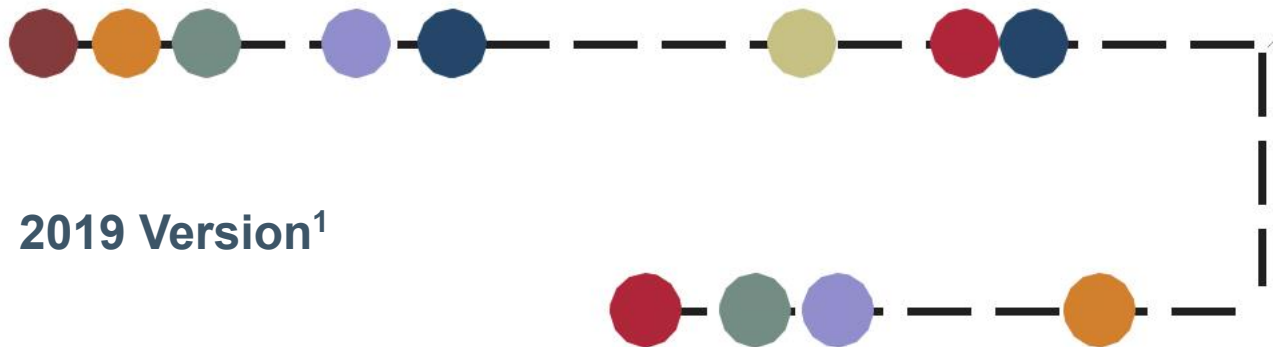


A Database User Manual for

SPEED

Statistics on Public
Expenditures for Economic
Development



¹ This version of the SPEED manual was prepared for the 2019 update of the SPEED database originally produced in 2010 (IFPRI 2010a). The 2019 version of SPEED database was updated and documented by Sarah K. Lowder sarahklowder@gmail.com.

International Food Policy Research Institute

The International Food Policy Research Institute (IFPRI), established in 1975, provides evidence-based policy solutions to sustainably end hunger and malnutrition and reduce poverty. The Institute conducts research, communicates results, optimizes partnerships, and builds capacity to ensure sustainable food production, promote healthy food systems, improve markets and trade, transform agriculture, build resilience, and strengthen institutions and governance. Gender is considered in all of the Institute's work. IFPRI collaborates with partners around the world, including development implementers, public institutions, the private sector, and farmers' organizations, to ensure that local, national, regional, and global food policies are based on evidence. IFPRI is a member of the CGIAR Consortium.

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Notices:

1. The Statistics on Public Expenditures for Economic Development (SPEED) data are provided "as is," and in no event shall the International Food Policy Research Institute (IFPRI) be liable for any damages resulting from use of the data. While great effort was taken to obtain high-quality data, the accuracy or reliability of the data is not guaranteed or warranted in any way.
2. IFPRI encourages the use of this database but emphasizes that it may contain "raw" data. For some of the data points, the users will need to take care in handling missing observations, outlier values, and violations of logical consistency.

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ABSTRACT

This document provides an overview of the coverage of the new release of the 2019 version of the Statistics on Public Expenditures for Economic Development (SPEED) database. Key issues related to currency redenomination and changes in definition of sector expenditure and how they are addressed to ensure cross-country and intertemporal comparability are presented. The database covers 164 countries from 1980 to 2017 for eleven sectors: agriculture, communication, education, defense, health, mining, social protection, fuel and energy, transport, transport and communication (as a group) and other. Indicators reported include percentage of sector expenditure in total expenditure, percentage of total expenditure to total gross domestic product, and per capita sector and total expenditure in constant prices. Significant effort has been put into recording the sources, methods, and issues related to each individual data point so as to allow for easy replication or verification of any data value.

Access to the SPEED database, along with further detailed information, can be found on the International Food Policy Research Institute website at <http://www.ifpri.org/publication/public-expenditure-database>.

INTRODUCTION

Public expenditure is a powerful instrument for governments to use in achieving sustainable growth, poverty reduction, and transformation. Understanding the linkages between different types of public expenditure and development can help governments to better allocate their resources in a manner consistent with their policy objectives and citizens' needs and priorities. Development practitioners, donors, and the general public have increasingly requested expenditure accountability and transparency in the use of public resources. Transparency in public spending allows governments to better track, monitor, and evaluate the impacts of investment decisions and to invest in the provision of public goods and services that benefit the rural poor (such as agricultural research and extension, health, education, and social protection) and provide a conducive environment for private-sector investments.

Against this background, the International Food Policy Research Institute (IFPRI) launched and made publicly available the Statistics on Public Expenditures for Economic Development (SPEED) database in 2010 (IFPRI 2010b).² The database aims to provide policymakers, researchers, and the broader development community with the most comprehensive public expenditure information. This is the third major update of the database since 2010 (the first and second major updates were made available in 2013 and 2015 respectively). This third update includes:

- an expanded time coverage (1980 to 2017).
- an expanded country coverage (164 countries³);
- additional currencies (LCU, Current US Dollars, Constant 2010 US Dollars);
- inclusion of World Bank regions

This 2019 version includes a total of eleven sectors: agriculture, communication, education, defense, health, mining, social protection, fuel and energy, transport, transport and communication (as a group) and other. Prior to 1990, the International Monetary Fund (IMF) presented the expenditures on transport and communications as one combined sector. Since 1990, the expenditures have been reported separately as two sectors. As in the 2015 version of SPEED, this 2019 version presents the expenditures on the two sectors separately as well as combined for completeness of information. Estimates of total spending and spending on other sectors are also provided.

The user is encouraged to read and become familiar with the definitions of sector expenditure provided by the Government Finance Statistics Manual 2014 by the IMF (IMF 2014), as the documentation of the SPEED database draws from the terminology used in the Government Finance Statistics Manual 2014, along with individual countries' own definitions in some cases. (See Appendix A of this document for a general overview of the functional classification of expenditures used by the IMF and other institutions.)

SPEED aims to provide a transparent and user-friendly database for undertaking cross-country and time-series public expenditure analyses. It is expected that periodic future updates will further expand the coverage of countries, time, and sectors/subsectors. The long-term vision of SPEED is that it can be broadly used by researchers, policymakers, donors, and others in the development community for a variety of economic, policy, and research applications.

² SPEED used to be known as Statistics of Public Expenditure for Economic Development.

³ While data were not available for all years and indicators for the 164 countries included in SPEED, the data were updated for as many countries, years and indicators as possible.

DATA

The primary source for data is the IMF Government Financial Statistics (GFS) which provides the largest- and longest-spanning public expenditure data series. The data from the GFS were supplemented with data from the IMF's Government Financial Statistics (GFS) Yearbook, Statistical Appendix and Selected Issues publications and the World Bank's Public Expenditure Reviews. Data from in-country or national sources were also used, including budget documents and statistical abstracts downloaded from government websites of ministries of finance, statistics bureaus, accountant generals' offices, and central banks. Prior to their becoming available online in electronic formats, data from sources were obtained as hard-copy publications. Similarly, data from several international and multilateral organizations are included.

Because different sources of data are used, there can be competing data points for any one year in a particular country. On the contrary, it is possible to have some years with no data. How these and other issues are dealt with to create the database is discussed in depth in the data handling section of this document. The countries covered in SPEED can broadly be classified into five types based on the primary data sources used in compiling the expenditures:

Type 1: Countries for which only data from IMF sources are available and used

Type 2: Countries for which only data from national sources are available and used

Type 3: Countries for which data from both national and IMF sources are available

Type 4: Countries (mostly in Africa) for which data were obtained from the Regional Strategic Analysis and Knowledge Support System (ReSAKSS 2013) and online database of the West African Central Bank (2015)

Type 5: Countries (mostly in Europe) for which data from Eurostat (2012) were used

In type 3, 4 and 5 situations, the IMF data were used in favor of data from any other source. Data for Type 2 countries were updated according to their national data sources.

Data from the IMF originated from printed editions of the IMF's Statistical Appendix from 1981 to 2008 as well as from the GFS Database CD-ROM. More recent data were obtained via the online GFS database. For some countries such as Bangladesh, Pakistan, Ethiopia, and Pakistan, public expenditure reviews undertaken by the World Bank were used. In general, available data from national sources were used with the goal of extending, complementing, and cross-validating the data from the IMF GFS. The gains or value-addition from using national data in this manner were observed to be high particularly for countries in Africa, Latin America and the Caribbean, and Europe as well as those of high-income status. The United Nations Classification of the Functions of Government (United Nations 2013) definition is followed for all countries, and the data are reported for General Governments.

Countries Covered

The countries covered are displayed in Table 1, classified into eight groups: East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North America, South Asia, Africa south of the Sahara, Euro zone, and high income. The first six groups are based on geographical location as defined by the World Bank. The Euro zone countries were grouped together because of

having a common currency and strong economic ties in addition to the fact that their expenditure data originated from Eurostat. The high-income group is defined based on the definition by the World Bank, where countries with gross national income per capita greater than \$12,616 in 2012 are classified as high income. To make the groups mutually exclusive, high-income countries that are already listed under the other seven groups were excluded from the high-income group.

Table 1. List of countries by group covered in the SPEED database

EAP	ECA	LAC	MENA	SA	SSA	EU+	ODC			
Cambodia	Albania	Argentina	Panama	Algeria	Afghanistan	Angola	Malawi	Austria	Netherlands	Australia
China	Armenia	Bahamas	Paraguay	Bahrain	Bangladesh	Benin	Mali	Belgium	Norway	Canada
China, Hong Kong SAR	Azerbaijan	Barbados	Peru	Egypt	Bhutan	Botswana	Mauritius	Bulgaria	Poland	Israel
Fiji	Belarus	Belize	St. Kitts and Nevis	Iran	India	Burkina Faso	Mozambique	Croatia	Portugal	Japan
Indonesia	Bosnia and Herzegovina	Bolivia		Iraq	Maldives	Burundi	Namibia	Cyprus	Romania	New Zealand
Kiribati		Brazil	St. Vincent and Grenadines	Jordan	Nepal	Cabo Verde	Niger	Czechia	Slovakia	Republic of Korea
Lao PDR	Georgia	Chile		Kuwait	Pakistan	Cameroon	Nigeria	Denmark	Slovenia	
Malaysia	Kazakhstan	Colombia	Suriname	Lebanon	Sri Lanka	Central African Republic	Rwanda	Estonia	Spain	Singapore
Mongolia	Kyrgyzstan	Costa Rica	Trinidad and Tobago	Morocco		Congo	Senegal	Finland	Sweden	United States of America
Myanmar	North Macedonia	Dominica		Oman		Cote d'Ivoire	Seychelles	France	Switzerland	
Papua New Guinea		Dominican Republic	Uruguay	Qatar		Democratic Republic of Congo	Sierra Leone	Germany	United Kingdom	
Philippines	Republic of Moldova		Venezuela	Saudi Arabia		Equatorial Guinea	South Africa	Greece		
Samoa		Ecuador				Ethiopia	Sudan	Hungary		
Solomon Islands	Russian Federation	El Salvador		Tunisia		Gambia	Swaziland	Iceland		
Thailand		Grenada				Ghana	Togo	Ireland		
Timor-Leste	Serbia	Guatemala		United Arab Emirates		Guinea-Bissau	Uganda	Italy		
Tonga	Tajikistan	Honduras				Kenya	United Republic of Tanzania	Latvia		
Vanuatu	Turkey	Jamaica		Yemen		Lesotho		Lithuania		
Viet Nam	Ukraine	Mexico				Liberia	Zambia	Luxembourg		
	Uzbekistan	Nicaragua				Madagascar	Zimbabwe	Malta		

DATA HANDLING

This section presents three important aspects of the data management procedures that were applied in creating the database. These relate to (1) missing data points within the series, (2) missing data points at the beginning or end of the series, and (3) competing data points arising from multiple sources. In a number of cases interpolations and extrapolations were used, however these procedures could not be used in all cases. For ratios, shares or per capita measures, weighted averages were used.

Interpolations

Missing data are a frequent occurrence in most economic data series, and interpolation is one way of dealing with them. The basic notion behind interpolation is that nonmissing observations in the data can be used in the estimation of missing values. Interpolation requires that there be nonmissing data points at each end of the interval of the missing observations. The nonmissing end points serve as the bounds within which the missing values will be imputed. Two methods are used depending on whether a single observation or multiple observations were missing.

- i. **Simple average** methods are used in the case of a single missing value that is surrounded by two nonmissing data points. Then the missing value is imputed by taking the average value of the two nonmissing data points, as shown in example 1.

Example 1: Total expenditure, millions (local currency units)

Country	1989	1990	1991
Kenya	51,801	---	53,701

Imputation for 1990: $(51,801 + 53,701) / 2 = 52,751$

- ii. **Linear trend** method is used in the case of consecutive multiple missing values that are surrounded by a nonmissing data point on either end. Then the missing values are imputed by calculating the linear trend between the two nonmissing data points, as shown in example 2.

Example 2: Agriculture expenditure, millions (local currency units)

Country	2000	2001	2002	2003
Uruguay	934.00	---	---	1095.78

Imputation for 2001: $934.00 + (1,095.78 - 934.00) / 3 = 987.93$

Imputation for 2002: $987.93 + (1,095.78 - 934.00) / 3 = 1,041.85$

Extrapolations

In some cases, however, missing data occur at the beginning or end of the series, meaning that valid nonmissing observations are present only after or before the missing observations, respectively. In such situations, an extrapolation is required. Extrapolations use information from nonmissing observations or from a secondary dataset to predict past or future missing values of the data series. Extrapolations were one of two types: “Extrapolate1” or “Extrapolate2.” Extrapolate1 indicates that a **five-year average growth rate** method is used, where the missing value is imputed based on the five-year average annual growth rate of the nonmissing data points, as shown in example 3.

Example 3: Education expenditure, millions (local currency units)

Country	1980	1981	1982	1983	1984	1985	1986	1987
Jordan	---	41.51	65.88	75.73	68.64	86.56	95.00	---

Imputation for 1980: $41.51 - 41.51 * (1981-1986 \text{ average annual growth rate, } 20.03\%) = 33.20$
 Imputation for 1987: $95.00 + 95.00 * (1981-1986 \text{ average annual growth rate, } 20.03\%) = 114.03$

Most extrapolations were of the type “Extrapolate2”. For these, growth rates in expenditure from a secondary data source (such as a national source or Regional Strategic Analysis and Knowledge Support System (ReSAKSS)) were applied to levels of spending from a primary data source (such as the IMF) in order to provide an estimate of spending.

DATA USAGE

Weighted Averages

Several indicators in the SPEED database (eg. sectoral spending as a share of total spending or as a share of gdp, agricultural spending as a share of agricultural gdp or spending per capita) are ratios, shares or per capita measures. For such indicators analysts often calculate averages by region, income or other country grouping. Averages may either be simple (unweighted) or weighted averages; unless otherwise specified, a weighted average of an indicator that is a ratio should use the denominator as weight. As such, the weighted average of agricultural share of total spending is weighted using total spending and the weighted average of per capita spending uses population as the weight. Example 4 shows an example of weighted and unweighted averages of per capita spending on agriculture in South Asian countries. The simple and weighted averages result from the calculations shown below.

$$\text{Simple average} = (\$23.03 + \$5.89 + \$88.83 + \$18.04 + \$31.04 + \$11.12 + \$7.26 + \$32.06) / 8 = \$27.16$$

$$\text{Weighted average} = (\$23.03 * 28.8\text{m} + \$5.89 * 152.1\text{m} + \$88.83 * 7\text{m} + \$18.04 * 1,231\text{m} + \$31.04 * 4\text{m} + \$11.12 * 27.0\text{m} + \$7.26 * 170.6\text{m} + \$32.06 * 20.2\text{m}) / (1,630.1\text{m}) = \$15.96$$

Example 4. Spending on agriculture per capita, 2010

country	Spending on agriculture	Population	Spending on agriculture per capita
Afghanistan	\$663,438,100	28,803,200	\$23.03
Bangladesh	\$896,711,800	152,149,100	\$5.89
Bhutan	\$64,637,200	727,600	\$88.83
India	\$22,207,510,000	1,230,981,000	\$18.04
Maldives	\$11,315,900	364,500	\$31.04
Nepal	\$300,521,300	27,023,100	\$11.12
Pakistan	\$1,238,525,000	170,560,200	\$7.26
Sri Lanka	\$647,469,400	20,198,400	\$32.06
Unweighted average			\$27.16
Weighted average			\$15.96

CURRENCY VALUES AND INDICATORS

This edition of SPEED provides 96 variables; they are listed with definitions in Appendix B. To make the data comparable across countries and to remove the influence due to inflation over time, the data were converted into constant 2010 purchasing power parity (PPP) dollars (PPP\$) and constant 2010 US dollars using GDP deflators, PPP conversion factors, or foreign exchange rates obtained from the World Bank (2018). Then several indicators measuring different aspects of public spending were computed.

Constant 2010 values

Expenditures in current local currency units (x_{lcu}) are first converted to constant 2010 local currency units ($x_{2010lcu}$) using the gross domestic product (GDP) deflator downloaded from the World Bank (2018) according to:

$$x_{2010lcu_t} = x_{lcu_t} / \text{GDP-deflator}_t,$$

where t is time in years.

Next, expenditures in constant 2010 local currency units ($x_{2010lcu_t}$) are converted to constant 2010 US dollars using foreign exchange rates for 2010 ($x_{2010US\$}$) and constant 2010 PPP\$ ($x_{2010ppp\$}$) according to:

$$x_{2010US\$}_t = x_{2010lcu_t} / \text{usd}_{2010}$$

$$x_{2010ppp\$}_t = x_{2010lcu_t} / \text{ppp}_{2010}$$

where usd_{2010} and ppp_{2010} represent the official exchange rate and PPP conversion factor in 2010 for converting the data to constant 2010 US dollars and PPP\$, respectively.

Indicators

The following indicators were created:

- Percentage of sector expenditure in total expenditure
- Percentage of total expenditure to total GDP
- Per capita sector and total expenditure in constant 2010 US dollars and constant 2010 PPP\$

For the agricultural sector, percentage of agriculture expenditure to agricultural GDP is also reported. Data on GDP in constant 2010 PPP\$ and data on population were obtained from the World Bank (2018).

The respective indicators were calculated as follows:

- Percentage of sector expenditure in total expenditure = $(x_{lct} / \text{total } x_{lct}) * 100$, where total x represents total expenditure
- Percentage of total expenditure to total GDP = $(\text{total } x_{lct} / \text{GDP}_{lct}) * 100$
- Per capita expenditure in constant 2010 US\$ = $x_{2010US\$}_t / \text{population}$
- Per capita expenditure in constant 2010 PPP\$ = $x_{2010ppp\$}_t / \text{population}$

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This 2019 version of the Statistics on Public Expenditures for Economic Development (SPEED) database was undertaken as part of, and funded by, the CGIAR Research Program on Policies, Institutions, and Markets (PIM) led by the International Food Policy Research Institute (IFPRI). PIM is in turn supported by [these donors](#). This publication has not gone through IFPRI's standard peer review procedure. The opinions expressed here do not necessarily reflect those of PIM, IFPRI, or CGIAR.

Previous versions of the SPEED database were developed and maintained with funds from multiple sources. Initial stages of SPEED were funded by the United States Agency for International Development (USAID) through its support to the Regional Strategic Analysis and Knowledge Support System (ReSAKSS) programs in Africa and Asia facilitated by IFPRI. Other initial funding sources include the UK Department for International Development (DFID), the Swedish International Development Cooperation Agency (SIDA), and the Bill and Melinda Gates Foundation, the International Fund for Agricultural Development (IFAD), and the Ministry of Foreign Affairs of Netherlands (MFAN) all through their support to the ReSAKSS-Africa program.

The 2019 version of SPEED database was updated and documented by Sarah K. Lowder (independent agricultural economist) using earlier versions of the SPEED database which were compiled, processed and documented by Datalyze Consulting Corporation. Research assistance was provided by Jimena Rotondi of the American University. This work was coordinated with the help of Xinshen Diao, Ian Masias and Jenny Smart.

The SPEED database has benefitted from the expertise, knowledge and work of several researchers and institutions. Over the years, a number of colleagues at the International Food Policy Research Institute have been instrumental in either providing data or expertise in understanding the particular aspects of the data. Some of these colleagues are: Shenggen Fan, Bingxin Yu, Tewodaj Mogues, Samuel Benin, Frances Cossar, Dario Debowics, Inigo Gallo Verduzco, Athur Mabiso, Edina Metili Mwang, Alejandro Nin-Pratt, Gissele Gajate Garrido, Yifei Liu and Luz Marina Alvare.

For more information on SPEED, please contact IFPRI-SPEED@cgiar.org.

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APPENDICES

Appendix A: Classification of the Functions of Government

01 - General public services	05 - Environmental protection	09 - Education
01.1 - Executive and legislative organs, financial and fiscal affairs, external affairs	05.1 - Waste management	09.1 - Pre-primary and primary education
01.2 - Foreign economic aid	05.2 - Waste water management	09.2 - Secondary education
01.3 - General services	05.3 - Pollution abatement	09.3 - Post-secondary non-tertiary education
01.4 - Basic research	05.4 - Protection of biodiversity and landscape	09.4 - Tertiary education
01.5 - R&D General public services	05.5 - R&D Environmental protection	09.5 - Education not definable by level
01.6 - General public services n.e.c.	05.6 - Environmental protection n.e.c.	09.6 - Subsidiary services to education
01.7 - Public debt transactions	06 - Housing and community amenities	09.7 - R&D Education
01.8 - Transfers between different levels of government	06.1 - Housing development	09.8 - Education n.e.c.
02 - Defence	06.2 - Community development	10 - Social protection
02.1 - Military defence	06.3 - Water supply	10.1 - Sickness and disability
02.2 - Civil defence	06.4 - Street lighting	10.2 - Old age
02.3 - Foreign military aid	06.5 - R&D Housing and community amenities	10.3 - Survivors
02.4 - R&D Defence	06.6 - Housing and community amenities n.e.c.	10.4 - Family and children
02.5 - Defence n.e.c.	07 - Health	10.5 - Unemployment
03 - Public order and safety	07.1 - Medical products, appliances and equipment	10.6 - Housing
03.1 - Police services	07.2 - Outpatient services	10.7 - Social exclusion n.e.c.
03.2 - Fire-protection services	07.3 - Hospital services	10.8 - R&D Social protection
03.3 - Law courts	07.4 - Public health services	10.9 - Social protection n.e.c.
03.4 - Prisons	07.5 - R&D Health	
03.5 - R&D Public order and safety	07.6 - Health n.e.c.	
03.6 - Public order and safety n.e.c.	08 - Recreation, culture and religion	
04 - Economic affairs	08.1 - Recreational and sporting services	
04.1 - General economic, commercial and labour affairs	08.2 - Cultural services	
04.2 - Agriculture, forestry, fishing and hunting	08.3 - Broadcasting and publishing services	
04.3 - Fuel and energy	08.4 - Religious and other community services	
04.4 - Mining, manufacturing and construction	08.5 - R&D Recreation, culture and religion	
04.5 - Transport	08.6 - Recreation, culture and religion n.e.c.	
04.6 - Communication		
04.7 - Other industries		
04.8 - R&D Economic affairs		
04.9 - Economic affairs n.e.c.		

Source: IMF, 2014.

Appendix B: Description of variables in final dataset

variable	Definition
region	region or income group to which country assigned
country	country name
isocode	3 letter isocode for the country
year	year of estimate
unit	unit of variable
tot_con_ppp	total expenditure in billions of constant 2010 ppp dollars
tot_con_usd	total expenditure in billions of constant 2010 US dollars
tot_cur_lcu	total expenditure in billions of nominal local currency units
tot_cur_usd	total expenditure in billions of current US dollars
tot_pc_con_ppp	per capita total expenditure in constant 2010 ppp dollars
tot_pc_con_usd	per capita total expenditure in constant 2010 US dollars
tot_pctgdp	percentage of total expenditure in total GDP
trn_con_ppp	transport expenditure in billions of constant 2010 ppp dollars
trn_con_usd	transport expenditure in billions of constant 2010 US dollars
trn_cur_lcu	transport expenditure in billions of nominal local currency units
trn_cur_usd	transport expenditure in billions of current US dollars
trn_pc_con_ppp	per capita transport expenditure in constant 2010 ppp dollars
trn_pc_con_usd	per capita transport expenditure in constant 2010 US dollars
trn_pctexp	percentage of transport expenditure in total expenditure
trn_pctgdp	percentage of transport expenditure in total GDP
ag_con_ppp	agriculture expenditure in billions of constant 2010 ppp dollars
ag_con_usd	agriculture expenditure in billions of constant 2010 US dollars
ag_cur_lcu	agriculture expenditure in billions of nominal local currency units
ag_cur_usd	agriculture expenditure in billions of current US dollars
ag_pc_con_ppp	per capita agriculture expenditure in constant 2010 ppp dollars
ag_pc_con_usd	per capita agriculture expenditure in constant 2010 US dollars
ag_pctaggdp	percentage of agriculture expenditure in agricultural GDP
ag_pctexp	percentage of agriculture expenditure in total expenditure
ag_pctgdp	percentage of agriculture expenditure in total GDP
com_con_ppp	communication expenditure in billions of constant 2010 ppp dollars
com_con_usd	communication expenditure in billions of constant 2010 US dollars
com_cur_lcu	communication expenditure in billions of nominal local currency units
com_cur_usd	communication expenditure in billions of current US dollars
com_pc_con_ppp	per capita communication expenditure in constant 2010 ppp dollars
com_pc_con_usd	per capita communication expenditure in constant 2010 US dollars
com_pctexp	percentage of communication expenditure in total expenditure
com_pctgdp	percentage of communication expenditure in total GDP
def_con_ppp	defense expenditure in billions of constant 2010 ppp dollars
def_con_usd	defense expenditure in billions of constant 2010 US dollars
def_cur_lcu	defense expenditure in billions of nominal local currency units
def_cur_usd	defense expenditure in billions of current US dollars
def_pc_con_ppp	per capita defense expenditure in constant 2010 ppp dollars
def_pc_con_usd	per capita defense expenditure in constant 2010 US dollars
def_pctexp	percentage of defense expenditure in total expenditure
def_pctgdp	percentage of defense expenditure in total GDP
edu_con_ppp	education expenditure in billions of constant 2010 ppp dollars
edu_con_usd	education expenditure in billions of constant 2010 US dollars
edu_cur_lcu	education expenditure in billions of nominal local currency units
edu_cur_usd	education expenditure in billions of current US dollars
edu_pc_con_ppp	per capita education expenditure in constant 2010 ppp dollars
edu_pc_con_usd	per capita education expenditure in constant 2010 US dollars
edu_pctexp	percentage of education expenditure in total expenditure
edu_pctgdp	percentage of education expenditure in total GDP
fuel_con_ppp	fuel expenditure in billions of constant 2010 ppp dollars
fuel_con_usd	fuel expenditure in billions of constant 2010 US dollars
fuel_cur_lcu	fuel expenditure in billions of nominal local currency units

Appendix B: Description of variables in final dataset, cont.

variable	Definition
fuel_cur_usd	fuel expenditure in billions of current US dollars
fuel_pc_con_ppp	per capita fuel expenditure in constant 2010 ppp dollars
fuel_pc_con_usd	per capita fuel expenditure in constant 2010 US dollars
fuel_pctexp	percentage of fuel expenditure in total expenditure
fuel_pctgdp	percentage of fuel expenditure in total GDP
hl_con_ppp	health expenditure in billions of constant 2010 ppp dollars
hl_con_usd	health expenditure in billions of constant 2010 US dollars
hl_cur_lcu	health expenditure in billions of nominal local currency units
hl_cur_usd	health expenditure in billions of current US dollars
hl_pc_con_ppp	per capita health expenditure in constant 2010 ppp dollars
hl_pc_con_usd	per capita health expenditure in constant 2010 US dollars
hl_pctexp	percentage of health expenditure in total expenditure
hl_pctgdp	percentage of health expenditure in total GDP
min_con_ppp	mining expenditure in billions of constant 2010 ppp dollars
min_con_usd	mining expenditure in billions of constant 2010 US dollars
min_cur_lcu	mining expenditure in billions of nominal local currency units
min_cur_usd	mining expenditure in billions of current US dollars
min_pc_con_ppp	per capita mining expenditure in constant 2010 ppp dollars
min_pc_con_usd	per capita mining expenditure in constant 2010 US dollars
min_pctexp	percentage of mining expenditure in total expenditure
min_pctgdp	percentage of mining expenditure in total GDP
oth_con_ppp	expenditure on other sectors in billions of constant 2010 ppp dollars
oth_con_usd	expenditure on other sectors in billions of constant 2010 US dollars
oth_cur_lcu	expenditure on other sectors in billions of nominal local currency units
oth_cur_usd	expenditure on other sectors in billions of current US dollars
oth_pc_con_ppp	per capita expenditure on other sectors in constant 2010 ppp dollars
oth_pc_con_usd	per capita expenditure on other sectors in constant 2010 US dollars
oth_pctexp	percentage of expenditure on other sectors in total expenditure
oth_pctgdp	percentage of expenditure on other sectors in total GDP
sp_con_ppp	social protection expenditure in billions of constant 2010 ppp dollars
sp_con_usd	social protection expenditure in billions of constant 2010 US dollars
sp_cur_lcu	social protection expenditure in billions of nominal local currency units
sp_cur_usd	social protection expenditure in billions of current US dollars
sp_pc_con_ppp	per capita social protection expenditure in constant 2010 ppp dollars
sp_pc_con_usd	per capita social protection expenditure in constant 2010 US dollars
sp_pctexp	percentage of social protection expenditure in total expenditure
sp_pctgdp	percentage of social protection expenditure in total GDP
tc_con_ppp	transport & communication in billions of constant 2010 ppp dollars
tc_con_usd	transport & communication expenditure in billions of constant 2010 US dollars
tc_cur_lcu	transport & communication expenditure in billions of nominal local currency units
tc_cur_usd	transport & communication expenditure in billions of current US dollars
tc_pc_con_ppp	per capita transport & communication expenditure in constant 2010 ppp dollars
tc_pc_con_usd	per capita transport & communication expenditure in constant 2010 US dollars
tc_pctexp	percentage of transport & communication expenditure in total expenditure
tc_pctgdp	percentage of transport & communication expenditure in total GDP

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INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE
A world free of hunger and malnutrition

1201 Eye Street, NW, Washington, DC 20005 USA | T. +1-202-862-5600 | F. +1-202-862-5606 | Email: ifpri@cgiar.org | www.ifpri.org | www.ifpri.info

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