

## “Fiscal Policy, Poverty, and Inequality in a Constrained Environment: The Case of the West Bank and Gaza”

This folder contains the reproducibility package for the Working Paper “Fiscal Policy, Poverty, and Inequality in a Constrained Environment: The Case of the West Bank and Gaza” by Beenish Amjad, Haydeeliz Carrasco, Arden Finn and Maya Goldman.

### Data Availability Statement

#### Overview

#### Statement about Rights

- I certify that the author(s) of the manuscript have legitimate access to and permission to use the data used in this manuscript.
- I certify that the author(s) of the manuscript have documented permission to redistribute/publish the data contained within this replication package. Appropriate permission are documented in the LICENSE.txt file.

#### Summary of Availability

- All data are publicly available.
- Some data cannot be made publicly available. In particular, data on property taxes pulled from "Property evaluations 2017.xls", "Property tax collections 2017.xls" and disaggregated price data in "prices.xlsx", “Augmented IO\_West Bank\_V3” are restricted access shared by the NSO cannot be made available.
- No data can be made** publicly available.

#### Details on each Data Source

The structure of this section is as follows. The first table details publicly available data which forms the core of the analysis for the paper. The second table details administrative data used to model the redistributive impact of property tax which is non-publicly available data.

With the exception of administrative data on Property tax, the data accessed in this project was accessed via existing collaborations of the World Bank country teams (including Health, Education, MTI, Poverty and Social Protection) with the Government counterparts.

For those interested in replication of the data, we have provided the contact person for each data source. We cannot guarantee that the relevant authorities will approve access to the data for the purposes of replication by external parties, but we will provide our assistance for two years following publication.

#### Publicly available data (marked with asterisk means staff only)

Name	Citation	Access information	File
“Palestinian Expenditure	Palestinian Central	The data is owned by the Palestinian Central Bureau of Statistics (PCBS). This data can be accessed by	PSE folder.

and Consumption Survey (PECS)**	Bureau of Statistics (2016/17)	Bank Staff at: <a href="https://microdatalib.worldbank.org/index.php/catalog/10300/">https://microdatalib.worldbank.org/index.php/catalog/10300/</a>	
Palestinian cities	NA	This is a data frame with Information about Palestinian cities produced by the authors.	20220128_Municipal_Codes.xls
Data on tax revenue collection and number of taxpayers	Ministry of Finance	Information about VAT rates was mapped and summarized in a dataset by the World Bank team	VAT rates_for STATA.xlsx
Custom duty rates_for STATA	Israel Tax Authority	Customs information was mapped and summarized in a dataset by the World Bank team using the information on the following link. <a href="https://shaarolami-query.customs.mof.gov.il/CustomspilotWeb/en/CustomsBook/Import/CustomsTaarifEntry">https://shaarolami-query.customs.mof.gov.il/CustomspilotWeb/en/CustomsBook/Import/CustomsTaarifEntry</a>	Custom duty rates_for STATA.xlsx

#### Not Publicly available data

Name	Citation	Access information
"Property evaluations 2017"	Palestinian Central Bureau of Statistics (2016/17)	The data is owned by the Palestinian Central Bureau of Statistics (PCBS). This data is not publicly available and was provided to the World Bank team as part of ongoing collaborations with the PCBS.
"Prices"	Palestinian Central Bureau of Statistics (2016/17)	The data is owned by the Palestinian Central Bureau of Statistics (PCBS). This data is not publicly available and was provided to the World Bank team as part of ongoing collaborations with the PCBS.
Number of Property Tax payers 2017	Palestinian Central Bureau of Statistics (2016/17)	The data is owned by the Palestinian Central Bureau of Statistics (PCBS). This data is not publicly available and was provided to the World Bank team as part of ongoing collaborations with the PCBS.
"Property tax collection 2017"	Palestinian Central Bureau of Statistics (2016/17)	The data is owned by the Palestinian Central Bureau of Statistics (PCBS). This data is not publicly available and was provided to the World Bank team as part of ongoing collaborations with the PCBS.

IO folder	Palestinian Central Bureau of Statistics (2016/17)	Augmented IO shared by the NSO. This file is available on request from the NSO, and is not in the public domain. Folder contains two files : Augmented IO_West Bank_V3and Petroleum Augmented IO_WB
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The following table shows details about data sources consulted for this project and used for the Research Project but it is not used in the replication package code.

“Supply Use Table”	Palestinian Central Bureau of Statistics	The data is owned by the Palestinian Central Bureau of Statistics (PCBS). This data is publicly available. For details; <a href="https://content.iospress.com/articles/statistical-journal-of-the-iaos/sji160244">https://content.iospress.com/articles/statistical-journal-of-the-iaos/sji160244</a> . Khasib, Amina. ‘The Supply and Use Table as a Useful Tool for Improving Data Quality in Palestine’. 1 Jan. 2017: 963 – 972.	For details; (SUT2017-PT-Values.xls, SUT2017-Gz-Values.xls, SUT2017-WB-Values.xls) This is not used in the raw data or code but was used in developing the project
“Government Budget”	Palestinian Central Bureau of Statistics 2016 and 2017	The data is owned by the Palestinian Central Bureau of Statistics (PCBS). This data is publicly available and can be accessed at; <ul style="list-style-type: none"> <li>• <a href="https://www.pmf.ps/pmf/documents/accounts/annual/2017/merged_gfs%202017%20eng.pdf">https://www.pmf.ps/pmf/documents/accounts/annual/2017/merged_gfs%202017%20eng.pdf</a></li> <li>• <a href="https://www.pcbs.gov.ps/Downloads/book2496.pdf">https://www.pcbs.gov.ps/Downloads/book2496.pdf</a></li> </ul>	For details; (merged_gfs 2017 eng.pdf and merged_2016 gfs with coverage.pdf) This is not used in the raw data or code but was used in developing the project.
“Macro-fiscal, social, and economic indicators”	World Development Indicators	The data was accessed in 2022 using general portal of the WDI. For details; <a href="https://databank.worldbank.org/source/world-development-indicators">https://databank.worldbank.org/source/world-development-indicators</a>	This is not used in the raw data or code but was used in developing the project.
“Data on tax revenue collection and number of taxpayers”	Ministry of Finance	This data is owned by the Ministry of Finance and it is publicly available at; <a href="https://www.pmf.ps/pmf/documents/accounts/annual/2017/merged_gfs%202017%20eng.pdf">https://www.pmf.ps/pmf/documents/accounts/annual/2017/merged_gfs%202017%20eng.pdf</a>	Total direct and indirect tax collection including personal income tax, property tax, VAT, customs etc.
Social protection schemes data, allocation, and number of beneficiaries	Ministry of Social Development	This data is owned by the Ministry of Social Development and it is publicly available. Following links are available from which data was obtained; <ul style="list-style-type: none"> <li>• <a href="https://www.mosa.pna.ps/en">https://www.mosa.pna.ps/en</a></li> <li>• Cash Transfer Program [Arabic]. <a href="https://www.mosa.gov.ps/programs/35.html">https://www.mosa.gov.ps/programs/35.html</a></li> <li>• Implementation Completion and Results Report: West Bank and Gaza Cash Transfer</li> </ul>	Total payment under different social protection schemes, rules of allocation, amount transferred etc. to model Social protection

		<p>Project (P119307, P144967). Report No: ICR00004569</p> <ul style="list-style-type: none"> <li>• ASPIRE World Bank (link: <a href="https://www.worldbank.org/en/data/datatopics/aspire/country/west-bank-and-gaza">https://www.worldbank.org/en/data/datatopics/aspire/country/west-bank-and-gaza</a>)</li> <li>• Ministry of Social Affairs. (Jan 2017). <i>Ministry of Social Affairs Accomplishments for 2016</i> [Arabic]. <a href="https://www.mosa.gov.ps/msdupload/reports/15625419381942490536.pdf">https://www.mosa.gov.ps/msdupload/reports/15625419381942490536.pdf</a></li> <li>• Afanah, Moayad. (Oct 2016). <i>Cash Transfers for Social Assistance - Investigative Working Paper</i>. Civil Society Team for Enhancing Budget Transparency. <a href="https://www.aman-palestine.org/en/reports-and-studies/8909.html">https://www.aman-palestine.org/en/reports-and-studies/8909.html</a></li> <li>• Ministry of Social Development. (Jan 2018). <i>Ministry of Social Development Accomplishments for 2017</i> [Arabic]. <a href="https://www.mosa.gov.ps/msdupload/reports/15625419861986386981.pdf">https://www.mosa.gov.ps/msdupload/reports/15625419861986386981.pdf</a></li> <li>• Ministry of Social Development. (Jun 2018). <i>Annual Statistical Report for 2017</i> [Arabic]. <a href="https://www.mosd.gov.ps/ar/node/892">https://www.mosd.gov.ps/ar/node/892</a></li> <li>• The Office of the European Union Representative (West Bank and Gaza Strip, UNRWA). (Oct 2019). <i>Support to the Palestinian Cash Transfer Programme</i>. <a href="https://eeas.europa.eu/delegations/palestine-occupied-palestinian-territory-west-bank-and-gaza-strip/65554/support-palestinian-cash-transfer-programme_en">https://eeas.europa.eu/delegations/palestine-occupied-palestinian-territory-west-bank-and-gaza-strip/65554/support-palestinian-cash-transfer-programme_en</a></li> <li>• The World Bank. (Feb 2017). <i>Project Information Document/Integrated Safeguards Data Sheet (PID/ISDS): Social Protection Enhancement Project (P160674)</i>. Report No: PIDISDSC19913.</li> <li>• The World Bank. (May 2017). <i>Implementation Status &amp; Results Report: Cash Transfer Project (P119307)</i>. Report No: ISR26873.</li> </ul>	
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		<ul style="list-style-type: none"> <li>• The World Bank. (Jun 2017). <i>Project Appraisal Document: Social Protection Enhancement Project</i>. Report No: PAD2342.</li> <li>• The World Bank. (Dec 2017). <i>Implementation Status &amp; Results Report: Cash Transfer Project (P119307)</i>. Report No: ISR30180.</li> <li>• The World Bank. (Dec 2018). <i>Implementation Completion and Results Report: West Bank and Gaza Cash Transfer Project (P119307, P144967)</i>. Report No: ICR00004569.</li> <li>• Tebaldi, R. (2019). <i>Building Shock-Responsive National Social Protection Systems in the Middle East and North Africa (MENA) Region</i>. International Policy Centre for Inclusive Growth (IPC-IG). <a href="https://ipcig.org/pub/eng/RR30_Building_Shock_Responsive_National_Social_Protection.pdf">https://ipcig.org/pub/eng/RR30_Building_Shock_Responsive_National_Social_Protection.pdf</a></li> </ul> <p>Wong, J., Jacques, K., Ban Kim, C., Mano, S., Camara Pinto, B., &amp; Sarraj, J. (Feb 2019). <i>Cash Transfers in Palestine: Building Blocks of Social Protection</i>. The Reach Project. <a href="https://reachalliance.org/case-study/cash-transfers-in-palestine-building-blocks-of-social-protection/">https://reachalliance.org/case-study/cash-transfers-in-palestine-building-blocks-of-social-protection/</a></p>	
“Electricity Tariff 2017”	Ministry of Energy	<p>This data is owned by the Ministry of Energy and it is publicly available. Several sources have been used for the data including the following;</p> <ul style="list-style-type: none"> <li>• <a href="https://www.worldbank.org/en/country/westbankandgaza/brief/securing-energy-for-development-in-west-bank-and-gaza-brief">https://www.worldbank.org/en/country/westbankandgaza/brief/securing-energy-for-development-in-west-bank-and-gaza-brief</a></li> <li>• Securing Energy for Development in the West Bank and Gaza, World Bank; <a href="https://www.worldbank.org/en/country/westbankandgaza/brief/securing-energy-for-development-in-west-bank-and-gaza-brief">https://www.worldbank.org/en/country/westbankandgaza/brief/securing-energy-for-development-in-west-bank-and-gaza-brief</a></li> <li>• Article 5, Ministerial decision N 03/137/17 of the year 2017. Decree Law No (I) of Year 2018 Amending the General Electricity Law of 2009 <a href="https://www.pec.ps/en">https://www.pec.ps/en</a></li> <li>• <a href="https://www.icnl.org/resources/civic-freedom-monitor/palestine">https://www.icnl.org/resources/civic-freedom-monitor/palestine</a></li> </ul>	Electricity tariff structure, cost of supply etc.

		<ul style="list-style-type: none"> <li>• <a href="https://pdf.usaid.gov/pdf_docs/PA00TM13.pdf">https://pdf.usaid.gov/pdf_docs/PA00TM13.pdf</a></li> </ul>	
“Education Expenditures and student enrollment”	Ministry of Education	<p>This data is owned by the Ministry of Education and it is publicly available using following links;</p> <ul style="list-style-type: none"> <li>• Ministry of Education and Higher Education, 2017, Education Statistical Yearbook 2016/2017, Ramallah–Palestine <a href="https://www.mohe.pna.ps/Higher-Education-/Higher-Education-System">https://www.mohe.pna.ps/Higher-Education-/Higher-Education-System</a></li> <li>• <a href="http://www.mohe.pna.ps">http://www.mohe.pna.ps</a></li> </ul>	Expenditure on education, number of students, education levels etc.
“Labor Force Survey 2017”	Palestinian Central Bureau of Statistics 2017	<p>The data is owned by the Palestinian Central Bureau of Statistics (PCBS). This data is publicly available and can be accessed at</p> <p><a href="https://www.pcbs.gov.ps/PCBS-Metadata-en-v5.2/index.php/catalog/652">https://www.pcbs.gov.ps/PCBS-Metadata-en-v5.2/index.php/catalog/652</a></p>	LFS-10Y-Q4-2017-E.dta.
“Health expenditures”	Ministry of Health	<p>This data is owned by the Ministry of Health and it is publicly available using following source:</p> <p><a href="http://site.moh.ps/Content/Books/ZxRcynmiUofNqt66u4CrHRgmJR6Uv7z77srjilEAho6xnz5V3rgLTuRhO7xf2j2VusNilvWkjwp84yXHLdGleB97gKrHHI5iZ9oPJ25owGEN.pdf">Health Annual Report Palestine 2016 - Ministry of Health</a> <a href="http://site.moh.ps/Content/Books/ZxRcynmiUofNqt66u4CrHRgmJR6Uv7z77srjilEAho6xnz5V3rgLTuRhO7xf2j2VusNilvWkjwp84yXHLdGleB97gKrHHI5iZ9oPJ25owGEN.pdf">http://site.moh.ps/Content/Books/ZxRcynmiUofNqt66u4CrHRgmJR6Uv7z77srjilEAho6xnz5V3rgLTuRhO7xf2j2VusNilvWkjwp84yXHLdGleB97gKrHHI5iZ9oPJ25owGEN.pdf</a></p>	Spending on health, beneficiaries etc.

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## Computational requirements

### Software Requirements

- Stata (code was last run with version 16) – estout (3.23)
  - iefieldkit (2.0)
  - ietoolkit (6.3)
  - unique (1.2.4)
  - coefplot (1.8.3)
  - reghdfe (5.7.3)
  - ftools (2.37.0)
  - dataout (1.0.4)
  - ssc install ceq
  - dropmiss (2.5.0)
  - the program “MASTER.do” already contains all dependencies.
- ### Memory and Runtime Requirements

- The code was last run on a Windows 10 laptop with 16GB of RAM.

- Stata analysis code takes approximately 20 minutes to run.

### Instructions to Replicators

The code to reproduce the results included in the working paper. To recreate the outputs, follow the steps below.

1. Download the reproducibility package on your computer.
2. Open the downloaded folder.
  - A. Download the “Template” folder and save it.
  - B. The data used for this paper is available in the “Stata” folder under two sub-folders namely;
    - i) sub-folder “rawdata”
    - ii) sub-folder “output” which contains all the outputs and results of the code, all the processed final dataset of CEQ income concepts. It also contains another sub-folder “Temp”. Temp contains the temporary datasets generated using do files and codes.
    - iii) sub-folder additional documentation, containing multiple files which will aid with the understanding of this reproducibility package. For instance, “macro-fiscal administrative data” which contains the relevant administrative data to finalize the model and macro validate the results
  - C. Download all above three folders and copy all the files
  - D. All the codes are the in folder “do-files”. First file is called 00\_PSE\_master: in Stata.
    - i. To run the Stata MASTER, open it and edit the path of the repository copy in your computer. This do-file creates all the non-map tables and graphs included in the working paper.
    - ii. All the user written packages are installed in the ado folder of the package.
    - iii. All interventions’ results are produced by running the do files no. 01 to 12.
    - iv. The do file 99\_PSE\_CEQ income concepts would produce the outputs and 999 do file would produce the FIA results.
    - v. The do file 101\_PSE\_etabs produces would produce all the e-sheets (e tabs) or MWBs using the templates already shared.
    - vi. The do file 103. PSE\_graphs\_report produces all the graphs used in the report. The graphs are separately saved in the folder “Output” under sub-folder “graphs”
  - E. Additional calculations are required for the following outputs:
    - i. Table 4-2: The calculation is explained in section 4.5.1 of the report, and it uses the price of electricity given in Table 2-4 on page 16 of the report.
    - ii. Table 9-1: Column “PECS 2016/17” is the result of the code output exported in “c1” sheet of the excel file c1.xlsx. The calculation of the rest

of the columns are done in excel sheet “Macrovalidation”. The results are not reproducible if this excel file is deleted.

- iii. Figure A.2: The first 5 columns are exported via code to the excel file pdi\_pgt.xlsx. Average income is calculated by dividing the total income by column 2, and average contributions are calculated by dividing the total contributions by column 3.
- iv. Table C.1: The table is exported via code to the excel file AnnexC.xlsx (Columns F-N).