

Gender Parity in the Civil Service Dataset (Gen-PaCS)

Codebook
Version 1.1
November 1, 2022



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1. INTRODUCTION

1.1 Overview

The Gender Parity in Civil Service (Gen-PaCS) Dataset – Version 1.1 is the first public version of a dataset with gender-disaggregated data on employment in public administration across 158 countries and territories from 1951-2020. It includes gender-disaggregated numbers and percentages of employees in the civil service overall, and broken down by ministry, when such data were available. Future versions will make available additional data, including on decision-making levels.

For the purposes of our data collection and documentation, we use interchangeably the terms ‘public administration’, ‘public service’ and ‘civil service’ and the terms ‘public administrator’, ‘public servant’ and ‘civil servant.’ As defined in the 2021 report [Gender Equality in Public Administration](#) (Finkel, Hughes, and Hill 2021:19), public administration is made up of the government institutions that plan, coordinate, and control operations and implement policies. Public administrators work in public departments and agencies. Countries and territories often define public administrators separately from the public service, which can include legislators, judges, and the military. Some, but not all, countries and territories differentiate the civil service as a segment of public administrators who are highly educated or trained and/or perform key government roles. This dataset relies on how countries define and measure their own public administration, so the sectors, levels and positions included vary across countries.

The Gen-PaCS dataset is a product of a seven-year collaborative effort on gender equality in public administration (GEPA) between the United Nations Development Programme (UNDP) and the Gender Inequality Research Lab (GIRL) at the University of Pittsburgh. GIRL is co-led by Dr. Müge Kökten Finkel and Dr. Melanie M. Hughes and is supported by an interdisciplinary team of graduate student researchers. The dataset has enabled academic research, policy briefs, regional analyses and the 2021 global report on [Gender Equality in Public Administration](#) (Finkel, Hughes, and Hill 2021), co-authored with UNDP.

1.2 Preferred Citation

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1.3 Methodology

Gen-PaCS – Version 1.1 was compiled primarily from government websites and reports, often those of national statistics offices, public administration agencies, and gender-focused ministries. Data sources also include third-party agencies, such as the Organisation for Economic Co-Operation and Development (OECD), and academic research.

1.4 Acknowledgements

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2. GEN-PACS DATASET DETAILS

2.1 Overview and Caveats

Gen-PaCS - Version 1.1 of the database spans from 1951 to 2020 and includes 158 countries and territories, for a total of 1,492 country-years. In making comparisons across countries or years, users should be aware of the following:

Overall public administration vs. ministry level: Gender-disaggregated totals for both the full public administration system as a whole and for ministries are included, where such data are available. Total public administration numbers can capture agencies, commissions, public corporations, and other bodies that fall outside of the ministry structure; the ministry level data includes only the ministry or primary cabinet structures of the executive branch. Ministry data is coded by sectoral focus, allowing for comparison of women's representation across areas of government. See the Variables Codebook (section 3) for a description of these ministry type and sectors.

Cross-national variation: Each country/territory has a unique definition of "public administration" or "civil service", which makes cross-national comparisons difficult. There is substantial variation on which sectors, occupations, institutions, and contract types constitute a country's public administration. For example, many countries include schoolteachers, police, or soldiers in public administration, while others do not. Variance is also attributed to descriptive elements like country size and degree of centralization. Each of these factors shapes the figures included in Gen-PaCS.

Time-series variation: Access to data may vary year-to-year depending on reporting consistency and sourcing. Longitudinal data are not necessarily reported consistently across country-years, and different sources may report different totals for the same year within a country. Additionally, national ministry or executive agency structures can change year-to-year or between government administrations. This is particularly

important to consider for ministry level data in cases where government ministries merge or split over time.

Source type: The public administration totals and patterns of representation being captured by each source type may differ considerably. These sources may use different definitions of public administration and rules for who is counted and included in the totals. To aid with comparisons, the dataset is organized into data subsets based on sources. Care should be taken if comparing between subsets. As further discussed in section 2.2, the subset for *administrative data* more accurately represents individual countries' public administration employee totals. The subset for *labor force data* is more standardized cross-nationally through the ILO classification, but universally includes defense and social security functions which may or may not be officially part of public administration and often excludes areas that are part of public administration, such as public school and public health workers.

2.2 Structure of the Dataset

Publicly available employment records in public administration vary in source and reporting type. *Sources* correspond to the underlying method of data collection used to provide records on public administration employment. There are two predominant types of sources used: labor force surveys and administrative records. Together, more than 90 percent of observations in Gen-PaCS come from these two source types (see also discussion of "Source Type" in section 2.1 of this codebook).

Governments primarily use four different methods of *reporting* data on civil servants: labor force survey reports, gender equality reports, civil service yearbooks, and online databases. While labor force survey reports and civil service yearbooks almost exclusively rely on labor force surveys and administrative records, gender equality reports or online databases can use either administrative records or labor force surveys when reporting gender data in public administrations. Given the potential difficulties in navigating these different types of data, Gen-PaCS features unique variables (see section 3) to capture both source and reporting type.

The data are partitioned by source type.

Sheet A – Administrative: Administrative records are official employment records captured by government agencies, often through human resource management information systems. Totals from these records, when publicly available, are usually reported in national civil service yearbooks. We also include as "administrative" those sources that cite such records, such as briefings from a Ministry of Public Administration, or that otherwise give totals of public administration employees and do *not* use the ILO category discussed below. Administrative data are not internationally harmonized, are often not publicly available, and may be incomplete. Personnel systems may not include data on certain sectors, such as defense.

Sheet B – Labor force surveys (LFS): Labor force surveys typically conduct nationally representative population survey data and are regularly administered to capture employment patterns in a country. These surveys tend to employ the International

Labour Organization's (ILO) International Standard Classification of Occupations (ISCO) category, 'Public Administration; Defence; and Compulsory Social Security.' While this measure is relatively standardized and widely available cross-nationally and over-time, it is also often inconsistent with official definitions of public administration in a country. For example, people employed in national defense may not be part of a country's public administration. Similarly, groups that a country may define as public administration workers, such as nurses or teachers, may be excluded from this ILO measure. Data from labor force surveys can provide an incomplete or unclear picture of civil service employment patterns but are useful for their widespread availability over time and country.

Sheet C - Other: The final tab captures all public administration data contained in Gen-PaCS that does not fit into the prior categories. This "other" umbrella includes reports from academic research, non-governmental organizations, or other third-party agencies, and is often used when the primary source of the data is unknown. In some cases, the organizations may have used a different methodology to collect data, for example, by fielding their own surveys. This range of sources means that data in this tab is not easily comparable cross-nationally. In Gen-PaCS - Version 1.1, data are only included if they have been published or otherwise been made public.

2.3 Files Available

Data files:

- "GenPaCSv1p1.xlsx" - Excel workbook, full dataset, sheets divided by data source into administrative (a), labor force surveys (b), and other or unknown (c)
- "GenPaCSv1p1a.csv", "GenPaCSv1p1b.csv", and "GenPaCSv1p1c.csv" - Comma-delimited data files, one for each of the three data sources (a, b, and c)
- "GenPaCSv1p1a.dta", "GenPaCSv1p1b.dta", and "GenPaCSv1p1c.dta" - Stata dataset files, one for each of the three data sources (a, b, and c)

Codebooks:

- "GenPaCSv1p1Codebook.pdf" - This document, which includes a description of the data, how it was collected, the variables included in the dataset, and coding notes
- "GenPaCSv1p1MinistryCodebook.xlsx" - Excel file, documenting how ministries were coded into policy areas

3. DATASET VARIABLES

3.1 Identification Variables

sdgreg (SDG region)

Countries and areas grouped into eight regions as defined by the United Nations Statistics Division and used for the Sustainable Development Goals report

undpreg (UNDP region)

Countries and areas grouped into seven regions as defined by the United Nations Development Programme

iso (ISO)

Internationally recognized codes set out by the International Organization for Standardization and designated to each country and most dependent areas.

iso3 (ISO3)

Three-letter country codes published by the International Organization of Standardization. The codes represent countries, dependent territories, and special areas of geographic interest.

country (Country)

Name of the country/territory. Name as of January 1, 2022, as recognized by UN.

year (Year)

Year the data were originally collected or are recorded to represent.

3.2 Overall Employment in Public Administration

“Overall Public Administration” refers to the total participation of civil servants (men, women, and others) in public administration. This includes all levels of employees. (We use “overall” to distinguish from variables focused only on certain levels of the civil service, for example senior managers, that we plan to introduce in future versions of the dataset.)

overall_m (Men)

Number of men in public administration overall

overall_w (Women)

Number of women in public administration overall

overall_t (Total)

Total number of people in public administration overall

overall_pcw (% Women)

Percent of women in public administration overall

3.3 Ministry Level Employment Data

Ministry level employment statistics are recorded for overall employment, capturing all workers including those at decision-making levels. These data include only the ministry or primary cabinet structures of the executive branch. Data on agencies, commissions and public corporations that fall outside of the primary ministry or cabinet structure are excluded from ministry level statistics. Consequently, the sum of public administrators across all ministries often is not equal to the total number of workers in public administration overall, and this varies substantially across countries.

Almost all ministry level data in the Gen-PaCS dataset comes from official administrative records captured by government agencies, often through human resource management information systems. As discussed above, administrative data are not internationally harmonized, are often not publicly available, and may be incomplete. Ministry structure and composition may shift drastically over time with changing government administrations or needs, and not all ministries report consistently. The first subset of ministry level summary measures (section 3.3.1) aims to help users identify how comprehensive the data are.

The second subset of ministry variables (3.3.2 and 3.3.3) aggregate ministry data to promote cross-national comparisons. First, data are coded into four broad sectors based on the classification system used by the European Institute for Gender Equality (EIGE). These groupings are known throughout the dataset as BEIS classifications (3.3.2). Second, ministries are coded into more niche areas of policy making using a coding scheme adapted from Escobar-Lemmon and Taylor-Robinson's (2016) research on cabinets. These groupings are known throughout the dataset as the ELTR classifications (3.3.3). Though these two classifications systems use the same set of ministries, BEIS data are marked as missing when data for any ministries that fall under a sectoral category are unavailable. As such, BEIS data are only displayed for a country-year when comprehensive ministry data is available. ELTR data, on the other hand, is present for a country-year even if data are available for one ministry.

The section below describes these categories in more detail. Information on which specific industries were included within the BEIS and ELTR classifications within each country are available through the Ministry Level Codebook.

3.3.1 Ministry Level Summary Measures

These variables capture information about ministry level data and their completeness, as well as how they compare to overall totals. All ministry level measures currently apply to the overall civil service.

ml_dummy_o (ML overall data exists)

Dummy variable. 1 indicates presence of some ministry level data in overall public administration; 0 indicates no ML data.

ml_incomplete_o (Incomplete ML overall data)

Dummy variable. 1 indicates that ministry level data in overall public administration are incomplete; 0 indicates that data are complete.

ml_beis_o (ML overall total - BEIS)

Sum of the total number of civil servants in ministry positions in overall public administration following the BEIS classification. Only present when ministry data is complete.

ml_eltr_o (ML overall total - ELTR)

Sum of the total number of civil servants in ministry positions in overall public administration following the ELTR classification. Present for all cases where any ministry level data exists.

ml_pc_o (% of overall captured by ML data)

Percentage of the total number of overall civil servants captured by the sum of the total number of civil servants in ministry positions following the BEIS classification. If ministry level data are known to be incomplete, BEIS totals are missing and thus this variable is missing. Discrepancies between the overall and ministry level data may result from different levels, sectors, and/or agencies being included in the overall measures that are not covered by the ministry level measures.

3.3.2 BEIS Classification

The following variables show numbers and percentages of ministry positions, aggregated by the type of ministry. The BEIS classification follows the EIGE classification system which categorizes ministries into the four categories based on their primary government function:

Basic Function ministries (B) include those that cover inter- and intra-governmental operations, including foreign and internal affairs, defense, and justice.

Economic ministries (E) include those that cover daily economic and financial operations of government (i.e., finance and trade), as well as those dedicated to key industries, such as agriculture or tourism.

Infrastructure ministries (I) are those that govern basic physical structures and facilities needed for the operation of society, including transportation, public works, housing, communication, and the environment.

Socio-Cultural ministries (S) include those that oversee social or cultural affairs, including health, education, social affairs, employment, family, culture, and sports.

All ministry level measures currently apply to the overall civil service.

mlov_b_m (Basic men)

Number of men working in ministries with basic functions

mlov_b_w (Basic women)

Number of women working in ministries with basic functions

mlov_b_t (Basic total)

Total number of civil servants working in ministries with basic functions

mlov_b_pcw (Basic percent women)

Percent of those working in basic ministries who are women

mlov_e_m (Economic men)

Number of men working in ministries with economic functions

mlov_e_w (Economic women)

Number of men working in ministries with economic functions

mlov_e_t (Economic total)

Total number of civil servants working in ministries with economic functions

mlov_e_pcw (Economic percent women)

Percent of women working in ministries with economic functions

mlov_i_m (Infrastructure men)

Number of men working in ministries with infrastructure functions

mlov_i_w (Infrastructure women)

Number of men working in ministries with infrastructure functions

mlov_i_t (Infrastructure total)

Total number of civil servants working in ministries with infrastructure functions

mlov_i_pcw (Infrastructure percent women)

Percent of women working in ministries with infrastructure functions

mlov_s_m (Socio-cultural men)

Number of men working in ministries with socio-cultural functions

mlov_s_w (Socio-cultural women)

Number of men working in ministries with socio-cultural functions

mlov_s_t (Socio-cultural total)

Total number of civil servants working in ministries with socio-cultural functions

mlov_s_pcw (Socio-cultural percent women)

Percent of women working in ministries with socio-cultural functions

3.3.3 ELTR Classification

The following variables show numbers and percentages of ministry positions, aggregated by the type of ministry. The ELTR classification is a modified version followed from Escobar-Lemmon and Taylor-Robinson (2016) which categorizes ministries into the twenty distinct categories based on their primary government function:

- Agriculture
- Commerce and Industry
- Culture
- Defense
- Education
- Environmental Protection
- Executive Operations
- Finance and Treasury
- Foreign Relations
- Health
- Housing and Regional Development
- Information and Communications
- Justice and Public Security
- Labor and Social Security
- Natural Resources
- Planning
- Public Works and Transportation
- Science, Technology, Engineering, Math (STEM)
- Social Issues
- Women's Issues

All ministry level measures currently apply to the overall civil service.

mlov_eo_m (Executive Operations men)

Number of men working in ministries related to executive operations

mlov_eo_w (Executive Operations women)

Number of women working in ministries related to executive operations

mlov_eo_t (Executive Operations total)

Total number of civil servants working in ministries related to executive operations

mlov_eo_pcw (Executive Operations percent women)

Percent of women working in ministries related to executive operations

mlov_ic_m (Information & Communication men)

Number of men working in ministries related to information and communication

mlov_ic_w (Information & Communication women)

Number of women working in ministries related to information and communication

mlov_ic_t (Information & Communication total)
Total number of civil servants working in ministries related to information and communication

mlov_ic_pcw (Information & Communication percent women)
Percent of women working in ministries related to information and communication

mlov_jps_m (Justice and Public Security men)
Number of men working in ministries related to justice and public security

mlov_jps_w (Justice and Public Security women)
Number of women working in ministries related to justice and public security

mlov_jps_t (Justice and Public Security total)
Total number of civil servants working in ministries related to justice and public security

mlov_jps_pcw (Justice and Public Security percent women)
Percent of women working in ministries related to justice and public security

mlov_d_m (Defense men)
Number of men working in ministries related to defense

mlov_d_w (Defense women)
Number of women working in ministries related to defense

mlov_d_t (Defense total)
Total number of civil servants working in ministries related to defense

mlov_d_pcw (Defense percent women)
Percent of women working in ministries related to defense

mlov_fr_m (Foreign Relations men)
Number of men working in ministries related to foreign relations

mlov_fr_w (Foreign Relations women)
Number of women working in ministries related to foreign relations

mlov_fr_t (Foreign Relations total)
Total number of civil servants working in ministries related to foreign relations

mlov_fr_pcw (Foreign Relations percent women)
Percent of women working in ministries related to foreign relations

mlov_ag_m (Agriculture men)
Number of men working in ministries related to agriculture

mlov_ag_w (Agriculture women)
Number of women working in ministries related to agriculture

mlov_ag_t (Agriculture total)
Total number of civil servants working in ministries related to agriculture

mlov_ag_pcw (Agriculture percent women)
Percent of women working in ministries related to agriculture

mlov_ci_m (Commerce and Industry men)
Number of men working in ministries related to commerce and industry

mlov_ci_w (Commerce and Industry women)
Number of women working in ministries related to commerce and industry

mlov_ci_t (Commerce and Industry total)
Total number of civil servants working in ministries related to commerce and industry

mlov_ci_pcw (Commerce and Industry percent women)
Percent of women working in ministries related to commerce and industry

mlov_ft_m (Finance and Treasury men)
Number of men working in ministries related to finance and treasury

mlov_ft_w (Finance and Treasury women)
Number of women working in ministries related to finance and treasury

mlov_ft_t (Finance and Treasury total)
Total number of civil servants working in ministries related to finance and treasury

mlov_ft_pcw (Finance and Treasury percent women)
Percent of women working in ministries related to finance and treasury

mlov_iss_m (Labor and Social Security men)
Number of men working in ministries related to labor and social security

mlov_iss_w (Labor and Social Security women)
Number of women working in ministries related to labor and social security

mlov_iss_t (Labor and Social Security total)
Total number of civil servants working in ministries related to labor and social security

mlov_iss_pcw (Labor and Social Security percent women)
Percent of women working in ministries related to labor and social security

mlov_pl_m (Planning men)
Number of men working in ministries related to planning

mlov_pl_w (Planning women)
Number of women working in ministries related to planning

mlov_pl_t (Planning total)
Total number of civil servants working in ministries related to planning

mlov_pl_pcw (Planning percent women)
Percent of women working in ministries related to planning

mlov_ep_m (Environmental Protection men)
Number of men working in ministries related to environmental protection

mlov_ep_w (Environmental Protection women)

Number of women working in ministries related to environmental protection

mlov_ep_t (Environmental Protection total)

Total number of civil servants working in ministries related to environmental protection

mlov_ep_pcw (Environmental Protection percent women)

Percent of women working in ministries related to environmental protection

mlov_nr_m (Natural Resources men)

Number of men working in ministries related to natural resources

mlov_nr_w (Natural Resources women)

Number of women working in ministries related to natural resources

mlov_nr_t (Natural Resources total)

Total number of civil servants working in ministries related to natural resources

mlov_nr_pcw (Natural Resources percent women)

Percent of women working in ministries related to natural resources

mlov_hrd_m (Housing and Regional Development men)

Number of men working in ministries related to housing and regional development

mlov_hrd_w (Housing and Regional Development women)

Number of women working in ministries related to housing and regional development

mlov_hrd_t (Housing and Regional Development total)

Total number of civil servants working in ministries related to housing and regional development

mlov_hrd_pcw (Housing and Regional Development percent women)

Percent of women working in ministries related to housing and regional development

mlov_pwt_m (Public Works and Transportation men)

Number of men working in ministries related to public works and transportation

mlov_pwt_w (Public Works and Transportation women)

Number of women working in ministries related to public works and transportation

mlov_pwt_t (Public Works and Transportation total)

Total number of civil servants working in ministries related to public works and transportation

mlov_pwt_pcw (Public Works and Transportation percent women)

Percent of women working in ministries related to public works and transportation

mlov_stem_m (Science, Tech, Engineering, Math men)

Number of men working in ministries related to science, technology, engineering and math

mlov_stem_w (Science, Tech, Engineering, Math women)

Number of women working in ministries related to science, technology, engineering and math

mlov_stem_t (Science, Tech, Engineering, Math total)

Total number of civil servants working in ministries related to science, technology, engineering and math

mlov_stem_pcw (Science, Tech, Engineering, Math percent women)

Percent of women working in ministries related to science, technology, engineering and math

mlov_ed_m (Education men)

Number of men working in ministries related to education

mlov_ed_w (Education women)

Number of women working in ministries related to education

mlov_ed_t (Education total)

Total number of civil servants working in ministries related to education

mlov_ed_pcw (Education percent women)

Percent of women working in ministries related to education

mlov_ph_m (Health men)

Number of men working in ministries related to health

mlov_ph_w (Health women)

Number of women working in ministries related to health

mlov_ph_t (Health total)

Total number of civil servants working in ministries related to health

mlov_ph_pcw (Health percent women)

Percent of women working in ministries related to health

mlov_wi_m (Women's Issues men)

Number of men working in ministries related to women's issues

mlov_wi_w (Women's Issues women)

Number of women working in ministries related to women's issues

mlov_wi_t (Women's Issues total)

Total number of civil servants working in ministries related to women's issues

mlov_wi_pcw (Women's Issues percent women)

Percent of women working in ministries related to women's issues

mlov_si_m (Social Issues men)

Number of men working in ministries related to social issues

mlov_si_w (Social Issues women)

Number of women working in ministries related to social issues

mlov_si_t (Social Issues total)

Total number of civil servants working in ministries related to social issues

mlov_si_pcw (Social Issues percent women)

Percent of women working in ministries related to social issues

mlov_cl_m (Culture men)

Number of men working in ministries related to culture

mlov_cl_w (Culture women)

Number of women working in ministries related to culture

mlov_cl_t (Culture total)

Total number of civil servants working in ministries related to culture

mlov_cl_pcw (Culture percent women)

Percent of women working in ministries related to culture

3.4 Sourcing Variables

Source information is provided for Overall Public Administration and for Ministry Level data. This includes what agencies produced and reported the data, what type of reporting method was used, and the data source.

reporting_agency_o and **reporting_agency_ml** (Reporting agency for overall public administration and for ministry level)

The organization responsible for producing the document where the data are found. Text field, varies across and within countries.

reporting_method_o and **reporting_method_ml** (Reporting method for overall public administration and for ministry level)

Category code for type of document where the data were found/method through which the data were supplied. Includes the following types of reports and codes:

1 - Labor Force Survey Report

Provides results of labor force surveys

3 - UNDP - Public

Published UNDP report or document (Data exclusively provided by UNDP are not included in Gen-PaCS)

5 - Third Party Agency Report

Source is an organization or entity other than the country's government, UNDP or EIGE, or an academic source

6 - Academic Research

Data reported in academic articles, journals, reports, etc

7 - Other

Other sources not covered by the coding categories

8 - Unknown

Reporting method is unclear or unattributed

9 - National Census

Census performed by government/national statistical agency; often uses same employment categories and definitions as labor force survey

10 - Civil Service Yearbook

Reports on the organization, performance, and employment patterns in public administration; most widely available in Asia-Pacific region

11 - Statistical Yearbook

Reports on national measures and statistics, often produced by national statistical agencies, that include a number of sectors or areas that may include the public administration

12 - Gender Report

Highlights the status of women relative to men in countries across many dimensions
Data on public administration are often available in an employment section; most widely available in Europe and Central Asia

13 - National Website or Database

Can provide extensive data and statistics across a variety of domains, including gender-disaggregated employment (often from LFS) or governance data; typically produced by national statistics offices and most widely available in LAC and OECD countries

14 - National Report - Other

Other types of government source reports not included in the categories here

data_source_o and **data_source_ml** (Primary source of data, for overall public administration and ministry level)

Categories for the method through which the initial data were collected. Care was taken to code based on the original source of the data. For example, totals presented in an agency report that directly cites the national labor force survey are coded as LFS. The dataset file is divided into sheets based on overall source type. Sheet A, the administrative data, includes code 10; Sheet B, LFS, includes code 1; and Sheet C includes all other codes.

1 - Labor Force Survey

Labor force survey

3 - UNDP-UKN

United Nations Development Programme

5 - Third

Third Party other than UNDP, often other intergovernmental or nongovernmental organizations

6 - Ac

Academic

7 - Other

Other

8 - UKN

Unknown

9 - CEN

National census

10 - Admin

Administrative data

4. SUPPLEMENTAL NOTES

4.1 Notes on Country Cases

The notes below highlight and explain unusual and duplicate cases, discuss our methodological decisions, and provide some guidance for researchers using the database. As discussed above, in some cases for one country-year we have data from multiple sources; these are sorted into the separate subsets based on source type. In other cases, however, there are multiple totals for one country-year that come from the same type of source; that is, different reports give different numbers for the same year, even when using the same type of data. These duplicate country-years were individually investigated to trace the discrepancies and select the more accurate data point.

Selection decisions were based on a number of rules and criteria, including each country's definition of public administration, the quality and granularity of the data, and the presence of a time series. In general, we sought and prioritized data that reflected the country's definition of public administration, and the more expansive/inclusive totals. Numerical totals were preferred over percentages, as were data with more complete disaggregation. Where possible, time series were prioritized. For example, if a third-party agency issued a report for a single year, but the employment commission issued annual reports for a decade, we select the employment commission data. With labor force data and other sources that use similar employment categories, we looked for those data closest to the ILO category and definition.

The country cases below are cases where duplicates were not otherwise differentiated by type or source. The extra cases have been dropped from the public dataset, and we offer brief descriptions here of the specific decisions and justifications.

Cabo Verde: Data for 2010 come from two similar sources, both from the National Statistics Institute, that use a standard LFS sector definition ("Administração pública e defesa; segurança social obrigatório"). We selected the 16719 total, as it is directly from report tables rather than presentation slides. The two differ in their reported proportion of women by 0.42%. (Note: a third data point for this country-year is published in the same report and the totals differ more substantially. It does not use the LFS category (instead "Trabalhador da Administração Pública") and seems to delineate occupation not sector; this is not considered a duplicate data point but included in the "Other" subset under National Census sourcing.)

Estonia: There are duplicate cases across 2007-2010, from administrative sources. The Ministry of Finance and National Library both produce yearbook publications that include public administration totals, with the reported percent women varying by 0.1% to 6.0%. We selected the Ministry of Finance sourcing, since it includes number totals, not just percentages (as well as data on decision-making). In addition, the Library report includes defense totals.

Ireland: In the duplicate cases for 2011 and 2016, the data come from similar LFS sources, but differ in their estimates of percent women by 0.29% and 1.53%. We selected those that are sourced directly from the Central Statistics Office website rather than consolidated in reports.

Italy: There are two different totals for 2015 from administrative data sources. We selected the Ministry of the Treasury data (the 3,142,939 total) to maintain consistency with the time series. In addition, this source includes decision-making data, whereas the other source uses terminology other than "public administration." Their estimates of percent women differ by 1.58%.

Kyrgyzstan: For 2016, two different sources present LFS data, though their reported proportion of women is equal. We selected the from National Statistical Committee's Gender Report (the 100,500 total) over the third-party agency report for a few reasons. This fits with and provides continuity with the time series, and this report includes number totals, not just overall percentages.

Mauritius: Duplicates for 2001 and 2002 come from LFS sources. The national statistics agency releases annual reports, which often include data on previous years for comparison, and the totals reported differ across reports from different years. In general, we select for the most updated data. For the 2001 case, we selected the totals reported for 2001 in the 2002/2003 Annual Report (36200) instead of the 2000/2001 Report. These differed by 0.27% in their reported proportion of women. We selected those totals over the 2011 Report as well, which differs by 1.17%, because in later years the employment data were presented differently. The name of the employment category changed, no longer including "compulsory social security," and the way the data were divided and presented had changed. For the same reasons, in the 2002 case we selected the 2002/2003 Report (38200) over the 2012 Report, which differ by 3.3% women.

Namibia: For 2014, we have totals from two different government agency sources, the Employment Equity Commission and the Public Service Commission, that both use administrative data. We selected the Employment Equity Commission report, which reports a total of 67,251. This fits with the longer time series, and the other report excludes some sectors. Proportion of women's representation differs by 0.38% between the two sources.

State of Palestine: For 2016, we selected the 90,862 total, from an annual gender report. The paper includes a table with totals for the Public Sector, broken down by grade/employment, and notes that this includes "civil employees only." This offers a more complete accounting than the other source, which adds across individual agencies. The percent women differs between the two by 0.19%.

Tajikistan: For the duplicate cases of 2014 and 2017, we maintain a consistent time series and select the totals from the Committee for Women and Family Affairs reports.

5. KEY SOURCES & RESOURCES CITED

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