS Survey |
| Eswatini 2010 Poverty Outcome by Indicator and Household | swz\_mics10.csv |  | FALSE | 2010 Eswatini MICS Survey |
| Eswatini 2014 Poverty Outcome by Indicator and Household | swz\_mics14.csv |  | FALSE | 2014 Eswatini MICS Survey |
| Ethiopia 2011 Poverty Outcome by Indicator and Household | eth\_dhs11.csv |  | FALSE | 2011 Ethiopia DHS Survey |
| Ethiopia 2016 Poverty Outcome by Indicator and Household | eth\_dhs16.csv |  | FALSE | 2016 Ethiopia DHS Survey |
| Ethiopia 2019 Poverty Outcome by Indicator and Household | eth\_dhs19.csv |  | FALSE | 2019 Ethiopia DHS Survey |
| Gabon 2000 Poverty Outcome by Indicator and Household | gab\_dhs00.csv |  | FALSE | 2000 Gabon DHS Survey |
| Gabon 2012 Poverty Outcome by Indicator and Household | gab\_dhs12.csv |  | FALSE | 2012 Gabon DHS Survey |
| Gambia 2013 Poverty Outcome by Indicator and Household | gmb\_dhs13.csv |  | FALSE | 2013 Gambia DHS Survey |
| Gambia 2020 Poverty Outcome by Indicator and Household | gmb\_dhs19-20.csv |  | FALSE | 2020 Gambia DHS Survey |
| Ghana 2011 Poverty Outcome by Indicator and Household | gha\_mics11.csv |  | FALSE | 2011 Ghana MICS Survey |
| Ghana 2018 Poverty Outcome by Indicator and Household | gha\_mics17-18.csv |  | FALSE | 2018 Ghana MICS Survey |
| Guinea 2012 Poverty Outcome by Indicator and Household | gin\_dhs12.csv |  | FALSE | 2012 Guinea DHS Survey |
| Guinea 2018 Poverty Outcome by Indicator and Household | gin\_dhs18.csv |  | FALSE | 2018 Guinea DHS Survey |
| Guinea-Bissau 2014 Poverty Outcome by Indicator and Household | gnb\_mics14.csv |  | FALSE | 2014 Guinea-Bissau MICS Survey |
| Guinea-Bissau 2019 Poverty Outcome by Indicator and Household | gnb\_mics18-19.csv |  | FALSE | 2019 Guinea-Bissau MICS Survey |
| Guyana 2009 Poverty Outcome by Indicator and Household | guy\_dhs09.csv |  | FALSE | 2009 Guyana DHS Survey |
| Guyana 2014 Poverty Outcome by Indicator and Household | guy\_mics14.csv |  | FALSE | 2014 Guyana MICS Survey |
| Guyana 2020 Poverty Outcome by Indicator and Household | guy\_mics19-20.csv |  | FALSE | 2020 Guyana MICS Survey |
| Haiti 2012 Poverty Outcome by Indicator and Household | hti\_dhs12.csv |  | FALSE | 2012 Haiti DHS Survey |
| Haiti 2017 Poverty Outcome by Indicator and Household | hti\_dhs16-17.csv |  | FALSE | 2017 Haiti DHS Survey |
| Honduras 2006 Poverty Outcome by Indicator and Household | hnd\_dhs05-06.csv |  | FALSE | 2006 Honduras DHS Survey |
| Honduras 2012 Poverty Outcome by Indicator and Household | hnd\_dhs11-12.csv |  | FALSE | 2012 Honduras DHS Survey |
| Honduras 2019 Poverty Outcome by Indicator and Household | hnd\_mics19.csv |  | FALSE | 2019 Honduras MICS Survey |
| Indonesia 2012 Poverty Outcome by Indicator and Household | idn\_dhs12.csv |  | FALSE | 2012 Indonesia DHS Survey |
| Indonesia 2017 Poverty Outcome by Indicator and Household | idn\_dhs17.csv |  | FALSE | 2017 Indonesia DHS Survey |
| Iraq 2011 Poverty Outcome by Indicator and Household | irq\_mics11.csv |  | FALSE | 2011 Iraq MICS Survey |
| Iraq 2018 Poverty Outcome by Indicator and Household | irq\_mics18.csv |  | FALSE | 2018 Iraq MICS Survey |
| Jordan 2012 Poverty Outcome by Indicator and Household | jor\_dhs12.csv |  | FALSE | 2012 Jordan DHS Survey |
| Jordan 2018 Poverty Outcome by Indicator and Household | jor\_dhs17-18.csv |  | FALSE | 2018 Jordan DHS Survey |
| Kazakhstan 2011 Poverty Outcome by Indicator and Household | kaz\_mics10-11.csv |  | FALSE | 2011 Kazakhstan MICS Survey |
| Kazakhstan 2015 Poverty Outcome by Indicator and Household | kaz\_mics15.csv |  | FALSE | 2015 Kazakhstan MICS Survey |
| Kenya 2009 Poverty Outcome by Indicator and Household | ken\_dhs08-09.csv |  | FALSE | 2009 Kenya DHS Survey |
| Kenya 2014 Poverty Outcome by Indicator and Household | ken\_dhs14.csv |  | FALSE | 2014 Kenya DHS Survey |
| Kyrgyzstan 2006 Poverty Outcome by Indicator and Household | kgz\_mics05-06.csv |  | FALSE | 2006 Kyrgyzstan MICS Survey |
| Kyrgyzstan 2014 Poverty Outcome by Indicator and Household | kgz\_mics14.csv |  | FALSE | 2014 Kyrgyzstan MICS Survey |
| Kyrgyzstan 2018 Poverty Outcome by Indicator and Household | kgz\_mics18.csv |  | FALSE | 2018 Kyrgyzstan MICS Survey |
| Laos 2012 Poverty Outcome by Indicator and Household | lao\_mics11-12.csv |  | FALSE | 2012 Laos MICS Survey |
| Laos 2017 Poverty Outcome by Indicator and Household | lao\_mics17.csv |  | FALSE | 2017 Laos MICS Survey |
| Lesotho 2009 Poverty Outcome by Indicator and Household | lso\_dhs09.csv |  | FALSE | 2009 Lesotho DHS Survey |
| Lesotho 2014 Poverty Outcome by Indicator and Household | lso\_dhs14.csv |  | FALSE | 2014 Lesotho DHS Survey |
| Liberia 2007 Poverty Outcome by Indicator and Household | lbr\_dhs07.csv |  | FALSE | 2007 Liberia DHS Survey |
| Liberia 2013 Poverty Outcome by Indicator and Household | lbr\_dhs13.csv |  | FALSE | 2013 Liberia DHS Survey |
| Liberia 2020 Poverty Outcome by Indicator and Household | lbr\_dhs19-20.csv |  | FALSE | 2020 Liberia DHS Survey |
| Madagascar 2009 Poverty Outcome by Indicator and Household | mdg\_dhs08-09.csv |  | FALSE | 2009 Madagascar DHS Survey |
| Madagascar 2018 Poverty Outcome by Indicator and Household | mdg\_mics18.csv |  | FALSE | 2018 Madagascar MICS Survey |
| Malawi 2010 Poverty Outcome by Indicator and Household | mwi\_dhs10.csv |  | FALSE | 2010 Malawi DHS Survey |
| Malawi 2016 Poverty Outcome by Indicator and Household | mwi\_dhs15-16.csv |  | FALSE | 2016 Malawi DHS Survey |
| Malawi 2020 Poverty Outcome by Indicator and Household | mwi\_mics19-20.csv |  | FALSE | 2020 Malawi MICS Survey |
| Mali 2006 Poverty Outcome by Indicator and Household | mli\_dhs06.csv |  | FALSE | 2006 Mali DHS Survey |
| Mali 2018 Poverty Outcome by Indicator and Household | mli\_dhs18.csv |  | FALSE | 2018 Mali DHS Survey |
| Moldova 2005 Poverty Outcome by Indicator and Household | mda\_dhs05.csv |  | FALSE | 2005 Moldova DHS Survey |
| Moldova 2012 Poverty Outcome by Indicator and Household | mda\_mics12.csv |  | FALSE | 2012 Moldova MICS Survey |
| Mongolia 2010 Poverty Outcome by Indicator and Household | mng\_mics10.csv |  | FALSE | 2010 Mongolia MICS Survey |
| Mongolia 2013 Poverty Outcome by Indicator and Household | mng\_mics13.csv |  | FALSE | 2013 Mongolia MICS Survey |
| Montenegro 2013 Poverty Outcome by Indicator and Household | mne\_mics13.csv |  | FALSE | 2013 Montenegro MICS Survey |
| Montenegro 2018 Poverty Outcome by Indicator and Household | mne\_mics18.csv |  | FALSE | 2018 Montenegro MICS Survey |
| Mozambique 2003 Poverty Outcome by Indicator and Household | moz\_dhs03.csv |  | FALSE | 2003 Mozambique DHS Survey |
| Mozambique 2011 Poverty Outcome by Indicator and Household | moz\_dhs11.csv |  | FALSE | 2011 Mozambique DHS Survey |
| Namibia 2007 Poverty Outcome by Indicator and Household | nam\_dhs06-07.csv |  | FALSE | 2007 Namibia DHS Survey |
| Namibia 2013 Poverty Outcome by Indicator and Household | nam\_dhs13.csv |  | FALSE | 2013 Namibia DHS Survey |
| Nepal 2011 Poverty Outcome by Indicator and Household | npl\_dhs11.csv |  | FALSE | 2011 Nepal DHS Survey |
| Nepal 2016 Poverty Outcome by Indicator and Household | npl\_dhs16.csv |  | FALSE | 2016 Nepal DHS Survey |
| Nepal 2019 Poverty Outcome by Indicator and Household | npl\_mics19.csv |  | FALSE | 2019 Nepal MICS Survey |
| Niger 2006 Poverty Outcome by Indicator and Household | ner\_dhs06.csv |  | FALSE | 2006 Niger DHS Survey |
| Niger 2012 Poverty Outcome by Indicator and Household | ner\_dhs12.csv |  | FALSE | 2012 Niger DHS Survey |
| Nigeria 2013 Poverty Outcome by Indicator and Household | nga\_dhs13.csv |  | FALSE | 2013 Nigeria DHS Survey |
| Nigeria 2018 Poverty Outcome by Indicator and Household | nga\_dhs18.csv |  | FALSE | 2018 Nigeria DHS Survey |
| North Macedonia 2011 Poverty Outcome by Indicator and Household | mkd\_mics11.csv |  | FALSE | 2011 North Macedonia MICS Survey |
| North Macedonia 2019 Poverty Outcome by Indicator and Household | mkd\_mics18-19.csv |  | FALSE | 2019 North Macedonia MICS Survey |
| Pakistan 2013 Poverty Outcome by Indicator and Household | pak\_dhs12-13.csv |  | FALSE | 2013 Pakistan DHS Survey |
| Pakistan 2018 Poverty Outcome by Indicator and Household | pak\_dhs17-18.csv |  | FALSE | 2018 Pakistan DHS Survey |
| Palestine 2010 Poverty Outcome by Indicator and Household | pse\_mics10.csv |  | FALSE | 2010 Palestine MICS Survey |
| Palestine 2014 Poverty Outcome by Indicator and Household | pse\_mics14.csv |  | FALSE | 2014 Palestine MICS Survey |
| Palestine 2020 Poverty Outcome by Indicator and Household | pse\_mics19-20.csv |  | FALSE | 2020 Palestine MICS Survey |
| Peru 2012 Poverty Outcome by Indicator and Household | per\_dhs12.csv |  | FALSE | 2012 Peru DHS Survey |
| Philippines 2013 Poverty Outcome by Indicator and Household | phl\_dhs13.csv |  | FALSE | 2013 Philippines DHS Survey |
| Philippines 2017 Poverty Outcome by Indicator and Household | phl\_dhs17.csv |  | FALSE | 2017 Philippines DHS Survey |
| Rwanda 2010 Poverty Outcome by Indicator and Household | rwa\_dhs10.csv |  | FALSE | 2010 Rwanda DHS Survey |
| Rwanda 2015 Poverty Outcome by Indicator and Household | rwa\_dhs14-15.csv |  | FALSE | 2015 Rwanda DHS Survey |
| Rwanda 2020 Poverty Outcome by Indicator and Household | rwa\_dhs19-20.csv |  | FALSE | 2020 Rwanda DHS Survey |
| Sao Tome and Principe 2009 Poverty Outcome by Indicator and Household | stp\_dhs08-09.csv |  | FALSE | 2009 Sao Tome and Principe DHS Survey |
| Sao Tome and Principe 2019 Poverty Outcome by Indicator and Household | stp\_mics19.csv |  | FALSE | 2019 Sao Tome and Principe MICS Survey |
| Senegal 2005 Poverty Outcome by Indicator and Household | sen\_dhs05.csv |  | FALSE | 2005 Senegal DHS Survey |
| Senegal 2017 Poverty Outcome by Indicator and Household | sen\_dhs17.csv |  | FALSE | 2017 Senegal DHS Survey |
| Senegal 2019 Poverty Outcome by Indicator and Household | sen\_dhs19.csv |  | FALSE | 2019 Senegal DHS Survey |
| Serbia 2010 Poverty Outcome by Indicator and Household | srb\_mics10.csv |  | FALSE | 2010 Serbia MICS Survey |
| Serbia 2014 Poverty Outcome by Indicator and Household | srb\_mics14.csv |  | FALSE | 2014 Serbia MICS Survey |
| Serbia 2019 Poverty Outcome by Indicator and Household | srb\_mics19.csv |  | FALSE | 2019 Serbia MICS Survey |
| Sierra Leone 2013 Poverty Outcome by Indicator and Household | sle\_dhs13.csv |  | FALSE | 2013 Sierra Leone DHS Survey |
| Sierra Leone 2019 Poverty Outcome by Indicator and Household | sle\_dhs19.csv |  | FALSE | 2019 Sierra Leone DHS Survey |
| Sudan 2010 Poverty Outcome by Indicator and Household | sdn\_mics10.csv |  | FALSE | 2010 Sudan MICS Survey |
| Sudan 2014 Poverty Outcome by Indicator and Household | sdn\_mics14.csv |  | FALSE | 2014 Sudan MICS Survey |
| Suriname 2006 Poverty Outcome by Indicator and Household | sur\_mics06.csv |  | FALSE | 2006 Suriname MICS Survey |
| Suriname 2010 Poverty Outcome by Indicator and Household | sur\_mics10.csv |  | FALSE | 2010 Suriname MICS Survey |
| Suriname 2018 Poverty Outcome by Indicator and Household | sur\_mics18.csv |  | FALSE | 2018 Suriname MICS Survey |
| Thailand 2012 Poverty Outcome by Indicator and Household | tha\_mics12.csv |  | FALSE | 2012 Thailand MICS Survey |
| Thailand 2019 Poverty Outcome by Indicator and Household | tha\_mics19.csv |  | FALSE | 2019 Thailand MICS Survey |
| Timor-Leste 2010 Poverty Outcome by Indicator and Household | tls\_dhs09-10.csv |  | FALSE | 2010 Timor-Leste DHS Survey |
| Timor-Leste 2016 Poverty Outcome by Indicator and Household | tls\_dhs16.csv |  | FALSE | 2016 Timor-Leste DHS Survey |
| Togo 2010 Poverty Outcome by Indicator and Household | tgo\_mics10.csv |  | FALSE | 2010 Togo MICS Survey |
| Togo 2014 Poverty Outcome by Indicator and Household | tgo\_dhs13-14.csv |  | FALSE | 2014 Togo DHS Survey |
| Togo 2017 Poverty Outcome by Indicator and Household | tgo\_mics17.csv |  | FALSE | 2017 Togo MICS Survey |
| Trinidad and Tobago 2006 Poverty Outcome by Indicator and Household | tto\_mics06.csv |  | FALSE | 2006 Trinidad and Tobago MICS Survey |
| Trinidad and Tobago 2011 Poverty Outcome by Indicator and Household | tto\_mics11.csv |  | FALSE | 2011 Trinidad and Tobago MICS Survey |
| Tunisia 2012 Poverty Outcome by Indicator and Household | tun\_mics11-12.csv |  | FALSE | 2012 Tunisia MICS Survey |
| Tunisia 2018 Poverty Outcome by Indicator and Household | tun\_mics18.csv |  | FALSE | 2018 Tunisia MICS Survey |
| Turkmenistan 2006 Poverty Outcome by Indicator and Household | tkm\_mics06.csv |  | FALSE | 2006 Turkmenistan MICS Survey |
| Turkmenistan 2019 Poverty Outcome by Indicator and Household | tkm\_mics19.csv |  | FALSE | 2019 Turkmenistan MICS Survey |
| Uganda 2011 Poverty Outcome by Indicator and Household | uga\_dhs11.csv |  | FALSE | 2011 Uganda DHS Survey |
| Uganda 2016 Poverty Outcome by Indicator and Household | uga\_dhs16.csv |  | FALSE | 2016 Uganda DHS Survey |
| Ukraine 2007 Poverty Outcome by Indicator and Household | ukr\_dhs07.csv |  | FALSE | 2007 Ukraine DHS Survey |
| Ukraine 2012 Poverty Outcome by Indicator and Household | ukr\_mics12.csv |  | FALSE | 2012 Ukraine MICS Survey |
| Vietnam 2021 Poverty Outcome by Indicator and Household | vnm\_mics20-21.csv |  | FALSE | 2021 Vietnam MICS Survey |
| Yemen 2006 Poverty Outcome by Indicator and Household | yem\_mics06.csv |  | FALSE | 2006 Yemen MICS Survey |
| Yemen 2013 Poverty Outcome by Indicator and Household | yem\_dhs13.csv |  | FALSE | 2013 Yemen DHS Survey |
| Zambia 2007 Poverty Outcome by Indicator and Household | zmb\_dhs07.csv |  | FALSE | 2007 Zambia DHS Survey |
| Zambia 2014 Poverty Outcome by Indicator and Household | zmb\_dhs13-14.csv |  | FALSE | 2014 Zambia DHS Survey |
| Zambia 2018 Poverty Outcome by Indicator and Household | zmb\_dhs18.csv |  | FALSE | 2018 Zambia DHS Survey |
| Zimbabwe 2011 Poverty Outcome by Indicator and Household | zwe\_dhs10-11.csv |  | FALSE | 2011 Zimbabwe DHS Survey |
| Zimbabwe 2015 Poverty Outcome by Indicator and Household | zwe\_dhs15.csv |  | FALSE | 2015 Zimbabwe DHS Survey |
| Zimbabwe 2019 Poverty Outcome by Indicator and Household | zwe\_mics19.csv |  | FALSE | 2019 Zimbabwe MICS Survey |
| Country region and income groups | OGHIST.xlsx | /data | TRUE | The World Bank |
| Government expenditure data | general-government-data.xlsx | /data | TRUE | Own calculations using World Bank data |
| Rule of law and control of corruption data | wgi-data..xlsx | /data | TRUE | Own calculations using World Bank data |

## Computational requirements

All calculations were done in Python 3.9.13 and require the following packages:

* numpy: 1.26.4
* pandas: 2.2.0
* scipy: 1.12.0
* statsmodels: 0.14.1
* matplotlib: 3.8.3
* plotly: 5.9.0
* networkx: 2.8.4
* sklearn: 1.0.2
* linearmodels: 5.4
* stargazer==0.0.6
* policy\_priority\_inference (imported from the .py file provided in the reproducibility package)

## Description of programs/code

* The program complexity-mp-analysis.ipynb generates all tables and figures in the main body and the appendices of the article. Output files are called appropriate names (e.g., table1.html, figure2.pdf) and should be easy to correlate with the manuscript.
* The program policy\_priority\_inference.py are used to simulate the Policy Priority Inference (PPI). They are adapted from the PPI GitHub package: <https://github.com/oguerrer/ppi>.

## List of generated tables and programs

The provided code reproduces selected tables and figures in the paper, as explained and justified below.

|  |  |  |  |
| --- | --- | --- | --- |
| Figure/Table # | Program | Output file | Note |
| Table 1 | complexity\_mp\_analysis.ipynb | table1.html | Reproduced in raw format. |
| Table 2 | complexity\_mp\_analysis.ipynb | table2.html | Reproduced in raw format. |
| Table 3 | complexity\_mp\_analysis.ipynb | table3.html | Reproduced in raw format. |
| Table A1.1 | / | / | The table does not use any data. Therefore, not reproduced. |
| Table A1.2 | / | / | The table does not use any data. Therefore, not reproduced. |
| Figure 1 a Kyrgyzstan 2006 | complexity\_mp\_analysis.ipynb | figure1a\_kgz06.pdf | Reproduced in raw format. |
| Figure 1 a Kyrgyzstan 2018 | complexity\_mp\_analysis.ipynb | figure1a\_kgz18.pdf | Reproduced in raw format. |
| Figure 1 a Ethiopia 2011 | complexity\_mp\_analysis.ipynb | figure1a\_eth11.pdf | Reproduced in raw format. |
| Figure 1 a Ethiopia 2019 | complexity\_mp\_analysis.ipynb | figure1a\_eth19.pdf | Reproduced in raw format. |
| Figure 2 | complexity\_mp\_analysis.ipynb | figure2.pdf | Reproduced in raw format. |
| Figure 3 | complexity\_mp\_analysis.ipynb | figure3.pdf | Reproduced in raw format. |
| Figure A3.1 | complexity\_mp\_analysis.ipynb | figureA31.pdf | Reproduced in raw format. |
| Figure A3.2 | complexity\_mp\_analysis.ipynb | figureA32.pdf | Reproduced in raw format. |
| Figure A2.1 | complexity\_mp\_analysis.ipynb | figureA21.pdf | Reproduced in raw format. |