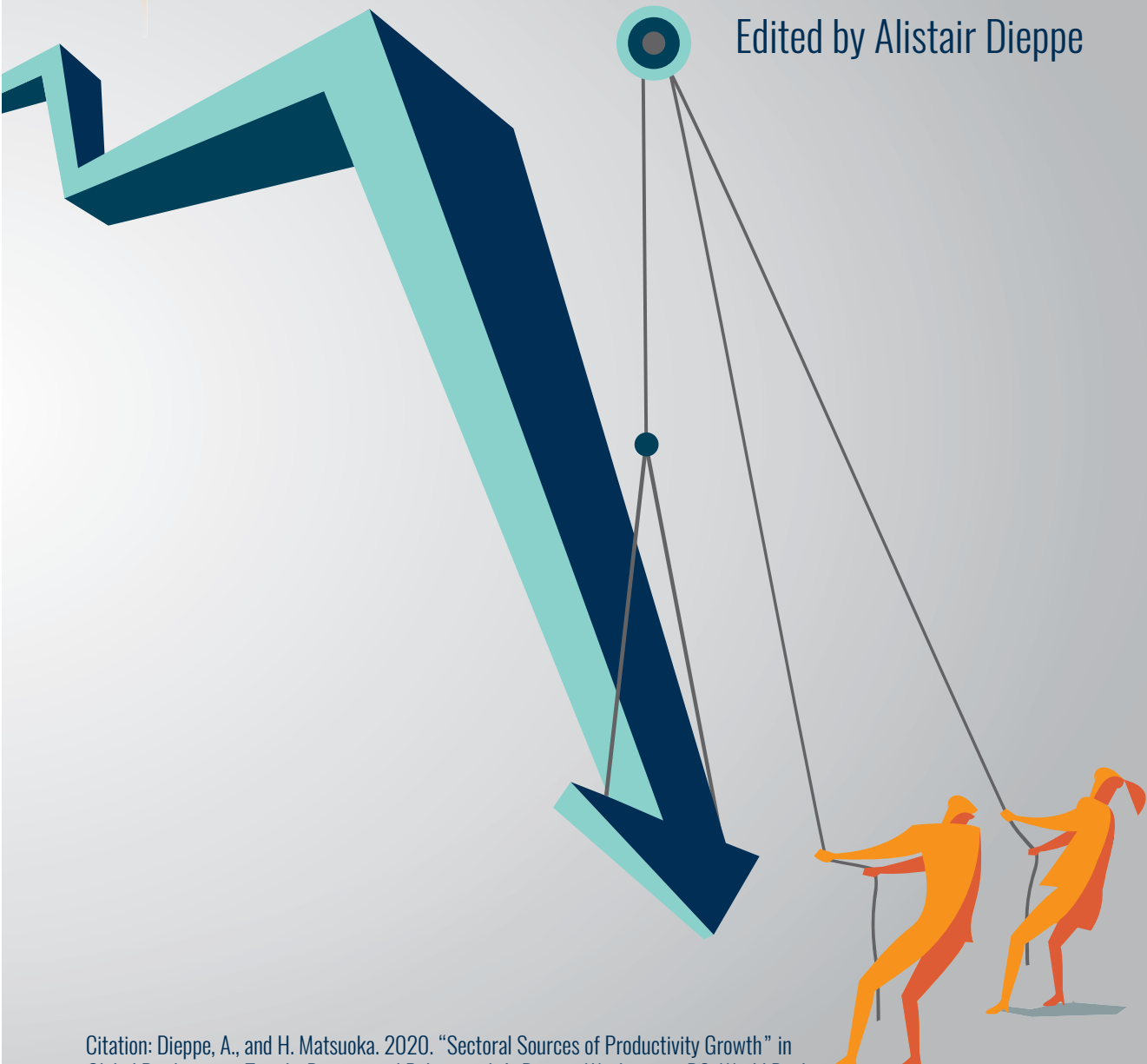


Data Appendix for:

# Global Productivity

## Trends, Drivers, and Policies

Edited by Alistair Dieppe



Citation: Dieppe, A., and H. Matsuoka. 2020. "Sectoral Sources of Productivity Growth" in *Global Productivity: Trends, Drivers, and Policies*, ed. A. Dieppe. Washington, DC: World Bank.



# APPENDIX

## Cross-Country Database of Sectoral Labor Productivity

*The chapter employs the most comprehensive dataset of sectoral labor productivity available for nine sectors. This dataset includes recent data to allow an analysis of developments following the 2007-09 global financial crisis for 103 countries.*

### Sectoral productivity

**Measures.** The database consists of sectoral and aggregate labor productivity statistics for 103 countries, and nine sectors covering the period up to 2017 (Table A.1 and A.2). Compared with the earlier literature, it employs a larger and more diverse sample of countries (Table A.3). The database includes five main variables: 1. Nominal value added (current prices, local currency, millions), 2. Real value added (2010 constant prices, local currency, millions), 3. Employment (thousands), 4. Labor productivity (2010 constant prices, local currency, thousands), 5. Labor productivity (2011 international PPP exchange rate, thousands).<sup>1</sup>

**Data sources.** The database combines data from World Bank World Development Indicators, the OECD STAN database, KLEMS, the Groningen Growth Development Center (GGDC) database (de Vries, Timmer, and de Vries 2015), and the Expanded Africa Sector Database (EASD, Mensah and Szirmai 2018) for value-added data and employment. The APO Productivity Database, UN data, ILOSTAT, and national sources are also used for extending the database. Table A.1 provides details for each country.

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Note: We are grateful for data collection from Bala Bhaskar Naidu Kalimili and Charles Yao Kouadio Kouame.

<sup>1</sup> Following (Wong 2006), local currency value-added is converted to U.S. dollars using 2011 PPP exchange rate obtained from the Penn World Table for the international comparison of productivity levels. Van Biesebroeck (2009) builds an expenditure-based sector-specific PPP in OECD countries, using detailed price data.

**TABLE A.1 Sample coverage (9-sector labor productivity)**

Advanced Economies			
Country	Group	Period	Source
Australia	AEs	1975-2018	OECD/APO/ILO
Austria	AEs	1970-2017	OECD/KLEMS/ILO
Belgium	AEs	1975-2017	OECD/ILO
Canada	AEs	1970-2018	OECD/ILO/own estimates
China, Hong Kong SAR	AEs	1974-2018	GGDC/APO/Haver/ILO
Cyprus	AEs	1995-2018	OECD/KLEMS/ILO
Czech Republic	AEs	1993-2017	OECD/ILO
Denmark	AEs	1970-2017	OECD/ILO
Estonia	AEs	1995-2017	OECD/KLEMS
Finland	AEs	1975-2017	OECD/ILO
France	AEs	1970-2017	OECD/ILO
Germany	AEs	1970-2017	OECD/ILO
Greece	AEs	1995-2017	OECD/ILO
Iceland	AEs	1994-2018	OECD/Haver/own estimates
Ireland	AEs	1995-2018	OECD/ILO
Italy	AEs	1970-2017	OECD/GGDC/ILO
Japan	AEs	1973-2017	OECD/Haver/ILO
Latvia	AEs	1995-2017	OECD/KLEMS/ILO
Lithuania	AEs	1995-2018	OECD/ILO
Luxembourg	AEs	1970-2018	OECD/KLEMS/ILO
Netherlands	AEs	1970-2017	OECD/KLEMS/ILO
New Zealand	AEs	1990-2018	OECD/Haver/own estimates
Norway	AEs	1970-2017	OECD/ILO
Portugal	AEs	1995-2017	OECD/ILO
Republic of Korea	AEs	1963-2018	OECD/GGDC/ILO
Singapore	AEs	1970-2018	GGDC/APO
Slovakia	AEs	1995-2017	OECD
Slovenia	AEs	1995-2018	OECD/ILO
Spain	AEs	1970-2018	OECD/KLEMS/ILO
Sweden	AEs	1970-2018	OECD/KLEMS/ILO
Switzerland	AEs	1992-2018	OECD/ILO
Taiwan	AEs	1963-2018	GGDC/APO/ILO/National source
United Kingdom	AEs	1960-2017	OECD/GGDC/ILO
United States	AEs	1950-2017	OECD/KLEMS/ILO

Note: OECD = OECD STAN database etc., KLEMS = World KLEMS (EU, LAC, and Russia); GGDC = the Groningen Growth Development Center database (Timmer, de Vries, and de Vries 2015); APO = APO Productivity Database; ILO = ILOSTAT.

**TABLE A.1 Sample coverage (9-sector labor productivity) (continued)**

Emerging markets and developing economies			
Country	Group	period	Source
China	EAP	1952-2017	GGDC/APO/Haver/ILO/Own estimates
Fiji	EAP	1977-2018	APO/UN/ILO/National source
Indonesia	EAP	1971-2018	GGDC/APO/UN/ILO/National source
Lao PDR	EAP	1990-2017	APO/UN/ILO
Malaysia	EAP	1975-2018	GGDC/APO/UN/ILO/National source
Mongolia	EAP	1970-2018	APO/UN/ILO/National source
Philippines	EAP	1971-2018	GGDC/APO/UN/ILO/National source
Thailand	EAP	1960-2018	GGDC/APO/UN/ILO/National source
Viet Nam	EAP	1990-2017	APO/UN/ILO
Azerbaijan	ECA	2001-2018	ILO/National source
Bulgaria	ECA	1995-2017	ILO/National source
Croatia	ECA	1995-2017	ILO/National source
Georgia	ECA	2003-2018	ILO/National source
Hungary	ECA	1995-2017	ILO/National source
Montenegro	ECA	2000-2018	ILO/National source
Poland	ECA	1995-2018	ILO/National source
Romania	ECA	1995-2018	ILO/National source
Russia	ECA	1995-2018	KLEMS/Haver/ILO/National source
Serbia	ECA	1995-2018	ILO/National source
Turkey	ECA	1988-2018	OECD/APO/ILO/National source
Argentina	LAC	1990-2018	GGDC/KLEMS/WDI/Haver
Belize	LAC	1991-2018	ILO/National source
Bolivia	LAC	1991-2018	ILO/National source
Brazil	LAC	1970-2018	GGDC/KLEMS/Haver/ILO/National source
Chile	LAC	1950-2018	GGDC/UN/ILO/National source
Colombia	LAC	1950-2018	GGDC/KLEMS/UN/ILO/National source
Costa Rica	LAC	1950-2018	OECD/GGDC/ILO/National source
Dominican Republic	LAC	1991-2018	ILO/National source
Ecuador	LAC	1991-2017	ILO/National source
Guatemala	LAC	2001-2018	ILO/National source
Honduras	LAC	1991-2018	ILO/National source
Jamaica	LAC	1993-2018	ILO/National source
Mexico	LAC	1950-2018	GGDC/KLEMS/ILO/National source
Paraguay	LAC	1991-2017	ILO/National source
Saint Lucia	LAC	1991-2018	ILO/National source
St. Vincent and the Grenadines	LAC	1991-2018	ILO/National source
Uruguay	LAC	1997-2018	ILO/National source
Algeria	MNA	1999-2018	ILO/National source
Egypt	MNA	1960-2018	GGDC/Haver/ILO/National source
Iran	MNA	1991-2017	ILO/National source
Jordan	MNA	1992-2018	ILO/National source
Morocco	MNA	1970-2018	GGDC/Haver/ILO
Qatar	MNA	1986-2018	APO/UN/ILO/National source
Bangladesh	SAR	1991-2018	ILO/National source
India	SAR	1960-2017	GGDC/APO/ILO/National source
Nepal	SAR	2001-2018	ILO/National source
Pakistan	SAR	1970-2018	APO/UN/ILO/National source
Sri Lanka	SAR	1971-2018	APO/UN/ILO/National source

**TABLE A.1 Sample coverage (9-sector labor productivity) (continued)**

Emerging markets and developing economies			
Country	Group	period	Source
Angola	SSA	2002-2017	ILO/National source
Botswana	SSA	1964-2017	EASD/ILO/National source
Burkina Faso	SSA	1970-2017	EASD/ILO/Own estimates
Cameroon	SSA	1965-2018	EASD/ILO/Haver
Eswatini	SSA	1991-2018	UN/ILO/National source
Ethiopia	SSA	1961-2017	EASD/ILO/National source
Ghana	SSA	1960-2018	EASD/ILO/National source
Kenya	SSA	1969-2018	EASD/ILO/National source
Lesotho	SSA	1970-2018	EASD/ILO/National source
Malawi	SSA	1966-2017	EASD/ILO/Own estimates
Mauritius	SSA	1970-2018	EASD/ILO/National source
Mozambique	SSA	1970-2018	EASD/ILO/National source
Namibia	SSA	1960-2018	EASD/ILO/National source
Nigeria	SSA	1960-2018	EASD/ILO/National source
Rwanda	SSA	1970-2018	EASD/ILO/National source
Senegal	SSA	1970-2017	EASD/ILO/Own estimates
Sierra Leone	SSA	2001-2018	ILO/National source
South Africa	SSA	1960-2018	EASD/ILO/National source
Uganda	SSA	1990-2018	EASD/ILO/National source
United Republic of Tanzania	SSA	1960-2017	EASD/ILO/National source
Zambia	SSA	1965-2018	EASD/Haver/ILO

Note: OECD = OECD STAN database etc., KLEMS = World KLEMS (EU, LAC, and Russia); GGDC = the Groningen Growth Development Center database (Timmer, de Vries, and de Vries 2015); EASD = Expanded Africa Sector Database (Mensah and Szirmai 2018); APO = APO Productivity Database; UN = UN data; ILO = ILOSTAT.

**TABLE A.2 Nine-sector categories**

Sector name	Description
1.Agriculture	Agriculture, forestry, and fishing
2.Mining	Mining and quarrying
3.Manufacturing	Manufacturing
4.Utilities	Electricity, gas, steam and air conditioning supply
5.Construction	Construction
6.Trade services	Wholesale and retail trade; repair of motor vehicles and motorcycles; Accommodation and food service activities
7.Transport services	Transportation and storage; Information and communication
8.Financial and Business services	Financial and insurance activities; Real estate activities; Professional, scientific and technical activities; Administrative and support service activities
9.Other services	Public administration and defense; compulsory social security; Education; Human health and social work activities; Arts, entertainment and recreation; Other service activities; Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use; Activities of extraterritorial organizations and bodies

Source: APO; EASD; GGDC; ILO; KLEMS; National sources; OECD; United Nations; World Bank.

**TABLE A.3 Comparison with other studies using nine-sector labor productivity**

	Period	Country coverage	Group coverage
This study	2003-2017	103	34 AEs 69 EMDEs 9 LICs
	1995-2017	94	34 AEs 60 EMDEs 7 LICs
	1975-2017	54	21 AEs 33 EMDEs 6 LICs
IMF (2018)	1965-2010	62	19 AEs 43EMDEs 2 LICs
	(1965-2015)	(39)	(19 AEs 20 EMDEs 0 LICs)
McMillan, Rodrik, and Verduzco-Gallo (2014)	1990-2005	38	13 AEs 25 EMDEs 2 LICs
Diao, McMillan, and Rodrik (2017)	2000-2010	39	13 AEs 26 EMDEs 3 LICs