

**README for the Reproducibility Package for  
Pathways to Prosperity for Adolescent Girls in Africa**

**Reproduction Instructions**

1. Get access to the data not included in the reproducibility package. See the table below for details.
2. Add the global path in the dofiles:
  - a. Introduction/Figure1.1.do
  - b. Chapter 2/Replication Chapter 2/Macros.do
  - c. Spotlight 2/main.do
3. Add the main path in the R scripts:
  - a. Chapter 2/Replication Chapter 2/Code/Graph Creation/ Bubble Graph.R
  - b. Chapter 2/Replication Chapter 2/Code/Graph Creation/Mics\_visualization.R
  - c. Chapter 2/Replication Chapter 2/Code/Graph Creation/ Old\_new\_transition\_graph.R
4. Run the do-files and R scripts in this order:
  - a. Introduction/Figure1.1.do
  - b. Chapter 2/Replication Chapter 2/Master.do
  - c. Chapter 2/Replication Chapter 2/Code/Graph Creation/ Bubble Graph.R
  - d. Chapter 2/Replication Chapter 2/Code/Graph Creation/Mics\_visualization.R
  - e. Chapter 2/Replication Chapter 2/Code/Graph Creation/ Old\_new\_transition\_graph.R
  - f. Spotlight 2/main.do
5. Map 2.1a, 2.1b, and 2.1c should be reproduced in QGIS with code results.
  - a. Map 2.1a:
    - i. Convert the file 10-14\_school.dta to a comma-separated values (CSV) file and load it into QGIS as a non-geographic layer.
    - ii. Load the shapefile admins2\_dhs.shp as a layer in QGIS
    - iii. Merge both layers with the attributes “tests” and “merge\_var”
    - iv. Produce a choropleth map with the variable “an\_sch” using the bins 0-20, 20-40, 40-60, 60-80, and 80+
  - b. Map 2.1b:
    - i. Convert the file 10maps\_data.dta to a comma-separated values (CSV) file and load it into QGIS as a non-geographic layer.
    - ii. Load the shapefile admins2\_dhs.shp as a layer in QGIS
    - iii. Merge both layers with the attributes “tests” and “merge\_var”
    - iv. Produce a choropleth map with the variable “isnwt\_ncnm” using the bins 0-10, 10-20, 20-40, 40-60, and 60+
  - c. Map 2.1c:
    - i. Convert the file 10maps\_data.dta to a comma-separated values (CSV) file and load it into QGIS as a non-geographic layer.
    - ii. Load the shapefile admins2\_dhs.shp as a layer in QGIS
    - iii. Merge both layers with the attributes “tests” and “merge\_var”
    - iv. Produce a choropleth map with the variable “niswt\_cm” using the bins 0-10, 10-20, 20-40, 40-60

## Data Availability Statement

Dataset	Availability	Located at	Comments
United Nations – <a href="#">World Population Prospects</a>	Included in the reproducibility package	<ul style="list-style-type: none"> <li>- Introduction/WPP2024_POP_F02_3_POPULATION_5-YEAR_AGE_GROUPS_FEMALE.xlsx</li> <li>- “Chapter 2/Replication Chapter 2/Data/Additional Data/popudata.dta”</li> </ul>	<p>Download URLs:  <a href="https://population.un.org/wpp/Download/Files/1_Indicator%20(Standard)/EXCEL_FILES/2_Population/WPP2024_POP_F02_3_POPULATION_5-YEAR_AGE_GROUPS_FEMALE.xlsx">https://population.un.org/wpp/Download/Files/1_Indicator%20(Standard)/EXCEL_FILES/2_Population/WPP2024_POP_F02_3_POPULATION_5-YEAR_AGE_GROUPS_FEMALE.xlsx</a>  <a href="https://population.un.org/wpp/Download/Files/1_Indicator%20(Standard)/EXCEL_FILES/2_Population/WPP2024_POP_F01_2_POPULATION_SINGLE_AGE_MALE.xlsx">https://population.un.org/wpp/Download/Files/1_Indicator%20(Standard)/EXCEL_FILES/2_Population/WPP2024_POP_F01_2_POPULATION_SINGLE_AGE_MALE.xlsx</a></p> <p>For “popudata.dta”, data from the download URLs was filtered by country and year, aggregated by age groups 15-49 for women, and aggregated for all ages for men.</p>
World Bank Development Indicators – <a href="#">Indicator: PPP conversion factor, GDP (LCU per international \$)</a>	Included in the reproducibility package	Spotlight 2/Data/raw/ PPP LCU Conversion.xls	Data was manually filtered for selected countries and years (see countries and years in the data file).
<a href="#">Adolescent Girls Initiative – Kenya (AGI-K)</a>	Included in the reproducibility package	Spotlight 2/Data/raw/AGIK/ <ul style="list-style-type: none"> <li>- R1R2R3_NBO_public_Feb2021.dta</li> <li>- R1R2R3_WAJ_public_Feb2021.dta</li> </ul>	We used the data version sent to us via email by the authors. There might be discrepancies with the version publicly available due to data updates.
<a href="#">Adolescent Girls Empowerment Program (AGEP) Round 4</a>	Data is not included in the reproducibility package. Data is accessible upon approval on the data URL	Spotlight 2/Data/raw/AGEP/AGEPR4/ <ul style="list-style-type: none"> <li>- AGEP_Round4.dta</li> <li>- AGEP_Sample.dta</li> </ul>	We used the data version sent to us via email by the authors. There might be discrepancies with the version publicly available due to data updates.
Sahel Women Empowerment and Demographic Dividend Initiative (SWEDD) –	Data for Burkina Faso, Côte d'Ivoire, and Niger are publicly available in their data URLs but	Spotlight 2/Data/raw/SWEDD/ BLSWEDDado(en).dta	We used the data version sent to us via email by the authors. There might be discrepancies with the version publicly available

<a href="#">Burkina Faso</a> , <a href="#">Côte d'Ivoire</a> , <a href="#">Mali</a> , Niger, Mauritania, Chad	cannot be redistributed. Data for Niger, Mauritania, and Chad are forthcoming in the Microdata Library		due to data updates. The data we received was household data appended for all countries in the Stata data file. “BLSWEDDado(en).dta” can be recreated by appending all HH data files in each data URL once all country data are available.
Sahel Women Empowerment and Demographic Dividend Initiative (SWEDD) – Cash Transfers Benin	Data is forthcoming in the World Bank Microdata Library	Spotlight 2/Data/raw/SWEDD Benin/CCT/ - ADO_Volet_2_clean.dta - INDIVIDU_Volet_2_clean.dta - MENAGE_Volet_2_clean.dta - MERE_Volet_2_clean.dta	We used the data version sent to us via email by the authors. There might be discrepancies with the version publicly available due to data updates.
Sahel Women Empowerment and Demographic Dividend Initiative (SWEDD) – Safe Spaces Benin	Data is forthcoming in the World Bank Microdata Library	Spotlight 2/Data/raw/SWEDD Benin/Safespaces/ - ADO_Volet_1_clean.dta - GAR_Volet_1_clean.dta - INDIVIDU_Volet_1_clean.dta - MENAGE_Volet_1_clean.dta	We used the data version sent to us via email by the authors. There might be discrepancies with the version publicly available due to data updates.
<a href="#">Adolescent Girls Initiative for Learning and Empowerment (AGILE) – Nigeria</a>	Data is publicly available in the data URL but cannot be redistributed	Spotlight 2/Data/raw/Agile/ - Adolescent Survey_June 16 2023.dta - School Survey_June 16 2023.dta	We used the data version sent to us via email by the authors. There might be discrepancies with the version publicly available due to data updates.
Promoting Safe Sex among Adolescents in Tanzania (PASS)	Data is forthcoming in the World Bank Microdata Library	Spotlight 2/Data/raw/TZ_Safe/TZ_PASS-Baseline_ee.dta	We used the data version sent to us via email by the authors. There might be discrepancies with the version publicly available due to data updates.
UNICEF – <a href="#">Multiple Indicator Cluster Survey (MICS)</a>	Data is publicly available in the data URL but cannot be redistributed. Account creation is required.	Chapter 2/Replication Chapter 2/Data/MICS/ - MICS/CD.dta - MICS/CR.dta - MICS/GB.dta - MICS/GH.dta - MICS/GM.dta - MICS/LS.dta - MICS/MD.dta - MICS/MW.dta - MICS/NG.dta - MICS/SL.dta - MICS/ST.dta - MICS/TC.dta - MICS/TG.dta - MICS/ZW.dta - MICS 3/BF.dta	Data was downloaded from the Data URL by selecting the corresponding MICS round and country. - Files in “MICS” correspond to MICS 6 and files “fs.sav” - “MICS 3”, “MICS 4”, “MICS 5” correspond to “hl.sav” and their corresponding rounds - “MICS HH” corresponds to

		<ul style="list-style-type: none"> <li>- MICS 3/BU.dta</li> <li>- MICS 3/MZ.dta</li> <li>- MICS 3/SM.dta</li> <li>- MICS 4/SS.dta</li> <li>- MICS 5/BJ.dta</li> <li>- MICS 5/CG.dta</li> <li>- MICS 5/CI.dta</li> <li>- MICS 5/CM.dta</li> <li>- MICS 5/GN.dta</li> <li>- MICS 5/ML.dta</li> <li>- MICS 5/MR.dta</li> <li>- MICS 5/SZ.dta</li> <li>- MICS HH/BJ.dta</li> <li>- MICS HH/CG.dta</li> <li>- MICS HH/CI.dta</li> <li>- MICS HH/CM.dta</li> <li>- MICS HH/GN.dta</li> <li>- MICS HH/ML.dta</li> <li>- MICS HH/MR.dta</li> <li>- MICS HH/SZ.dta</li> </ul>	<p>MICS 5 and the files “hh.sav”</p> <p>The files were exported to Stata, renamed to their ISO-2 country code, and copied in the corresponding MICS round folder in the data location.</p>
<p>USAID – <a href="#">The DHS Program</a></p>	<p>Data is publicly available in the data URL but cannot be redistributed. Account creation is required.</p>	<p>Chapter 2/Replication Chapter 2/Data/DHS/</p> <ul style="list-style-type: none"> <li>- DHS HH/AO.dta</li> <li>- DHS HH/BF.dta</li> <li>- DHS HH/BJ.dta</li> <li>- DHS HH/BU.dta</li> <li>- DHS HH/CD.dta</li> <li>- DHS HH/CG.dta</li> <li>- DHS HH/CI.dta</li> <li>- DHS HH/CM.dta</li> <li>- DHS HH/ET.dta</li> <li>- DHS HH/GA.dta</li> <li>- DHS HH/GH.dta</li> <li>- DHS HH/GM.dta</li> <li>- DHS HH/GN.dta</li> <li>- DHS HH/KE.dta</li> <li>- DHS HH/KM.dta</li> <li>- DHS HH/LB.dta</li> <li>- DHS HH/LS.dta</li> <li>- DHS HH/MD.dta</li> <li>- DHS HH/ML.dta</li> <li>- DHS HH/MR.dta</li> <li>- DHS HH/MW.dta</li> <li>- DHS HH/MZ.dta</li> <li>- DHS HH/NG.dta</li> <li>- DHS HH/NI.dta</li> <li>- DHS HH/NM.dta</li> <li>- DHS HH/RW.dta</li> <li>- DHS HH/SL.dta</li> <li>- DHS HH/SN.dta</li> <li>- DHS HH/ST.dta</li> <li>- DHS HH/SZ.dta</li> <li>- DHS HH/TD.dta</li> </ul>	<p>Data was downloaded from the Data URL by selecting the corresponding country and year. The years are specific to each country, they are specified in pages 89-91 of the book and in the file “Chapter 2/Replication Chapter 2/Data/Additional Data/Data documentation.xlsx”. The type of data downloaded are Survey Datasets and Standard DHS. Women data come from the files in “Individual Recode”, Men data come from “Men’s recode”, and HH data come from “Household Recode”. Files were downloaded in Stata format, renamed to their corresponding ISO-2 country code, and copied in their corresponding data location.</p> <p>Geographic data was also obtained from this source for each country. Admin-2 country polygons were</p>

		<ul style="list-style-type: none"> <li>- DHS HH/TG.dta</li> <li>- DHS HH/TZ.dta</li> <li>- DHS HH/UG.dta</li> <li>- DHS HH/ZA.dta</li> <li>- DHS HH/ZM.dta</li> <li>- DHS HH/ZW.dta</li> <li>- DHS Men/AO.dta</li> <li>- DHS Men/BF.dta</li> <li>- DHS Men/BJ.dta</li> <li>- DHS Men/BU.dta</li> <li>- DHS Men/CD.dta</li> <li>- DHS Men/CG.dta</li> <li>- DHS Men/CI.dta</li> <li>- DHS Men/CM.dta</li> <li>- DHS Men/ET.dta</li> <li>- DHS Men/GA.dta</li> <li>- DHS Men/GH.dta</li> <li>- DHS Men/GM.dta</li> <li>- DHS Men/GN.dta</li> <li>- DHS Men/KE.dta</li> <li>- DHS Men/KM.dta</li> <li>- DHS Men/LB.dta</li> <li>- DHS Men/LS.dta</li> <li>- DHS Men/MD.dta</li> <li>- DHS Men/ML.dta</li> <li>- DHS Men/MR.dta</li> <li>- DHS Men/MW.dta</li> <li>- DHS Men/MZ.dta</li> <li>- DHS Men/NG.dta</li> <li>- DHS Men/NI.dta</li> <li>- DHS Men/NM.dta</li> <li>- DHS Men/RW.dta</li> <li>- DHS Men/SL.dta</li> <li>- DHS Men/SN.dta</li> <li>- DHS Men/ST.dta</li> <li>- DHS Men/SZ.dta</li> <li>- DHS Men/TD.dta</li> <li>- DHS Men/TG.dta</li> <li>- DHS Men/TZ.dta</li> <li>- DHS Men/UG.dta</li> <li>- DHS Men/ZA.dta</li> <li>- DHS Men/ZM.dta</li> <li>- DHS Men/ZW.dta</li> <li>- DHS Women/AO.dta</li> <li>- DHS Women/BF.dta</li> <li>- DHS Women/BJ.dta</li> <li>- DHS Women/BU.dta</li> <li>- DHS Women/CD.dta</li> <li>- DHS Women/CG.dta</li> <li>- DHS Women/CI.dta</li> <li>- DHS Women/CM.dta</li> <li>- DHS Women/ET.dta</li> <li>- DHS Women/GA.dta</li> </ul>	<p>added in a single layer and saved in the file "admin2_dhs.shp".</p>
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- DHS Women/GH.dta
- DHS Women/GM.dta
- DHS Women/GN.dta
- DHS Women/KE.dta
- DHS Women/KM.dta
- DHS Women/LB.dta
- DHS Women/LS.dta
- DHS Women/MD.dta
- DHS Women/ML.dta
- DHS Women/MR.dta
- DHS Women/MW.dta
- DHS Women/MZ.dta
- DHS Women/NG.dta
- DHS Women/NI.dta
- DHS Women/NM.dta
- DHS Women/RW.dta
- DHS Women/SL.dta
- DHS Women/SN.dta
- DHS Women/ST.dta
- DHS Women/SZ.dta
- DHS Women/TD.dta
- DHS Women/TG.dta
- DHS Women/TZ.dta
- DHS Women/UG.dta
- DHS Women/ZA.dta
- DHS Women/ZM.dta
- DHS Women/ZW.dta

Chapter 2/Replication Chapter  
2/Data/DHS Old/

- DHS HH/BF.dta
- DHS HH/BJ.dta
- DHS HH/CI.dta
- DHS HH/CM.dta
- DHS HH/ET.dta
- DHS HH/GA.dta
- DHS HH/GH.dta
- DHS HH/GN.dta
- DHS HH/KE.dta
- DHS HH/KM.dta
- DHS HH/LB.dta
- DHS HH/LS.dta
- DHS HH/MD.dta
- DHS HH/ML.dta
- DHS HH/MW.dta
- DHS HH/MZ.dta
- DHS HH/NG.dta
- DHS HH/NI.dta
- DHS HH/NM.dta
- DHS HH/RW.dta
- DHS HH/SL.dta
- DHS HH/TD.dta
- DHS HH/TG.dta
- DHS HH/TZ.dta

		<ul style="list-style-type: none"> <li>- DHS HH/UG.dta</li> <li>- DHS HH/ZA.dta</li> <li>- DHS HH/ZM.dta</li> <li>- DHS HH/ZW.dta</li> <li>- DHS Women/BF.dta</li> <li>- DHS Women/BJ.dta</li> <li>- DHS Women/CI.dta</li> <li>- DHS Women/CM.dta</li> <li>- DHS Women/ET.dta</li> <li>- DHS Women/GA.dta</li> <li>- DHS Women/GH.dta</li> <li>- DHS Women/GN.dta</li> <li>- DHS Women/KE.dta</li> <li>- DHS Women/KM.dta</li> <li>- DHS Women/LB.dta</li> <li>- DHS Women/LS.dta</li> <li>- DHS Women/MD.dta</li> <li>- DHS Women/ML.dta</li> <li>- DHS Women/MW.dta</li> <li>- DHS Women/MZ.dta</li> <li>- DHS Women/NG.dta</li> <li>- DHS Women/NI.dta</li> <li>- DHS Women/NM.dta</li> <li>- DHS Women/RW.dta</li> <li>- DHS Women/SL.dta</li> <li>- DHS Women/TD.dta</li> <li>- DHS Women/TG.dta</li> <li>- DHS Women/TZ.dta</li> <li>- DHS Women/UG.dta</li> <li>- DHS Women/ZA.dta</li> <li>- DHS Women/ZM.dta</li> <li>- DHS Women/ZW.dta</li> </ul> <p>Chapter 2/Replication Chapter 2/Data/Shapefiles/</p> <ul style="list-style-type: none"> <li>- Admin2_dhs.shp (and associated files with the same name)</li> </ul>	
<p>World Bank - <a href="#">Women, Business and the Law 1.0 Data for 1971-2024</a></p>	<p>Included in the reproducibility package</p>	<p>Chapter 2/Replication Chapter 2/Data/Additional Data/country_laws.dta</p>	<p>Data was filtered by countries for the year 2020 including these indicators:</p> <ul style="list-style-type: none"> <li>- Can a woman get a job in the same way as a man?</li> <li>- Does the law mandate equal remuneration for work of equal value?</li> <li>- Is paid leave of at least 14 weeks available to mothers?</li> </ul>

			<ul style="list-style-type: none"> <li>- Does the law prohibit discrimination in access to credit based on gender?</li> <li>- Can a woman open a bank account in the same way as a man?</li> <li>- Do sons and daughters have equal rights to inherit assets from their parents?</li> <li>- Can a woman get passport in the same way as a man?</li> </ul>
World Bank - <a href="#">Global Financial Inclusion (Global Findex) Database 2017</a>	Data is publicly available in the data URL but cannot be redistributed. Account creation is required.	Chapter 2/Replication Chapter 2/Data/Findex/micro_world.dta	
IGAD Climate Prediction and Applications Centre – <a href="#">Africa - Admin Level 2</a>	Included in the reproducibility package	Chapter 2/Replication Chapter 2/Data/Shapefiles/Africa_adm2.shp (and associated files with the same name)	Data was renamed to “africa_adm2.shp”