

APO Productivity Databook 2026



APO Productivity Databook 2026



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Designed in Tokyo by
Koh Tsuchiya / Perfect Vacuum

Printed in Japan by
Keio University Press Inc., Tokyo

for
ASIAN PRODUCTIVITY ORGANIZATION
1-24-1 Hongo, Bunkyo-ku
Tokyo 113-0033, Japan

978-92-833-2536-9 (paperback)
978-92-833-2537-6 (PDF)
978-92-833-2538-3 (e-book)

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Country and Group Definitions

APO21	21 APO member economies:	Asia38	Asia28 plus the following 10 countries:
BAN	Bangladesh	BHR	the Kingdom of Bahrain (Bahrain)
CAM	Cambodia	KAZ	Republic of Kazakhstan (Kazakhstan)
ROC	Republic of China (ROC)	KGZ	Kyrgyz Republic (Kyrgyzstan)
FJI	Fiji	KWT	State of Kuwait (Kuwait)
HKG	Hong Kong	OMN	Sultanate of Oman (Oman)
IND	India	QAT	State of Qatar (Qatar)
IDN	Indonesia	TKM	Turkmenistan
IRN	Islamic Republic of Iran (Iran)	TJK	Republic of Tajikistan (Tajikistan)
JPN	Japan	UAE	United Arab Emirates (UAE)
KOR	Republic of Korea (Korea)	UZB	Republic of Uzbekistan (Uzbekistan)
LAO	Lao PDR		
MAL	Malaysia	Asia	Asia38 plus the following 11 countries:
MGL	Mongolia	ARM	Armenia
NEP	Nepal	AZE	Azerbaijan
PAK	Pakistan	GEO	Georgia
PHL	the Philippines	IRQ	Iraq
SIN	Singapore	JOR	Jordan
SRI	Sri Lanka	LBN	Lebanon
THA	Thailand	MAC	Macao SAR
TUR	Turkiye	SAR	Syria
VIE	Vietnam	TLS	Timor-Leste
Asia28	APO21 plus the following seven countries:	WBG	West Bank and Gaza
AFG	the Islamic Emirate of Afghanistan (Afghanistan)	YEM	Yemen
BTN	the Kingdom of Bhutan (Bhutan)	Reference	the following seven countries:
BRN	Brunei Darussalam (Brunei)	USA	United States of America (US)
CHN	the People's Republic of China (China)	AUS	Australia
MDV	the Republic of Maldives (the Maldives)	NZL	New Zealand
MYA	Myanmar	GBR	United Kingdom (UK)
SAU	Kingdom of Saudi Arabia (Saudi Arabia)	FRA	France
		DEU	Germany
		ITA	Italy

*Names in brackets are used in the text.

Regional and Analytical Groupings

ASEAN	Association of Southeast Asian Nations: 10 countries of Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam, as of 2024. ASEAN is divided into two groups in the Databook: ASEAN6 and CLMV.	GCC	Gulf Cooperation Council: Six countries of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE.
ASEAN6	Six countries of Brunei, Indonesia, Malaysia, the Philippines, Singapore, and Thailand.	IPEF	Indo-Pacific Economic Framework: 14 countries of the US, Japan, Australia, New Zealand, the Republic of Korea, India, Fiji, and seven ASEAN countries (Brunei, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam).
C5	Five countries of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.	RCEP	Regional Comprehensive Economic Partnership: 15 countries of 10 ASEAN countries, Australia, China, Japan, Korea, and New Zealand.
CLMV	Four countries of Cambodia, Lao PDR, Myanmar, and Vietnam.	SAARC	South Asian Association for Regional Cooperation: Eight countries of Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka.
East Asia	Six countries of China, the ROC, Hong Kong, Japan, Korea, and Mongolia.		
EU15	15 countries of the European Union prior to enlargement: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the UK.		
EU27	27 countries of the European Union: the EU15 (excluding the UK) plus Bulgaria, the Republic of Croatia, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, the Slovak Republic, and Slovenia.		

*Abbreviations like IPEF and RCEP, though not regions, are included for consistency.

Abbreviations

ADB	Asian Development Bank	IPNs	International production networks
ANRD	Asia Natural Resources Database	IPP	Intellectual property products
APO	Asian Productivity Organization	ISIC	International Standard Industry Classification of All Economic Activities
APO-PDB	APO Productivity Database	KEO	Keio Economic Observatory, Keio University
AQALI	Asia QALI Database	LDCs	Least Developed Countries
B&C	Building and Construction	M&E	Machinery and Equipment
BOP	Balance of Payment	MER	Mineral and Energy Resources
CPI	Consumer Price Index	MPS	Material Product System
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership	NPISHs	Non-Profit Institutions Serving Households
COE	Compensation of Employees	OECD	Organisation for Economic Co-operation and Development
EITE	Energy-intensive and trade-exposed	PPP	Purchasing Power Parity
FDI	Foreign Direct Investment	PRN	Productivity Research Notes
FISIM	Financial intermediation services indirectly measured	QALI	Quality-adjusted labor inputs
FTAs	Free Trade Agreements	QNA	Quarterly National Accounts
GDP	Gross Domestic Product	R&D	Research and Development
GFCF	Gross fixed capital formation	SNA	System of National Accounts
GNI	Gross National Income	SUT	Supply and Use Tables
GVC	Global value chains	TFP	Total Factor Productivity
ICP	International Comparisons Program	UN	United Nations
ICT	Information and Communication Technology	UNDESA	United Nations Department of Economic and Social Affairs
IDE	Institute of Developing Economies	UNSD	United Nations Statistics Division
ILO	International Labour Organization	WHO	World Health Organization
IMF	International Monetary Fund	WTO	World Trade Organization
IOT	Input-Output Table		

Foreword

Rapid technological change, shifting trade and production networks, energy security concerns, demographic pressures, and geopolitical uncertainty are reshaping Asia and the Pacific. These forces bring new opportunities, but they also place greater demands on the capacity of economies to adapt and compete. Stronger productivity growth is therefore essential for economic resilience, improved living standards, and sustainable socioeconomic development.

The APO Vision 2030 sets a shared direction for the organization and its 21 member economies: achieving sustained and accelerating productivity growth. To advance this vision, the APO works with its members to strengthen national productivity systems, develop capabilities, and support productivity strategies aligned with national development priorities. It also promotes collaboration and the exchange and application of knowledge, connecting regional learning with practical action at the national level.

Reliable evidence is central to this work. The *APO Productivity Databook 2026*, the 19th edition in the series, contributes to this broader effort by drawing on harmonized productivity accounts and providing comparable indicators and analysis of economic growth and productivity in APO member economies and the wider Asia-Pacific region. Bringing together more than five decades of historical estimates, recent trends, and projections, it gives policymakers, researchers, business leaders, and productivity practitioners a common basis for understanding performance over time, comparing experiences, and informing policy dialogue and decision-making.

The Databook reports that average annual growth in per-hour labor productivity for APO member economies moderated from 2.9% in 2015–19 to 2.5% in 2019–24, while average annual total factor productivity growth remained at 1.0% in both periods. Beyond these aggregate measures, the Databook examines changes in productivity, industrial structure, and the composition of demand within and across APO member economies. By placing national experiences within a consistent regional perspective, the Databook supports dialogue and learning among economies. In this way, it complements the APO's broader work with its members by linking comparative evidence to national productivity policy and action.

The APO expresses its sincere appreciation to the Keio Economic Observatory at Keio University, Tokyo, for its longstanding collaboration in developing the APO Productivity Database. We also thank the national experts and contributing institutions of APO member economies whose continued cooperation strengthens the quality, coverage, and comparability of this publication.

We hope that the *APO Productivity Databook 2026* will deepen readers' understanding of Asia's changing productivity landscape and serve as a reliable and practical resource for informed policy dialogue and decision-making throughout the region and beyond.

Dr. Indra Pradana Singawinata

Secretary-General

Asian Productivity Organization

Tokyo, September 2026

1 Framework and Scope

1.1 Scope of the 2026 Edition

The 19th edition of the APO Productivity Databook provides standardized comparisons of economic growth and productivity across Asia, spanning more than five decades from 1970 through 2024, with projections extending to 2035. Its analytical coverage continues to expand, reinforcing the Databook's role as a comprehensive reference for understanding productivity dynamics across the region. At its core, the Databook rests on a straightforward premise: that productivity enhancement, whether achieved by raising output from given inputs or by sustaining output with reduced resource use, is the indispensable foundation of resilient long-term growth. Guided by harmonized data and robust methodologies, this edition systematically evaluates both historical productivity performance and future prospects, equipping policy-makers, researchers, and practitioners with the evidence needed to design effective strategies.

This edition presents indicators of economic growth and labor productivity across 38 Asian economies (Asia38), comprising the 21 APO member economies (APO21) and 17 non-member economies. The latter includes Afghanistan, Bhutan, Brunei, China, the Maldives, Myanmar, as well as the Gulf Cooperation Council (GCC), and the Central Asian Five (C5). Individual economies and the reference economies outside Asia are listed in the Country and Group Definitions (p. 7).

For a subset of 28 economies (Asia28)—the APO21 plus the seven non-member economies: Afghanistan, Bhutan, Brunei, China, the Maldives, Myanmar, and Saudi Arabia—the Databook develops full productivity accounts through the APO Productivity Database (APO-PDB). This deeper analytical tier requires sufficiently detailed and reliable data to estimate capital and labor inputs, as well as total factor productivity (TFP). The Asia28 economies collectively account for approximately 94% of the region's total output (in PPP terms) as of 2024. The APO-PDB is the product of a sustained research partnership between the APO and the Keio Economic Observatory (KEO) at Keio University, which commenced in 2007 and continues to expand in both methodological rigor and geographic coverage.

Beyond the statistical estimates presented in this Databook, complementary analyses of individual economies, methodological discussions, and specific measurement issues are published on a continuing basis in the Productivity Research Notes (PRN) series, which complements and contextualizes the results presented here. Each note is assigned a Digital Object Identifier (DOI) and archived in the series' open repository.¹

The country coverage of the Databook has expanded progressively as new data sources and estimation frameworks have become available. Table 1.1 traces this evolution across two dimensions: the gradual expansion of the APO-PDB (currently covering Asia28), and the broader set of economies covered by labor productivity indicators (Asia38). Extending the full accounts to all APO member economies alone took a decade, reflecting the demanding requirements in both data availability and measurement methodology. In this edition, Saudi Arabia is incorporated into the full accounts (Asia28), while the C5 countries are added to the labor productivity indicators (Asia38; see Box 1).

The Databook identifies the sources of economic growth across individual economies by quantifying the respective contributions of capital inputs, labor inputs, and TFP to GDP growth. The APO-PDB 2026 extends beyond individual economy productivity accounts by developing regional growth accounts for six economy groupings: ASEAN6, APO21, Asia28, CLMV, East Asia, and SAARC. These regional accounts adjust for inter-economy price differentials in outputs, capital, and labor inputs (Section 8.5), following the 2021 benchmark PPP estimates published in 2024 by the International Comparison Program

1: The PRN series is archived in a dedicated Zenodo community (prn-series-keo).

Table 1.1 Evolution of Country Coverage in the APO Productivity Databook

Databook	APO-PDB (Full Productivity Accounts)			Labor Productivity Indicators	
	AP021	Asia28	New additions	Asia38	New additions
2008	0	0		20	
2009	3	4	ROC, JPN, KOR, CHN	21	HKG
2010	7	8	FU, IDN, PHL, THA	23	BRN, MYA
2011	12	13	HKG, MAL, MGL, SIN, VIE (1986–)	29	GCC (BHR, KWT, OMN, QAT, SAU, UAE)
2012	14	15	IND, IRN	↓	
2013	16	17	PAK, SRI		
2014	17	18	BAN	↓	
2015	18	19	CAM (1990–), VIE (1970–86)		BTN
2016	19	20	NEP	↓	
2017	20	21	LAO		
2018	↓	23	BRN, MYA	↓	
2019		24	BTN, CAM (1970–90)		
2020	↓	↓		↓	
2021	21	25	TUR	31	TUR
2022	↓	↓		↓	
2023					
2024		↓			
2025		27	AFG, MDV	33	AFG, MDV
2026	↓	28	SAU	38	C5 (KAZ, KGZ, TKM, TJK, UZB)

Notes: Türkiye joined the APO as its 21st member economy in March 2020.

(World Bank 2024). Labor productivity indicators are additionally presented for C5, GCC, IPEF, and RCEP groupings, reflecting the broader geographic coverage of Asia38.²

1.2 Measurement Framework

The APO-PDB adopts the Jorgensonian growth accounting framework in which GDP growth is decomposed into the contributions of capital input, labor input, and TFP, with input measures adjusted for compositional (quality) changes. This section presents an overview of the current methodology, while its evolution is discussed in Box 12 (Section 8.2.4).

To ensure cross-country comparability, output and input measures are constructed based on harmonized national accounts, with adjustments to align differences in statistical definitions, classifications, and price structures across economies (Section 8.1). In Asia28, the System of National Accounts 2008 (2008 SNA; United Nations 2009) has been implemented, either partially or fully, in 26 economies, excluding Myanmar and Lao PDR (Section 8.1.1). Since the previous edition's data cutoff, seven economies have introduced major benchmark revisions to their national accounts (Table 1.2). The APO-PDB 2026 incorporates these latest official estimates and constructs a consistent retrospective series back to 1970, drawing on a wide range of supplementary data sources to ensure temporal consistency.³ This edition reflects revisions to official national accounts and related statistical data released up to May 2026.

Capital input is measured in terms of capital services, which provide the appropriate concept for growth accounting by reflecting the flow of productive services from heterogeneous assets. The aggregate measure of capital services serves both as a key input in TFP estimation and as a major determinant of labor

2: While IPEF and RCEP are not geographic regions in the strict sense, they are included as groupings for labor productivity comparisons given their policy relevance. Refer to the Regional and Analytical Groupings (p. 7) for the complete country list.

3: The implications of these benchmark revisions for productivity measurement are examined, economy by economy, in the Productivity Research Notes (PRN) series (e.g., China, PRN2614; Fiji, PRN2608; India, PRN2607; Iran, PRN2617; Japan, PRN2613; Türkiye, PRN2618). Beyond these revisions, the APO-PDB 2026 also incorporates various other corrections and methodological improvements across economies.

Table 1.2 Benchmark Revisions in National Accounts since the Previous Edition

Economy	Benchmark Year		Published
	New	Previous	
China	2023	2018	Dec 2024
Fiji	2019	2014	Sep 2025
India	2022/23	2011/12	Feb 2026
Iran	2021	2011	Oct 2024
Japan	2020	2015	Dec 2025
Saudi Arabia	2023	2010	May 2025
Turkiye	2023	2009	Sep 2025

Notes: For China, the revised 2023 GDP level was released in December 2024, but the corresponding back series was released only in September 2025. For Iran, GDP is estimated by both the SCI and the CBI; owing to limited external access to SCI data, its revision is incorporated only in this edition.

productivity growth. To capture differences in asset characteristics and quality change, capital input is disaggregated into 23 asset types, comprising 11 produced assets (including ICT hardware, software, and R&D capital), seven types of land, one type of inventories, and four types of mineral and energy resources (MER).⁴ Since 2020, the KEO has developed estimates of land and MER stocks through the Asia Natural Resources Database (ANRD), which is incorporated into the APO-PDB 2026 (Section 8.2.6). Given that the APO-PDB covers many low-income Asian economies exposed to natural hazards, a distinctive feature of the capital measurement is the explicit treatment of damage to productive capital stocks caused by natural disasters (Section 8.2.4).

Labor input is measured using quality-adjusted labor input (QALI), which accounts for changes in workforce composition across demographic and skill groups. In the growth accounting framework, QALI captures the contribution of labor quality by weighting hours worked across different worker categories using relative wage rates. The Asia QALI Database (AQALI), developed by KEO since 2013, provides a comprehensive labor dataset covering the number of workers, average hours worked per worker, and wages per hour worked, cross-classified by gender, educational attainment, age, and employment status. AQALI 2026 yields consistent QALI estimates for all economies in Asia²⁸ and is continuously updated as new population censuses and labor statistics become available (Section 8.3). As the standard specification, labor input in the APO-PDB is decomposed into hours worked and labor quality. For selected analyses, labor input is alternatively disaggregated into college and non-college labor (Box 8, Section 5.5).

1.3 Structure of the Databook

The Databook is structured as follows. Chapter 2 reviews recent developments in the Asian economy amid global shocks and structural change. Chapter 3 examines long-term economic growth through cross-country comparisons of GDP, while Chapter 4 analyzes the demand-side decomposition of growth based on final expenditure components. Chapter 5 presents the supply-side decomposition of economic growth, including labor productivity, capital productivity, energy productivity,⁵ and TFP across countries and regions.

Chapters 6 and 7 extend the analysis to structural and income dimensions. Chapter 6 compares industry structures across countries, while Chapter 7 evaluates real income growth and terms-of-trade effects. Chapter 8 provides methodological notes, and Chapter 9 presents supplementary tables. Chapter 10 reports economy profiles for APO21 economies and the region from 1970 to 2024, along with projections through 2035.⁶

4: The measurement of inventory stocks has been substantially revised in this edition (Section 8.2.3).

5: The 2026 edition introduces preliminary estimates for energy consumption and CO₂ emissions, allowing energy productivity measures to be reported for the same reference year as other productivity indicators (Section 5.7).

6: The country profiles for APO non-member countries and for regional aggregates beyond APO21 are not included in Chapter 10 but can be provided upon request by contacting KEO (office@sanken.keio.ac.jp).

The official national accounts and metadata used to construct the APO-PDB 2026 have been collected by national experts in APO member economies and researchers at KEO (see Section 1.4 for contributors). At KEO, submitted data are examined, and long-term productivity accounts are constructed using detailed information on labor, production, prices, trade, and taxes. International comparisons of economic performance are inherently subject to measurement and data comparability issues. Given the limits of data availability and quality, some adjustments in the Databook necessarily involve approximations, while others rely on widely accepted assumptions. Despite extensive efforts to harmonize the data, a degree of uncertainty remains.

1.4 Contributors

The APO Productivity Databook/Database project is managed by Koji Nomura, under the consultancy of Professor W. Erwin Diewert (University of British Columbia) and Dr. Mun S. Ho (Harvard University), and with coordination by Mr. Towfiqul Islam at APO. This edition's text, tables, and figures were authored by Koji Nomura and Mun S. Ho. The Databook gratefully acknowledges the lasting influence of the late Professor Dale W. Jorgenson, whose early support and insight helped shape the direction of this project. It also thanks Ms. Eunice Ya Ming Lau (Former Head of the Productivity Economics Branch, Office for National Statistics, UK) for laying the foundation of the Databook series as an author of the editions from 2008 to 2013, and Professor Fukunari Kimura (Professor Emeritus at Keio University) for his contribution as an author from 2013 to 2023. The Databook is also grateful to Ms. Trina Ott for reviewing the draft. The contributors to this edition are listed below.

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2 Asian Economy amid Global Shocks and Structural Change

2.1 Major Structural Developments

The economic environment facing Asian economies in 2025–2026 is shaped by developments over the preceding two decades, and several aspects have moved from the background to the foreground of policy. The Global Financial Crisis of 2008 broadened financial regulation and established the G20 as a principal venue for international coordination, a role it continues to play even in this period of heightened tensions among the major powers. Against that backdrop, five developments are particularly relevant to recent Asian economic performance, and this section reviews them before the chapter examines their consequences for output, prices, and productivity.

The first is the transformation of world trade that followed China's entry into the WTO in 2001. China's share of world merchandise exports rose from about 4% in 2001 to around 15% by the early 2020s, where it has broadly remained, as the composition shifted from low-technology manufactures toward communications equipment, solar cells, and batteries. For much of developing Asia, this reshaped regional production networks, deepening intermediate-input linkages with China while intensifying competition in third markets. More recently, this interdependence and trade deficits have become sources of friction: rising tariffs and “de-risking” efforts in the US and Europe have begun to reconfigure these linkages (Section 2.3), and the durability of the China export model is now in question as external demand fragments.

The second major development is the diffusion of information and communications technology (ICT) and, most recently, of artificial intelligence (AI). Rapid improvements in hardware and software reshaped production methods and labor demand across economies and are associated with the acceleration of total factor productivity (TFP) in many countries from the 1990s into the mid-2000s (Chapter 5). The global iPhone production chain became a symbol of this era, highly efficient but with limited manufacturing employment in advanced economies, and with the concentration of production of the most advanced logic chips in just a few locations; an estimated 80–90% of these chips are manufactured in the ROC. Since 2022, generative AI has driven a pronounced surge in data-center construction and in demand for advanced semiconductors and electric power; while its effects on aggregate productivity and employment remain uncertain (Section 2.5), this has reinforced the centrality of Asia's semiconductor producers and added to electricity demand at a time of tight energy balances (Section 2.4).

The third is the rapid expansion of new energy technologies—solar panels, wind turbines, electric vehicles (EVs), batteries, electrolyzers, and hydrogen fuel cells—developed largely in advanced economies but increasingly produced at scale in China, driven by efforts to reduce dependence on imported fuels and to limit pollution and greenhouse-gas emissions. Large-scale production in China has fostered many new suppliers and driven unit costs down sharply. Lower costs have supported the uptake of wind and solar power and a rising share of EVs in some markets, limiting the growth of global fossil-fuel use that came with rising global incomes. At the same time, this expansion has left the world unusually dependent on a single source for some of these products—an estimated 80% or more of global solar PV cell and module manufacturing capacity was located in China in 2024—and has raised concerns in importing economies about supply-chain resilience, dependence on a single supplier, and the growing costs of integrating large-scale renewable generation into electricity systems. Meanwhile, several Asian economies, including Malaysia, Vietnam, and India, have meanwhile emerged as alternative production sites as firms seek to diversify away from China. In early 2026, heightened energy-security concerns following the Strait of Hormuz crisis may also have lifted demand for some renewable-energy equipment, though the available data remain too limited to distinguish a durable shift from a temporary, policy-driven adjustment (Box 5, Section 4.3).

The fourth is the reorientation of US trade policy. Beginning with the first Trump administration in 2017, policy turned toward protectionism, away from multilateralism and toward bilateralism, with a focus on

strategic competition with China; higher tariffs on steel and aluminum and special tariffs on China were imposed, the US withdrew from the Trans-Pacific Partnership, and the functioning of the WTO was disrupted. These policies were largely retained under the Biden administration (2021–2024) before being substantially intensified by the second Trump administration in 2025 through successive tariff revisions, creating considerable uncertainty for global trade and investment decisions. For Asia, these measures have redirected trade and investment—diverting some exports from China to other economies and relocating targeted production toward those facing lower US tariffs—dynamics examined in Section 2.3. The strategic competition between the US and China has increasingly centered on advanced semiconductors, electric vehicles, batteries, critical minerals, and AI-related technologies.

The fifth is the war in Ukraine that began in 2022, which initially disrupted energy and food trade severely before flows eased through a major rerouting of oil and gas. Its ramifications still loom large: more geographically segmented trade, efforts to diversify sources of energy and minerals, and higher defense expenditure in many countries beyond Europe, with a growing emphasis on drones and related technologies, as well as on critical semiconductor and defense-equipment supply chains. For energy-importing economies across Asia, the episode heightened exposure to commodity price swings, while energy and mineral exporters experienced more variable terms of trade.

Common to these developments is a shift from deepening integration toward a more fragmented and contested global economy, in which Asian economies must weigh efficiency against resilience and security. The following sections examine how these structural developments were reflected in Asian output, trade, prices, and productivity during 2024–2026.

2.2 Recent Growth and Productivity

Asian economies generally maintained solid growth in 2024 and 2025 despite continuing disruptions to the global economy. China and India expanded by more than 4% in 2025, and several ASEAN economies recorded growth of around 5% or higher, led by Vietnam (8%), while Japan and Korea grew by about 1% (Table 2.1).⁷ This resilience is notable given the succession of global shocks discussed in the previous section. For the Asia28 region, growth reached 4.7% in 2025, broadly in line with its pre-pandemic pace, with SAARC (6.6%) and ASEAN (4.8%) above the regional average and East Asia (4.3%) close to it.

The recovery from the pandemic and the subsequent energy and food price shocks have been uneven across economies. Following the sharp contraction in 2020 and the rebound of 2021—when Asia28 GDP grew by 7.2%—growth paths diverged markedly, reflecting differences in the scale of fiscal and monetary support, exposure to the energy shock, and the timing of reopening. Large-scale stimulus underpinned a rapid recovery in the US, Europe’s heavier exposure to the cutoff of Russian energy produced weaker growth, and China’s property-sector weakness and subdued domestic demand left its growth below the pre-pandemic trend. The war in Ukraine, localized conflicts, and extreme weather events further shaped outcomes in individual economies.

7: The GDP estimates used here are based on the APO-PDB and aligned with the final-demand accounts in Chapter 4 (see Section 8.1); they may differ from official figures, as the APO-PDB applies translog rather than fixed-weight Laspeyres indices. Coverage also differs by variable: GDP growth extends through 2025—from annual or quarterly national accounts where available and provisional estimates elsewhere (Section 8.5.4)—whereas the productivity accounts are compiled only through 2024, so 2025 figures should be read as provisional.

Table 2.1 Recent Economic Growth, 2015–2025

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
APO21	4.4	4.9	5.0	4.0	2.1	-3.1	5.9	5.9	3.9	4.3	4.6
Asia28	4.7	5.4	5.5	4.9	3.3	-1.5	7.2	5.0	4.1	4.2	4.7
East Asia	4.2	4.9	5.3	5.0	3.9	-0.1	7.7	3.0	3.7	3.5	4.3
China	5.1	6.4	6.5	6.2	5.0	0.8	8.9	3.4	4.6	4.2	5.0
Hong Kong	2.4	2.1	3.7	2.7	-1.7	-6.5	6.2	-3.5	3.1	2.5	3.6
Japan	1.8	0.7	1.6	0.8	-0.3	-4.4	3.5	1.3	0.7	-0.2	1.1
Korea	2.8	3.0	3.4	3.3	2.4	-0.9	4.5	3.1	2.0	2.0	1.1
Mongolia	2.5	1.5	5.4	7.3	5.3	-4.5	1.6	4.8	7.0	4.9	6.8
ROC	1.5	2.2	3.6	2.8	3.2	2.9	6.6	2.5	0.5	5.6	8.8
SAARC	6.8	7.1	5.9	5.6	3.3	-5.0	7.6	9.0	5.9	6.2	6.6
Afghanistan	-1.8	3.5	2.6	1.2	3.8	-2.1	-23.2	-6.4	2.2	1.9	3.6
Bangladesh	8.0	8.8	6.0	7.9	5.9	3.3	6.2	6.8	4.3	4.5	4.1
Bhutan	4.6	5.8	6.1	3.1	6.4	-8.7	4.6	6.1	3.6	3.5	8.1
India	7.3	7.2	6.1	5.3	3.2	-6.4	8.4	10.4	7.0	6.9	7.6
Maldives	4.9	5.5	7.3	12.0	6.3	-41.5	34.7	12.1	4.2	2.8	5.7
Nepal	3.5	0.0	8.2	7.1	6.2	-2.5	4.4	5.1	2.3	3.3	4.0
Pakistan	3.9	6.2	4.5	6.2	2.3	-0.8	5.8	4.8	-0.3	2.4	3.7
Sri Lanka	5.8	5.0	5.7	4.0	-0.2	-5.8	6.3	-8.0	-1.3	6.5	4.4
ASEAN	5.2	5.0	5.2	5.2	4.2	-3.4	3.7	6.2	3.6	5.0	4.8
Brunei	4.8	-0.6	-0.6	4.5	5.9	-2.5	-1.3	-2.2	2.9	0.2	0.7
Cambodia	6.9	6.9	7.1	8.0	7.3	-3.4	4.7	6.5	3.5	6.5	4.4
Indonesia	4.8	4.9	4.9	5.0	4.9	-2.1	3.6	5.2	4.9	4.9	5.0
Lao PDR	7.4	8.1	6.2	5.0	4.9	0.7	2.9	3.5	4.9	3.7	5.2
Malaysia	5.3	4.5	4.9	4.3	3.2	-4.6	4.9	10.6	1.7	4.0	5.2
Myanmar	35.3	4.4	1.3	5.3	5.6	-8.4	-13.4	3.3	2.7	-0.8	-0.3
Philippines	5.6	7.3	6.9	6.4	5.2	-10.2	6.2	8.5	4.3	6.0	4.4
Singapore	4.0	5.2	5.1	3.2	0.9	-2.9	8.1	3.6	1.0	6.9	5.0
Thailand	3.1	3.4	4.1	4.1	2.1	-6.3	1.5	2.6	2.2	2.9	2.4
Vietnam	5.9	5.9	7.4	8.4	6.4	3.0	3.4	9.8	3.9	7.0	8.0
Other Asia	3.0	4.7	5.9	2.9	-1.4	-0.2	8.4	6.8	3.2	2.9	3.0
Fiji	4.4	2.4	5.2	3.7	-0.6	-18.9	-4.4	16.3	9.0	3.5	3.0
Iran	-2.2	11.0	8.6	0.3	-8.9	2.8	3.4	2.9	3.4	1.8	0.5
Saudi Arabia	4.2	0.9	1.2	4.8	2.0	-5.4	9.2	12.0	0.7	3.2	4.6
Turkiye	5.6	3.3	7.5	3.4	1.3	1.8	11.2	5.3	4.9	3.3	3.6
US	2.8	1.7	2.4	2.9	2.6	-2.3	5.9	2.4	3.0	2.7	2.1
France	1.1	0.9	2.1	1.6	2.0	-7.7	6.7	2.7	1.4	1.2	0.9
Germany	1.6	2.2	2.8	1.1	1.0	-4.2	3.8	1.8	-0.9	-0.5	0.3
Italy	0.9	1.2	1.6	0.8	0.4	-9.3	8.6	4.7	1.0	0.7	0.7
UK	2.4	2.2	3.0	1.4	1.3	-10.6	7.9	6.1	0.0	0.4	1.4
EU27	2.3	1.9	2.8	2.0	1.9	-5.7	6.2	3.5	0.4	1.1	1.5

Inflation, which accelerated across most of the region in 2021–2022, had moderated in many economies by 2025 as energy prices eased from their peaks, allowing a gradual relaxation of monetary policy where currency and external pressures permitted. Inflation nonetheless remained elevated in several economies facing currency depreciation and external-financing constraints. These developments and the energy price dynamics that underlie them are examined in Section 2.4.

Unit: Percentage (average annual growth rate). Sources: APO Productivity Database 2026 and quarterly national accounts (QNA). Notes: The QNA used for the actual economic growth of 2025 and the first quarter of 2026 is provided in Section 8.5.4. The 2025 growth projections for Fiji are from the Reserve Bank of Fiji; those for Afghanistan, Cambodia, Lao PDR, and Myanmar are from the Databook (Box 11).

The recovery in output was not matched by a comparable recovery in productivity. Table 2.2 presents the average annual growth rates of per-hour labor productivity (ALP) and total factor productivity (TFP) for Asian regions and economies over five sub-periods spanning 1970–2024.⁸ The contrast with the headline growth figures is notable: even as aggregate GDP returned toward its pre-pandemic pace, productivity growth slowed broadly. Comparing the two most recent sub-periods, ALP growth eased to 3.7% per year in 2019–2024 from 4.0% in 2015–2019, falling in 21 of the 28 economies, and TFP growth slowed to 1.0% from 1.5%, falling in 22. In other words, much of the recovery reflected the return of demand and hours worked rather than gains in underlying efficiency—a distinction not visible in headline growth alone.

China illustrates this gap most sharply. Its measured ALP growth held steady, edging up from 5.5% to 5.8%, while its TFP growth fell by more than half, from 2.0% to 0.9%. Output per hour was sustained, but it was increasingly bought with capital rather than efficiency—a pattern consistent with the property-sector downturn and weaker demand of these years, during which heavy investment continued even as its returns thinned. Because China is the largest economy in the group, this single divergence is enough to pull down the Asia28 TFP aggregate even where other economies held steady. With domestic demand

8: The Databook calculates different measures of productivity to provide a comprehensive picture: per-worker labor productivity is output (GDP) per worker, per-hour labor productivity adjusts for the number of hours worked per worker, and total factor productivity is output divided by an index of all factor inputs (labor and capital, including land and mineral and energy resources). These are described in detail in Chapter 5.

Table 2.2 Productivity Growth, 1970–2024

—Growth in per-hour GDP at constant prices and total factor productivity

	Per-hour Labor Productivity Growth					TFP Growth				
	1970–1990	1990–2010	2010–2015	2015–2019	2019–2024	1970–1990	1990–2010	2010–2015	2015–2019	2019–2024
APO21	2.5	2.5 →	2.8 ↗	2.9 ↗	2.5 ↘	0.6	0.6 →	0.7 ↗	1.0 ↗	1.0 →
Asia28	2.2	3.9 ↗	4.9 ↗	4.0 ↘	3.7 ↘	0.4	1.4 ↗	1.2 ↘	1.5 ↗	1.0 ↘
East Asia	2.7	4.5 ↗	6.1 ↗	4.4 ↘	4.8 ↗	0.9	1.6 ↗	1.7 ↗	1.9 ↗	1.0 ↘
China	2.9	8.1 ↗	8.0 ↘	5.5 ↘	5.8 ↗	1.1	3.0 ↗	1.4 ↘	2.0 ↗	0.9 ↘
Hong Kong	5.4	2.8 ↘	2.0 ↘	1.7 ↘	1.7 ↗	2.9	1.1 ↘	0.9 ↘	1.0 ↗	0.9 ↘
Japan	4.1	1.5 ↘	1.3 ↘	0.4 ↘	0.2 ↘	1.4	0.1 ↘	1.0 ↗	0.0 ↘	−0.3 ↘
Korea	6.1	5.4 ↘	1.8 ↘	4.4 ↗	2.9 ↘	1.7	1.3 ↘	0.2 ↘	1.7 ↗	0.9 ↘
Mongolia	2.9	3.2 ↗	6.1 ↗	0.7 ↘	2.4 ↗	−0.3	1.2 ↗	2.9 ↗	2.1 ↘	0.0 ↘
ROC	7.0	4.8 ↘	1.9 ↘	2.8 ↗	3.7 ↗	4.3	2.4 ↘	1.0 ↘	1.6 ↗	1.6 →
SAARC	1.7	4.3 ↗	4.1 ↘	4.5 ↗	3.7 ↘	0.3	1.8 ↗	0.9 ↘	1.6 ↗	1.8 ↗
Afghanistan	0.4	−2.1 ↘	4.5 ↗	1.6 ↘	−8.6 ↘	−2.2	−1.7 ↗	1.7 ↗	0.7 ↘	−9.1 ↘
Bangladesh	−0.7	3.3 ↗	4.7 ↗	5.8 ↗	3.9 ↘	−0.9	0.3 ↗	0.2 →	0.7 ↗	−0.7 ↘
Bhutan	3.5	4.7 ↗	6.6 ↗	3.4 ↘	2.4 ↘	1.5	0.2 ↘	−0.6 ↘	−0.6 ↗	−0.9 ↘
India	1.9	4.7 ↗	4.4 ↘	4.6 ↗	4.4 ↘	0.5	2.1 ↗	1.1 ↘	1.9 ↗	2.5 ↗
Maldives	2.2	1.0 ↘	2.3 ↗	3.4 ↗	−0.4 ↘	1.2	−1.3 ↘	−0.7 ↗	0.6 ↗	−0.7 ↘
Nepal	1.1	2.5 ↗	3.3 ↗	3.9 ↗	0.2 ↘	−1.0	−0.3 ↗	2.1 ↗	1.6 ↗	−1.6 ↘
Pakistan	3.2	2.8 ↘	1.6 ↘	3.1 ↗	0.0 ↘	1.3	1.2 ↘	1.0 ↘	1.4 ↗	0.0 ↘
Sri Lanka	2.4	4.0 ↗	5.8 ↗	2.5 ↘	0.1 ↘	0.6	2.1 ↗	0.3 ↘	−2.1 ↘	−2.9 ↘
ASEAN	2.7	3.1 ↗	3.9 ↗	3.6 ↘	2.3 ↘	0.7	0.4 ↘	0.2 ↘	0.9 ↗	0.2 ↘
Brunei	−1.9	−1.3 ↗	−0.9 ↗	−2.3 ↘	−0.2 ↗	0.3	−0.9 ↘	−1.5 ↘	0.0 ↗	−0.7 ↘
Cambodia	−1.4	2.0 ↗	5.3 ↗	3.7 ↘	0.9 ↘	−2.5	0.5 ↗	0.2 ↘	0.1 ↘	−2.1 ↘
Indonesia	3.4	2.4 ↘	4.0 ↗	2.3 ↘	2.7 ↗	1.4	−0.5 ↘	−0.7 ↘	−0.1 ↗	0.3 ↗
Lao PDR	2.3	2.9 ↗	6.2 ↗	4.1 ↘	1.1 ↘	0.6	0.6 →	2.2 ↗	1.2 ↗	−1.7 ↘
Malaysia	3.3	3.0 ↘	2.2 ↘	2.3 ↗	1.9 ↘	0.9	0.5 ↘	1.5 ↗	1.0 ↘	0.4 ↘
Myanmar	1.5	3.6 ↗	4.6 ↗	6.0 ↗	−1.6 ↘	−1.3	1.1 ↗	−1.2 ↘	1.3 ↗	−3.0 ↘
Philippines	1.1	2.0 ↗	3.7 ↗	5.2 ↗	1.3 ↘	−0.8	0.8 ↗	0.9 ↗	0.9 ↗	0.2 ↘
Singapore	3.4	3.2 ↘	2.1 ↘	3.4 ↗	2.5 ↘	0.8	1.2 ↗	0.3 ↘	0.9 ↗	1.1 ↗
Thailand	3.4	3.7 ↗	4.4 ↗	4.3 ↘	0.6 ↘	0.5	−0.4 ↘	0.2 ↗	1.7 ↗	−1.0 ↘
Vietnam	0.0	5.9 ↗	4.9 ↘	6.1 ↗	4.5 ↘	−0.7	0.8 ↗	−0.2 ↘	2.0 ↗	1.3 ↘
Other Asia	−0.1	2.1 ↗	2.0 ↘	1.7 ↘	1.4 ↘	−1.6	0.7 ↗	0.4 ↘	0.7 ↗	1.3 ↗
Fiji	0.6	0.3 ↘	2.6 ↗	2.1 ↘	−0.5 ↘	−1.4	−0.3 ↗	2.5 ↗	1.3 ↘	−0.2 ↘
Iran	−0.4	3.4 ↗	−0.8 ↘	1.1 ↗	2.3 ↗	−1.6	1.2 ↗	−1.8 ↘	0.3 ↗	2.1 ↗
Saudi Arabia	−4.4	−0.3 ↗	1.6 ↗	−0.5 ↘	−3.2 ↘	−3.3	0.0 ↗	0.8 ↗	0.5 ↗	0.0 ↘
Turkiye	1.7	2.5 ↗	4.1 ↗	3.6 ↘	3.0 ↘	0.0	−0.6 ↘	1.2 ↗	−0.3 ↘	0.8 ↗
US	1.5	1.9 ↗	0.4 ↘	1.0 ↗	1.8 ↗	0.8	0.8 →	0.3 ↘	0.4 ↗	0.9 ↗

Unit: Percentage (average annual growth rate).

Sources: APO Productivity Database 2026. Notes: Arrows indicate changes compared to the preceding period. See Table 9.11 and Table 9.12 for growth rates every five years since 1990.

subdued, China's growth has leaned increasingly on exports, adding to competitive pressure on manufacturers elsewhere in Asia, including in Indonesia, Thailand, and Vietnam.

The few clear improvements were concentrated and, for the most part, particular rather than broad-based. The largest gains came in Iran, where ALP growth rose from 1.1% to 2.3% and TFP from 0.3% to 2.1%—a rebound that may reflect the recovery of activity following the easing of sanctions rather than a durable acceleration—and in the ROC, where ALP growth quickened to 3.7% on stable TFP growth of 1.6%, supported by its position in the semiconductor supply chain amid surging AI-related demand. Elsewhere, the direction was downward: productivity growth slowed in Korea (ALP to 2.9%, TFP to 0.9%) and across most of ASEAN, where TFP growth turned negative in several economies and fell from 0.9% to 0.2% for the aggregate. Japan recorded the weakest outcome among the advanced economies, with ALP growth of 0.2% and TFP growth of −0.3%, while Sri Lanka's TFP contracted amid its balance-of-payments crisis. The pattern suggests that the region has, for now, regained its growth momentum without regaining its productivity momentum—and that the handful of exceptions owe more to country-specific circumstances than to any common, technology-driven revival.

2.3 Trade Reconfiguration under Geopolitical and Policy Shocks

Trade is central to almost every Asian economy, including the larger ones, whereas the US has a relatively low export-to-GDP ratio of 11%. Figure 4.12 (Section 4.3) reports export shares for 2024: among the economies covered, only Pakistan (10%) and Nepal (8%) have ratios below that of the US, while the two Asian giants are far higher—India (22%) and China (19%)—and East and Southeast Asia and the oil exporters higher still, with the ROC (63%), Thailand (69%), and Vietnam (90%) among the most trade-dependent. This openness means that shifts in the direction of trade—who buys from whom—matter as much for Asian economies as the overall level of trade, and that the direction of trade has changed most in recent years in part due to the reorientation of US trade policy.

The most visible change has been a reordering of trade around the US and China. Figure 2.1 (left panel) shows that the US share of world imports sourced from China fell markedly, from about 19% in the late 2010s to around 12% by 2025, while Mexico, ASEAN economies, and SAARC gained share. Figure 2.1 (right panel) shows the mirror image from the importing side: dependence on imports from China continued to rise across much of developing Asia even as the US reduced its own reliance. The result is not a retreat from trade with China but a lengthening of the routes through which Chinese value added reaches the US market (see also Alfaro and Chor 2026).

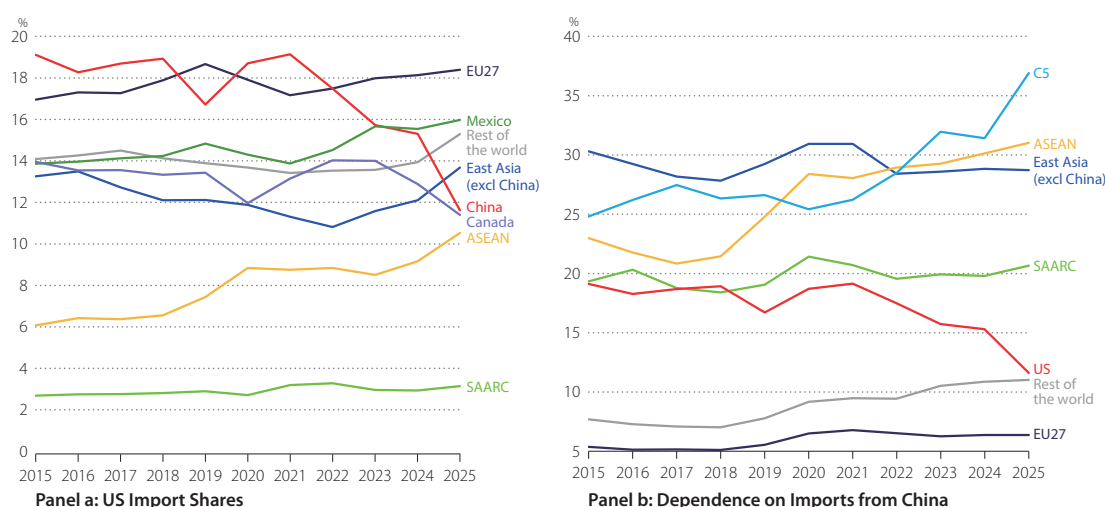


Figure 2.1 US Import Shares and Dependence on Imports from China, 2015–2025

Unit: Percentage. Sources: United Nations Comtrade Database (accessed April 22, 2026), IMF, International Trade in Goods (by partner country) (IMTS) (accessed April 24, 2026), United Nations Trade and Development Data Hub (accessed April 23, 2026), and ASEANstats Data Portal (accessed April 23, 2026), including adjustments by APO-PDB.

This pattern is clearest when changes in the two directions are viewed together. Figure 2.2 plots the change in each economy's dependence on imports from China against the change in its exports to the US between 2018 and 2025. Several economies—most prominently Vietnam and Cambodia, and to a lesser degree Thailand—saw their dependence increase simultaneously, a pattern consistent with the rerouting and partial relocation of production toward economies facing lower US tariffs. Others, such as the ROC, raised exports to the US while their import dependence on China changed little. Many countries are close to the very axis, with little change in trade with the US but a big rise in imports from China. These are descriptive associations rather than direct evidence of transshipment, which the trade statistics alone cannot establish; but the broad pattern aligns with the tariff measures and “de-risking” efforts described in Section 2.1.

Much of the trade and investment friction has centered on a narrow set of new-technology goods—electric vehicles, batteries, and solar cells—where China has become the dominant supplier. The trajectory of this trade depends heavily on US and European tariffs and industrial policies, and on China's response, so production locations and the trade flows that follow them remain unusually difficult to project. The product-level dynamics of these goods, and their considerable uncertainty, are examined in Box 5 (Section 4.3).

Whether this reconfiguration will affect productivity remains unclear. Figure 2.3 plots TFP growth over the recovery period against export growth to the US. No tight relationship emerges across economies: some of the strongest productivity performers, such as the ROC and Vietnam, also expanded exports to the US, but many economies with rising US exports recorded weak or negative TFP growth, and the most dynamic exporters are not consistently the most productive. The reconfiguration of trade has so far been more a change in the geography of production than a demonstrated source of efficiency gains. This is consistent with the observation that diversification and higher resilience may require sacrifices in production efficiency.

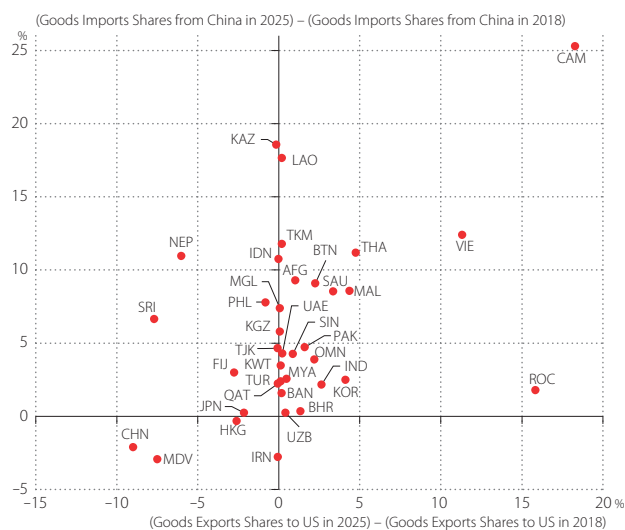


Figure 2.2 Realignment of Trade Ties, 2018–2025
—Change in goods-import dependence on China versus change in export dependence on the US

Unit: Percentage points. Sources: Trade data (see Figure 2.1).

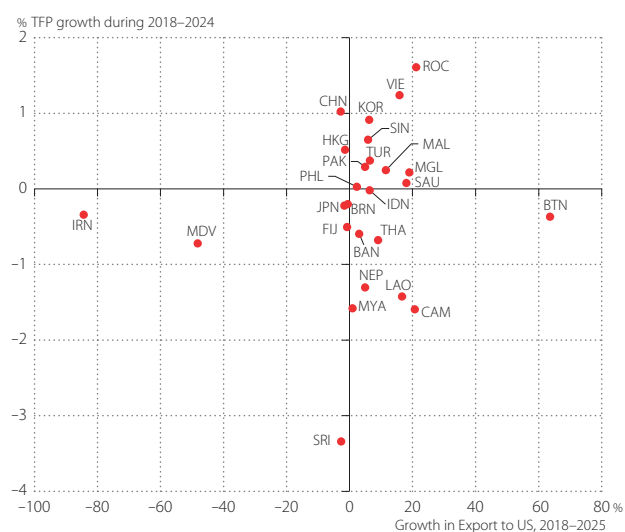


Figure 2.3 Trade and Productivity
—Average TFP growth, 2018–2024, versus growth of exports to the US, 2018–2025

Unit: Percentage. Sources: Trade data (see Figure 2.1) and APO Productivity Database 2026.

2.4 Energy Prices and Industrial Competitiveness

The first half of the 2020s was characterized by an exceptional sequence of global shocks that reshaped energy markets, international trade, and industrial competitiveness. The COVID-19 pandemic initially caused a sharp contraction in global demand in 2020, while disruptions to global supply chains and shifts in consumption toward information technology products and health-related services generated temporary shortages and price spikes in some goods. As economies reopened, large-scale fiscal and monetary stimulus supported a rapid recovery in demand while supply constraints persisted. Russia's invasion of Ukraine in February 2022 further disrupted global energy and commodity markets, intensifying inflationary pressures worldwide.

Figure 2.4 summarizes annual CPI inflation across Asia and selected major economies from 2015 to 2025. Inflation accelerated broadly in 2021 and peaked in 2022, although the magnitude varied substantially across economies. China was a notable exception, reflecting its subdued domestic demand and prolonged COVID-19 restrictions. By contrast, several economies facing external financing pressures and currency depreciation—including Türkiye, Sri Lanka, Pakistan, Lao PDR, and Myanmar—experienced exceptionally high inflation. Iran also continued to record persistently high inflation, largely reflecting the effects of economic sanctions imposed after the US withdrew from the Joint Comprehensive Plan of Action in 2018. By 2025, inflation had moderated in many advanced economies following tighter monetary policies, although it remained elevated in several emerging Asian economies.

	AFG	BAN	BRN	BTN	CAM	CHN	FJI	HKG	IDN	IND	IRN	JPN	KOR	LAO	MAL	MDV	MGL	MYA	NEP	PAK	PHL	ROC	SAU	SIN	SRI	THA	TUR	USA	VIE
2015	-0.7	6.0	-0.4	4.4	1.2	1.4	1.4	3.0	6.2	2.7	11.8	0.8	0.7	1.3	2.1	0.9	5.6	9.0	8.0	2.5	0.7	-0.3	1.2	-0.5	0.9	-0.9	7.4	0.1	0.6
2016	4.3	5.4	-0.4	3.2	3.0	2.0	3.8	2.4	3.5	4.8	7.0	-0.1	1.0	1.6	2.1	0.5	0.7	6.7	7.6	3.7	1.3	1.4	2.0	-0.5	3.7	0.2	7.5	1.3	2.6
2017	4.9	5.5	-1.2	4.8	2.9	1.6	3.3	1.5	3.7	3.3	7.7	0.5	1.9	0.8	3.7	2.8	4.2	4.5	8.4	4.0	2.8	0.6	-0.8	0.6	7.4	0.7	10.6	2.1	3.5
2018	0.6	5.4	1.0	2.7	2.4	2.1	4.1	2.3	3.1	3.9	16.6	0.9	1.5	2.0	1.0	-0.1	6.6	6.6	2.7	5.0	5.1	1.3	2.4	0.4	2.1	1.1	15.1	2.4	3.5
2019	2.3	5.4	-0.4	2.7	3.0	2.9	1.7	2.9	3.0	3.7	33.6	0.5	0.4	3.3	0.7	0.2	7.0	8.5	4.3	10.1	2.3	0.6	-2.1	0.6	3.5	0.7	14.1	1.8	2.8
2020	5.8	5.5	1.9	5.5	2.8	2.5	-1.7	0.3	1.9	6.4	26.7	0.0	0.5	5.0	-1.2	-1.4	3.7	3.6	5.4	9.3	2.4	-0.2	3.4	-0.2	6.0	-0.8	11.6	1.2	3.2
2021	7.8	5.4	1.8	7.1	2.9	0.9	1.5	1.5	1.5	5.0	36.0	-0.2	2.5	3.7	2.5	0.5	7.1	6.1	4.9	9.1	3.9	1.9	3.0	2.3	6.7	1.2	17.9	4.6	1.8
2022	10.6	7.4	3.5	5.5	4.3	2.0	5.9	1.9	4.1	6.5	36.1	2.5	5.0	20.7	3.3	2.3	14.1	21.9	4.0	18.1	5.7	2.9	2.4	6.0	40.9	-1.6	54.4	7.7	3.1
2023	-7.7	9.4	0.4	4.1	3.7	0.2	2.9	2.1	3.6	5.5	36.9	3.2	3.5	27.2	3.5	2.9	9.8	24.7	7.4	26.8	6.2	2.5	2.3	4.7	15.3	8.1	43.1	4.0	3.2
2024	-4.2	10.0	-0.4	2.8	0.8	0.2	3.9	1.7	2.2	4.8	28.1	2.7	2.3	20.8	1.7	1.4	6.0	25.2	6.9	11.9	2.7	2.2	1.7	2.4	-0.4	1.4	46.1	2.9	3.6
2025	n/a	8.4	-0.3	3.5	2.3	0.1	-1.4	1.4	1.9	2.4	35.2	3.1	2.1	7.5	1.4	4.0	8.3	n/a	2.6	3.5	1.6	1.6	2.1	0.9	-4.9	-0.1	29.9	2.7	3.3

Figure 2.4 CPI Changes, 2015–2025

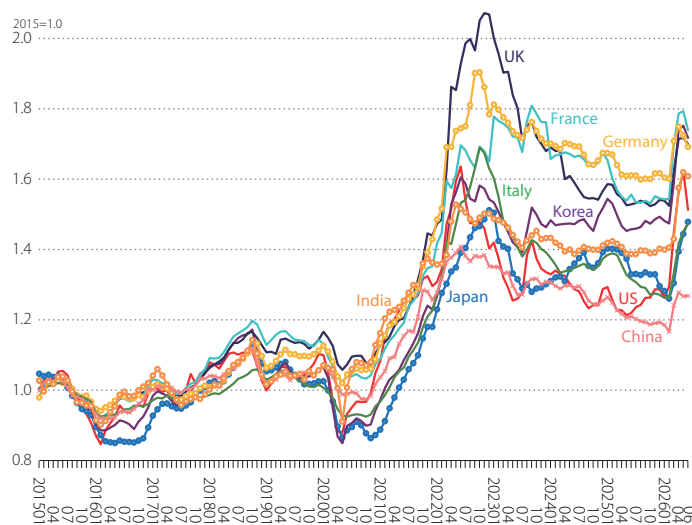
Unit: Annual growth rate of CPI. Source: Official CPI. Note: The observation periods for Afghanistan and Myanmar end in 2024.

These inflationary developments were closely associated with changes in international energy prices. The following discussion, therefore, examines the evolution of energy prices and their implications for industrial competitiveness using monthly indicators extending through June 2026.

The Databook monitors international energy costs using the multilateral Energy Cost Monitoring (ECM) Database developed by Nomura and Inaba (2026). Figure 2.5 presents monthly nominal quality-adjusted prices of final energy consumption for nine industrialized economies from January 2020 to June 2026. Energy prices began to rise in 2021 as the global economy recovered from the COVID-19 pandemic. The disruption of Russian energy supplies following the invasion of Ukraine in February 2022 triggered a much sharper increase, with particularly pronounced price surges in European economies during late 2022 and early 2023. Although energy prices gradually declined thereafter, they remained well above their pre-pandemic levels through the end of 2024, indicating a sustained increase in production costs. The renewed surge in early 2026, amid heightened tensions in the Gulf region, suggests that energy

Figure 2.5 Monthly Energy Prices, January 2020–June 2026

Unit: Index (average price at local currency unit in 2015=1.0 in each country). Source: Updated estimates of Nomura and Inaba (2026), based on Energy Cost Monitoring (ECM) Database. Notes: The energy price is defined as the quality-adjusted price of final energy consumption, measured in the implicit translog index. The price is seasonally adjusted and includes taxes and subsidies.



security will likely remain a major policy concern. Whether this marks the beginning of another prolonged energy shock remains uncertain, but it underscores the continued vulnerability of international energy markets.

Although nominal energy prices moderated after their 2022–2023 peaks, they remained well above their pre-pandemic levels in many economies. Because general inflation also differed substantially across countries (Figure 2.4), the burden of higher energy costs relative to other domestic prices remained particularly large in several advanced economies, especially Japan, Korea, and much of Europe. These sustained increases in real energy costs have placed growing pressure on the competitiveness of energy-intensive industries.

The transition toward carbon neutrality creates both opportunities and challenges for industrial competitiveness. While demand for green technologies benefits some sectors, higher energy costs may weaken the competitiveness of energy-intensive and trade-exposed (EITE) industries, particularly where climate policies could substantially increase production costs. The EU emissions trading system (EU ETS) is a complex set of carbon pricing mechanisms, including some allocation of quotas amounting to an offsetting subsidy, plus a potential protective carbon tariff. The net effect on output prices is not easily estimated but is likely to raise them.

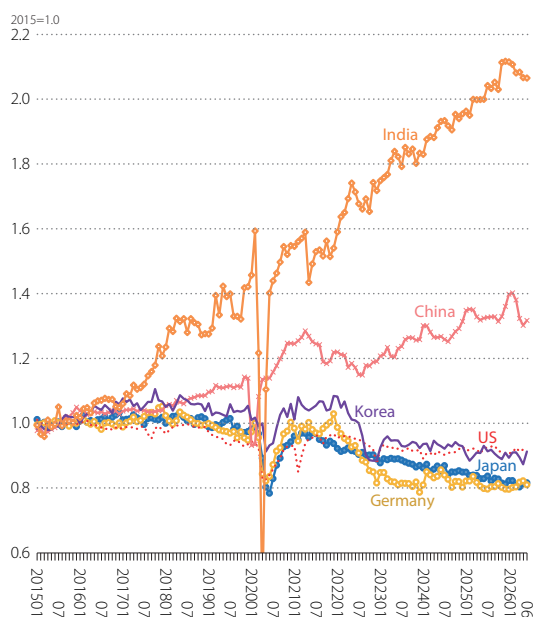


Figure 2.6 compares the EITE manufacturing output index from January 2015 to June 2026 for the six selected countries. The EITE output index provides a useful summary indicator of the industrial consequences of higher energy costs and climate policies. The most notable trends are the sharp expansions in India and China, stability in the US, and steep declines in Germany, Korea, and Japan. Since early 2022, Germany has experienced a particularly sharp contraction in EITE output, reflecting the impact of rising energy prices, and Korea has experienced a similar decline. In contrast,

Figure 2.6 Monthly EITE Output Index, January 2015–June 2026

Unit: Index (January 2015=1.0). Source: Updated estimates of Nomura and Inaba (2026), based on Energy Cost Monitoring (ECM) Database.

Japan's decline began earlier, following a brief post-pandemic recovery. Over the past several years—marked by rapid decarbonization initiatives and soaring energy costs—EITE output in these advanced economies has fallen by around 20%, indicating a serious erosion of their traditional industrial base.

Figure 2.7 decomposes the changes in the EITE output index shown in Figure 2.6 into the contributions of five industries: Paper, Chemicals, Nonmetallic mineral products, Iron and steel, and Nonferrous metals. Although Japan, Germany, and Korea all experienced substantial declines in EITE output, the underlying industrial drivers differ. In Japan, the decline was largely driven by iron and steel production, which accounts for a major share of its EITE output. Nippon Steel has continued expanding its overseas operations, most notably through the completion of its acquisition of U.S. Steel in June 2025 and the ongoing expansion of its integrated steel production in India. In Germany, the downturn since 2022 has been driven primarily by a contraction in the chemical industry. BASF has continued to expand its integrated production base in Guangdong, China, reflecting both the growing importance of the Chinese market and differences in production costs. In Korea, the sharp decline in EITE output since early 2022 reflects contractions in both the chemical and steel sectors. The Korean steel giant POSCO has continued to strengthen its overseas production network, including major investments in Indonesia, while maintaining domestic restructuring efforts. Although these investment decisions are influenced by many factors, including market growth in emerging Asia, persistent differences in energy costs and climate policies also affect the location of energy-intensive production. Such shifts could accelerate carbon leakage by relocating production—and potentially emissions—to economies with lower energy costs, without necessarily reducing global emissions.

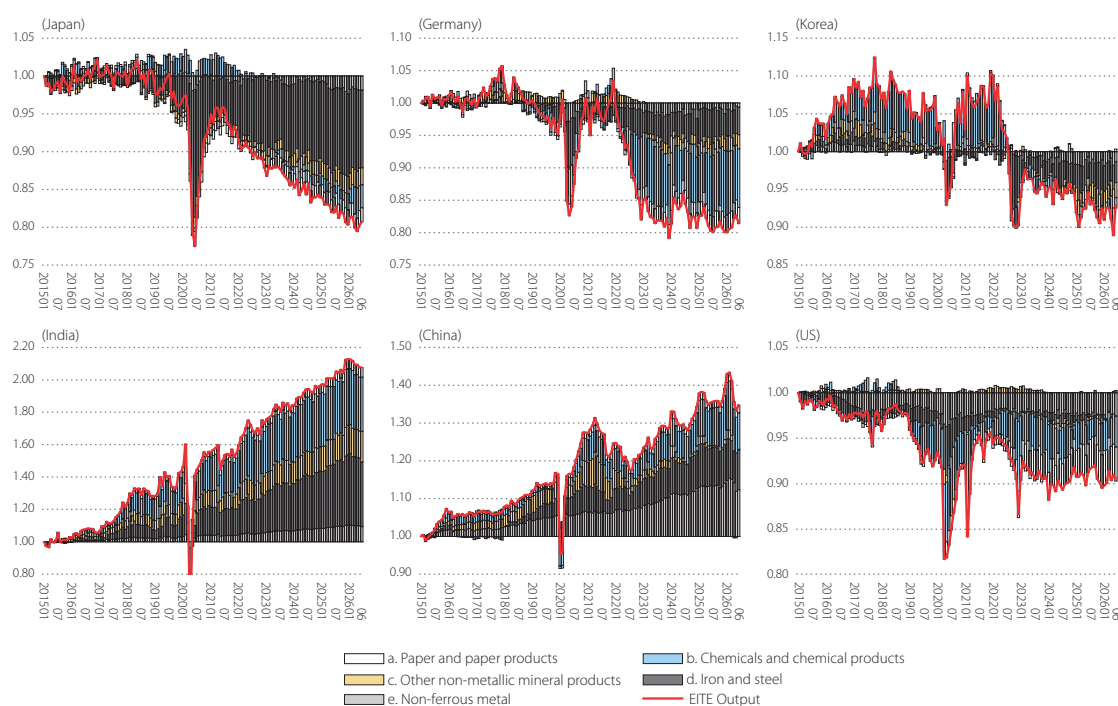


Figure 2.7 Industry Contributions to EITE Output Index, January 2015–June 2026

Unit: Index (January 2015=1.0). Period: January 2015–June 2026. Source: Updated estimates of Nomura and Inaba (2026), based on the Energy Cost Monitoring (ECM) Database.

2.5 AI and Productivity

The rapid diffusion of generative AI since the release of ChatGPT in late 2022 has become one of the most important topics in productivity research and economic policy. While expectations are high that AI may substantially raise productivity through automation, decision support, and product innovation, considerable uncertainty remains regarding the magnitude and timing of these gains. Recent research has increasingly distinguished between productivity gains observed at the firm level and those measurable in aggregate economic statistics.

Recent micro-level evidence generally suggests that AI adoption raises productivity, although the estimated gains vary considerably across firms, occupations, and industries, and measurable effects remain limited so far. A survey of executives in four advanced economies found that about 80% of firms had observed no impact on employment or productivity over the preceding three years (Yotzov et al. 2026). Where gains are identified, they are concentrated and uneven, and the proposed mechanisms differ: a study of European firms estimated an average labor-productivity gain of about 4%, concentrated in larger firms and attributed largely to capital deepening (Aldasoro et al. 2026), whereas a survey of the US financial executives found the largest gains in high-skill services, attributed to new products and customers rather than to capital deepening (Baslandze et al. 2026). Benefits vary with management practices, firm size, and integration into business processes, and adoption itself differs markedly between the US and Europe (Bick et al. 2026)—patterns that point to organizational capability as an important complement to frontier AI technologies.

Aggregate estimates remain considerably more uncertain and span a wide range. Extrapolating from task-level evidence, Acemoglu (2024) argues that AI may raise aggregate TFP by no more than about 0.66% over the coming decade, with later gains likely smaller as the remaining tasks to be automated grow harder. More optimistic assessments incorporate broader innovation effects and inter-industry spillovers; surveying these projections, Filippucci, Gal, and Schief (2024) report estimated annual labor-productivity gains of about 0.1 to 2.6 percentage points over a ten-year horizon, with the largest gains in finance, information services, and publishing and a sizeable “Baumol” drag where large service sectors benefit little. Using industry-level evidence, Highfill and Samuels (2026) find that the US industries with greater AI intensity recorded TFP growth roughly 1–2 percentage points higher per year, while emphasizing the measurement challenges in existing national accounts. During the diffusion phase, deployment-related organizational and service inputs may also be imperfectly measured, potentially biasing measured TFP growth upward (see PRN2612).

Noting the US productivity growth of about 2.7% in 2025—close to double the average of the preceding decade—Brynjolfsson (2026) reads the acceleration as broadly consistent with the “J-curve” hypothesis, in which substantial investment and reorganization precede measurable gains. Most of this evidence is drawn from advanced economies; across much of developing Asia, where AI adoption remains limited, any productivity effects are not yet discernible in the aggregate data.

Scenario-based evidence for Japan provides one illustration of how AI may affect productivity when combined with broader technological and organizational transformation. Figure 2.8 compares projected growth in TFP, labor productivity, and capital productivity across Japanese industries under a Business-as-Usual (BaU) scenario and a Technology and Societal Implementation (TSI) scenario. The TSI scenario suggests broad-based improvements in TFP and labor productivity, while capital productivity declines in some industries as complementary investment in digital and other capital outpaces output growth. The results illustrate that future productivity gains will depend not only on advances in AI itself but also on the effectiveness of its implementation throughout the economy.

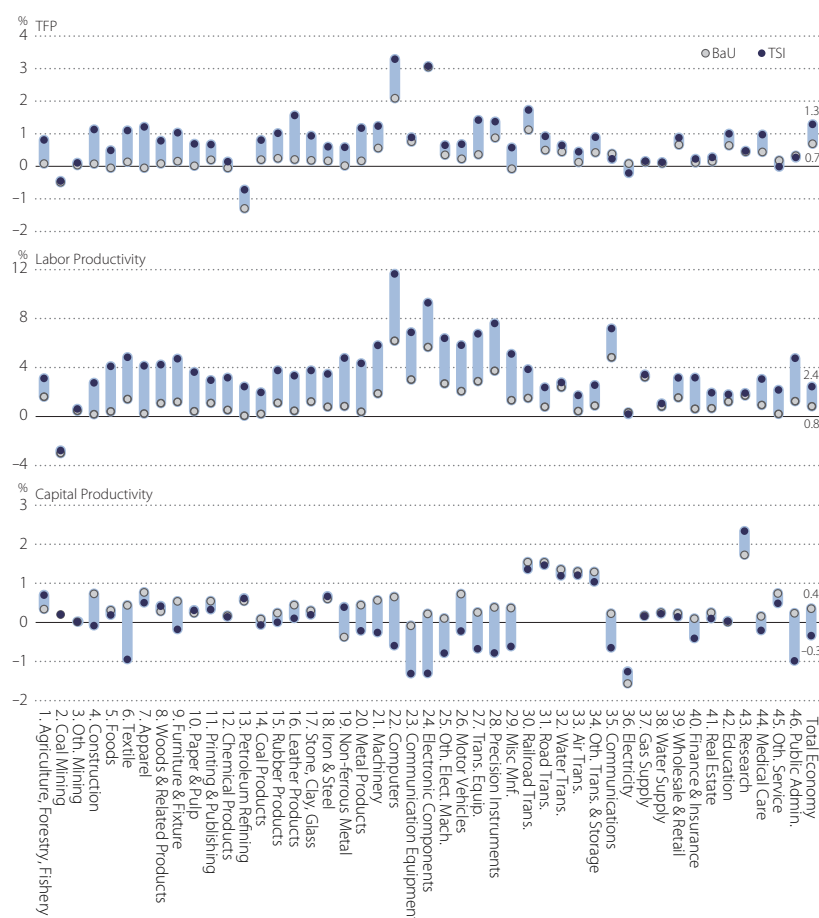


Figure 2.8 Productivity Effects of Technology and Societal Implementation in Japan, 2020–2040

Unit: Percentage (annual average growth rate in 2020–40). Source: PRN2602. Note: Output is measured on a gross-output basis by industry and on a real-value-added basis for the total economy; inputs are defined as total hours worked for labor productivity and as capital services for capital productivity.

AI is only the latest in a series of technologies whose productivity effects are transmitted through specific industries. In the Information Age that began around 1995, Ho, Nomura, and Samuels (2023) attribute an outsized contribution to aggregate TFP growth in the US and Japan to the ICT-hardware sector, where rapid productivity gains in a narrow set of industries lifted the economy-wide total. The new-technology goods now at the center of global trade—semiconductors, electric vehicles, batteries, and solar cells—are similarly characterized by rapid productivity growth, and the economies most engaged in their production, including China, Korea, the ROC, Japan, and parts of ASEAN, may capture a comparable contribution to aggregate TFP. The capacity to convert such production into measurable aggregate gains is likely to rest in part on the supporting stock of ICT and R&D capital, which remains concentrated in the higher-income East Asian producers and comparatively thin elsewhere in developing Asia (Box 7, Section 5.3). Whether these industries will play a role analogous to that of ICT hardware in the earlier period remains uncertain, but it underscores that the productivity consequences of new technologies depend on which economies host their production, not on the pace of innovation alone.

3 Economic Transformation of Asia

Highlights

- The economic scale of Asia38 was USD 40.3 trillion in 2024 in exchange-rate-based GDP, 37% greater than that of the US. Japan was the largest economy in Asia until 2008, when it was overtaken by China.
- Asia is even more dominant in PPP terms: Asia38 accounted for 48% of world output and was 3.3 times the size of the US in 2024. India overtook Japan as Asia's second-largest economy in 2009, while ASEAN's aggregate GDP reached a level comparable to Japan's around the same time. By the early 2030s, the SAARC region (South Asia) is projected to approach the size of the EU15.
- Asia38 grew at an average of 3.8% per year from 2019 to 2024, with China and India contributing 1.8 and 0.8 percentage points, respectively; India is projected to overtake China as Asia's largest growth driver in the early 2030s. Among regions, growth has been fastest in the CLMV and SAARC economies as they continue to catch up.
- By PPP-based per capita GDP, Japan led Asia until Singapore overtook it around 1980; the ROC and Korea later surpassed Japan in 2008 and 2014, respectively.
- In current-price per capita terms, Asia38 reached USD 21,000 in 2024—24% of US level. The contrast within Asia is stark: the Asian Tigers approach or exceed the US levels, whereas the SAARC region (1.9 billion people) and CLMV (180 million) remain at around USD 9,900 and 11,300, respectively. This significant gap, affecting most of Asia's population, largely reflects lower labor productivity.

Since the mid-1980s, the world economy narrative has been increasingly shaped by Asia, whose rapid growth has radically transformed its share of world output. Figure 3.1 compares the growth rates of Asia38 with those of the EU and the US over the observation period from 1970 to 2024 and the projection period from 2024 to 2035. (The heat maps use bluer colors to represent higher rates and redder colors to represent lower rates). As a result, the center of gravity in the global economy is gradually shifting toward Asia. In 2024, Asia38 accounted for 49% (46% for Asia28) of global output, compared with 15% for the US and 14% for the EU27, as shown in Figure 3.2. According to the projections for growth in Asia38 and the rest of the world, the Asian share of global output is expected to continue rising, reaching 52% (51% for Asia38) by 2035.⁹ In contrast, the US and the EU27 output shares are projected to fall to 14% and 12%, respectively.

Figure 3.1 GDP Growth of Asia, the EU, and the US, 1970–2035

—GDP growth at constant prices from 1970 to 2024 and the projection to 2035

Unit: Percentage (average annual growth rate). Sources: Official national accounts in each country (including adjustments by APO-PDB) and the projections (Box 11) for 2024–30 and 2030–35.

	1970 –1975	1975 –1980	1980 –1985	1985 –1990	1990 –1995	1995 –2000	2000 –2005	2005 –2010	2010 –2015	2015 –2019	2019 –2024	2024 –2030	2030 –2035
Asia38	5.08	4.92	3.92	5.46	5.10	4.20	5.61	6.52	5.32	4.58	3.78	4.04	3.33
US	2.62	3.63	3.12	3.18	2.50	4.21	2.48	0.98	2.22	2.39	2.37	2.07	1.90
EU15	3.12	3.10	1.57	3.28	1.75	2.95	1.70	0.75	0.96	1.92	0.95	1.25	0.94

9: The projections of economic growth for Asia28 are provided in Box 11. Among the 28 economies, 23 publish quarterly national accounts. As of June 2026, the projections incorporate data through the first quarter of 2026 for 18 of these economies, through the fourth quarter of 2025 for four economies, and through the third quarter of 2025 for one economy, depending on data availability (See Section 8.5.4).

To better understand the dynamics of long-term economic growth within the region, this chapter examines the diverse development efforts and achievements of Asian economies through cross-country comparisons of GDP levels and related performance indicators. Such level comparisons require expressing each country's harmonized GDP in a common currency unit, typically the USD, using one of two alternative conversion rates: the market exchange rate or purchasing power parity (PPP). PPPs are price-level adjustments across countries, estimated by the International Comparison Program (ICP); they reflect the fact that one US dollar, converted at market exchange rates, buys different quantities of the same goods in different countries. Because these price adjustments are subject to substantial revision, comparisons of GDP levels are inherently less robust than comparisons of growth rates.

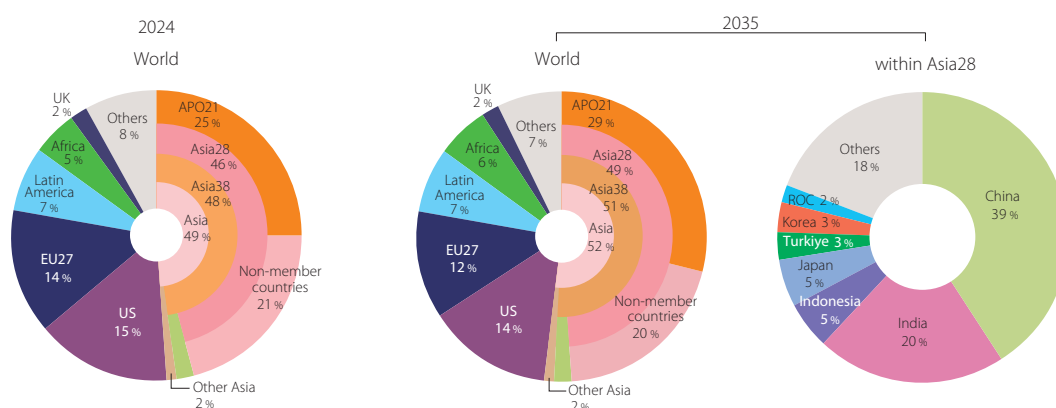


Figure 3.2 Asia's Share in World GDP, 2024 and 2035

—Share of GDP using the 2021 PPP

Unit: Percentage. Sources: The estimates for the Asia28 economies projections (Box 11) and the IMF (2026) for the rest of the world. Note: See Country and Group Definitions (p. 7) for the definitions of Asia, Asia38, Asia28, and APO21.

3.1 Shifting Growth Engines

Figure 3.3 presents a time-series level comparison of Japan, China, and the EU15 relative to the US, based on GDP at current market prices using exchange rates.¹⁰ The chart covers the entire observation period, 1970–2024, and the projection period of 2024–2035 (as indicated by the dotted lines). A snapshot comparison of all Asian countries is provided in Table 9.1. By this measure, Asia38's GDP was 37% and 47% higher than that of the US and the EU15, respectively, in 2024. Japan was the largest economy in Asia until 2008, when China overtook it, becoming both Asia's largest economy and the world's second largest, after the US, the following year. The turn in Japan's fortunes came in the early 1990s. After that, Japan's stagnation and the rapid growth of developing Asian economies eroded Japan's prominence in the regional economy.

Comparisons based on exchange rates appear arbitrary, as currency movements can be volatile and subject to substantial short-term fluctuations driven by speculative capital flows and government intervention. Furthermore, comparisons based on exchange rates often underestimate the size of a developing economy and, consequently, the perceived welfare of its residents. The scale of economic rankings in Asia changes dramatically when international price differences are considered.¹¹

10: The exchange rates used in this Databook are adjusted rates from the UN Statistics Division's National Accounts Main Aggregate Database (AMA); see Section 8.5.3 for details.

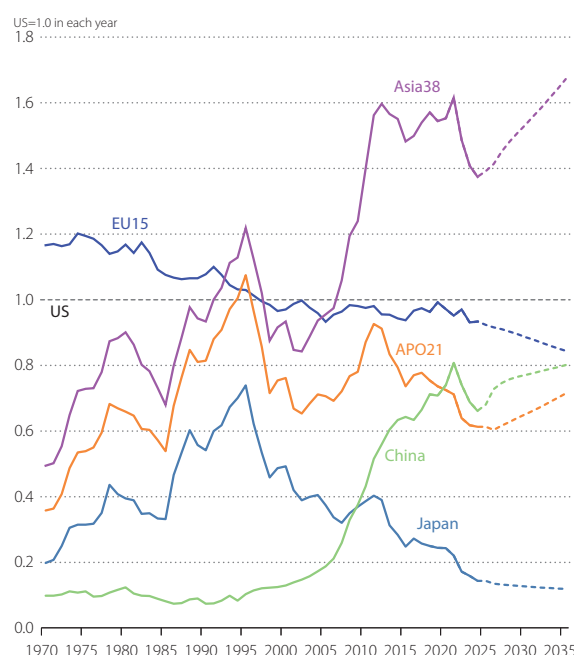


Figure 3.3 Asia and EU Relative to US GDP, Exchange Rates, 1970–2035

—Index of GDP at current market prices from 1970 to 2024 and the projection to 2035, using the exchange rate

Unit: Index (the US=1.0). Sources: Official national accounts in each country (including adjustments by APO-PDB) and the projections (Box 11). Notes: The projections are drawn with dotted lines. The 2026 exchange rate is based on the average of the January–May period and is assumed to remain constant for 2026 and beyond.

Figure 3.4 presents the price level index (PLI) for GDP, measured as the ratio of the PPP for GDP to the market exchange rate (footnote 10), where the PPP is based on the 2021 round of the ICP (World Bank 2024). The figure displays the PLI for 2021 (circles) and 2024 (vertical bars). It shows the extent to which market exchange rates fail to reflect each country's price level relative to the US. For all the economies shown, market exchange rates systematically understate domestic price levels in 2024, so that exchange-rate-based GDP understates their real economic size. While PPP is itself subject to criticisms, it accounts for international price differences and yields more accurate comparisons of relative size.¹²

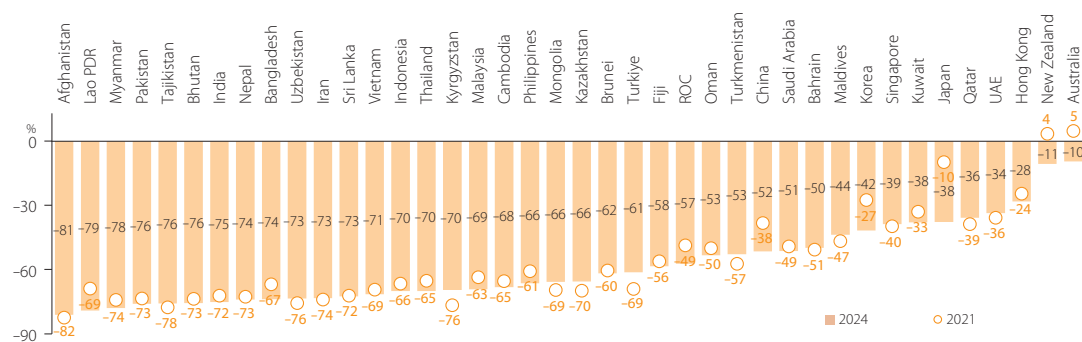


Figure 3.4 Price Level Index for GDP, 2021 and 2024

Unit: Percentage. Sources: World Bank (2024) for PPP and United Nations Statistics Division (UNSD) for the AMA rates. Notes: Economies shown are Asia38 plus Australia and New Zealand. The PLI is the ratio of PPP for GDP to the market exchange rate; the reference country is the US.

- 11: This is because exchange rates reflect trade sector bias (i.e., they are more influenced by the prices of traded goods and services than by those of non-traded goods and services) and thus do not necessarily correct the price differentials among countries. As developing economies tend to have relatively lower wages and, in turn, lower prices for non-traded goods and services, a unit of the local currency has greater purchasing power in the local economy than its market exchange rate would suggest. This pattern is known as the Balassa–Samuelson effect.
- 12: For economies operating under segmented exchange-rate regimes, such as Turkmenistan, a meaningful PLI requires pairing the PPP with the exchange rate that represents the same transactions; see PRN2616.

Box 1 Incorporating Central Asia: Coverage and Data Challenges

The five Central Asian economies (C5)—Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan—are added to the Databook for the first time in this edition. Endowed with substantial energy and mineral resources, these economies have attracted growing international attention and have become increasingly important to Asia, yet they have remained outside most cross-country productivity comparisons. KEO has progressively extended the APO-PDB to a broader set of Asian economies, and the inclusion of the C5 is part of this effort to broaden the geographic coverage of Asia38.

Constructing consistent long-term accounts for the C5 countries poses considerable challenges, as much of the Soviet-era data is available only through regional statistical yearbooks. Table 3.1 summarizes the availability of national accounts for each economy, separately for the production and expenditure sides. In recent years, official accounts and the UN estimates provide reasonable coverage, but earlier periods rely heavily on estimates derived from the World Bank and statistical yearbooks. Even where data are available, they are often incomplete: the production and expenditure sides are not always mutually consistent. Converting these estimates into internationally comparable terms raises further difficulties: in Turkmenistan, for example, the official exchange rate diverges substantially from the parallel market rate, and mining-sector value added has been scaled to align with natural-gas export values (Figure 3.12). While UN estimates offer a partial remedy, the APO-PDB necessarily applies its own adjustments to construct a coherent and temporally consistent series for the C5.

Table 3.1 Availability of National Accounts for C5, 1970–2024

Country\Year	1970	1980	1990	2000	2010	2020		
Kazakhstan	Prod.	1970	1980	1990				
	Exp.	1970	1980	1994				
Kyrgyzstan	Prod.	1970	1980	1990				
	Exp.	1970						
Tajikistan	Prod.	1970	1980	1990				
	Exp.	1970	1980	1995				
Turkmenistan	Prod.	1970	1980	1991	1992	2001		
	Exp.	1970	1980	1990	1993	2002		
Uzbekistan	Prod.	1970	1980	1987			2003	
	Exp.	1970	1980	1990	2001	2010		

Official national accounts (green dotted areas: GDP only)

UNSD National Accounts Estimates of Main Aggregates

Estimated using World Bank SNA/MPS accounts

Estimated based on World Bank GDP estimates and Statistical Yearbook

Sources: Official national accounts in each country, based on KEO's investigation of national statistical sources.

Despite these limitations, the C5 countries occupy a distinctive position within Asia. With a combined population of 81 million in 2024, they are far smaller than ASEAN6 (496 million), yet their per capita output is currently comparable (Figure 3.11). The composition behind this similarity is examined in Chapters 3 and 4.

Given these data limitations, the current estimates for the C5 countries should be regarded as preliminary. KEO intends to refine them in future editions as additional sources and analysis become available. This extension nonetheless enhances the comprehensiveness of the Databook and, by situating the C5 within a consistent regional framework, offers value to the broader Asian productivity comparisons.

After correcting for large international price differentials using PPPs (Figure 3.4), the relative size of Asia38 has expanded rapidly. Figure 3.5 compares real GDP levels across Asian regions using PPPs as the currency conversion factor, while Table 9.2 reports the corresponding estimates for individual economies. Compared with Figure 3.3, which uses market exchange rates, Figure 3.5 shows a larger share of the world economy accounted for by Asia. The size of Asia38 was 3.3 times that of the US in 2024 (compared

to 1.4 times using exchange rates) and overtook the US in 1973 (compared to 2007 using exchange rates). Figure 3.5 also shows the rapid expansion of the relative size of the SAARC economy (the regional grouping used in this edition to represent South Asia), of which India accounted for 80% in 2024. The size of the SAARC economy is expected to approach that of the EU15 by the early 2030s. ASEAN has also shown strength in its catch-up effort.

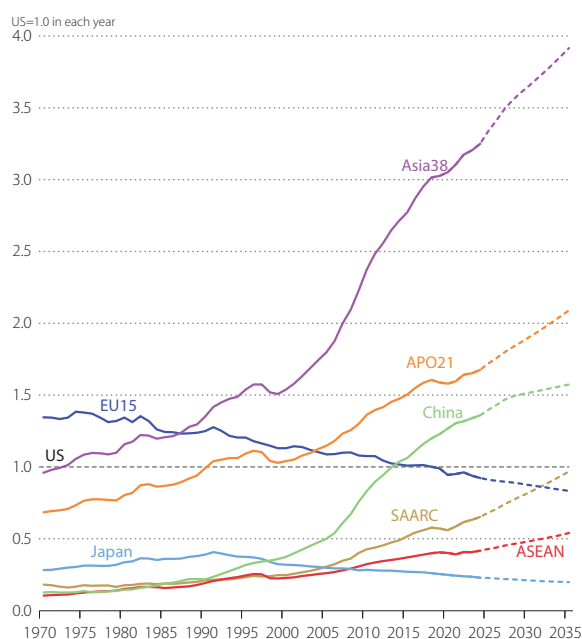


Figure 3.5 Asia and EU Relative to US GDP, PPP, 1970–2035

—Index of GDP at constant prices from 1970 to 2024 and the projection to 2035, using the 2021 PPP

Unit: Index (the US=1.0). Sources: Official national accounts in each country (including adjustments by APO-PDB) and the projections (Box 11). Note: The projections are drawn with dotted lines.

Figure 3.6 illustrates regional comparisons of real GDP growth, while Table 9.3 provides the corresponding numerical data. Since the mid-1990s, growth has been strongest in the CLMV and SAARC regions, while the C5 countries have grown at a more moderate pace. The higher growth of these poorer regions is projected to persist into the 2030s as they continue to catch up. In contrast, East Asia's growth rate is expected to decelerate to around 2% in the early 2030s, while CLMV and SAARC are projected to maintain rates above 5%.

Figure 3.6 GDP Growth by Region, 1970–2035

—GDP growth from 1970 to 2024 and the projection to 2035, using the 2021 PPP

Unit: Percentage (average annual growth rate). Sources: Official national accounts in each country (including adjustments by APO-PDB) and the projections (Box 11) for 2024–30 and 2030–35.

	1970 –1975	1975 –1980	1980 –1985	1985 –1990	1990 –1995	1995 –2000	2000 –2005	2005 –2010	2010 –2015	2015 –2019	2019 –2024	2024 –2030	2030 –2035
East Asia	4.89	5.51	5.93	5.84	5.45	4.45	5.24	7.10	5.38	4.78	3.59	3.35	2.31
ASEAN6	7.17	7.67	4.06	7.48	7.53	2.03	4.85	4.96	4.82	4.35	2.65	4.16	3.73
CLMV	2.87	3.75	3.43	2.81	7.11	7.90	7.84	7.45	5.54	6.68	4.39	6.12	5.87
SAARC	2.16	3.57	4.30	5.51	4.59	5.34	6.66	7.63	6.04	4.95	4.95	5.93	5.19
GCC	7.79	6.56	–6.23	2.81	3.32	3.78	5.21	3.67	4.97	2.15	2.97	3.49	2.79
C5	4.84	4.16	2.79	2.84	–9.45	2.07	10.03	8.31	5.50	4.28	3.75	4.74	4.06

These differences are leading to a shift in the contributions to Asia38's growth given in Figure 3.7. According to the projections, SAARC is expected to surpass East Asia as the leading contributor to Asian economic growth by 2032, emerging as the region's growth engine (left panel). Of the aggregate Asia average annual growth of 3.8% between 2019 and 2024, China accounted for 1.8 percentage points and India for 0.8; this gap, however, is closing rapidly, and India is projected to overtake China as Asia's largest growth driver in 2034 (center panel). ASEAN's contribution is expected to remain steady at around

0.6 percentage points (left panel), though within ASEAN, where Indonesia remains the largest contributor, the rising contributions of Vietnam and the Philippines stand out (right panel).

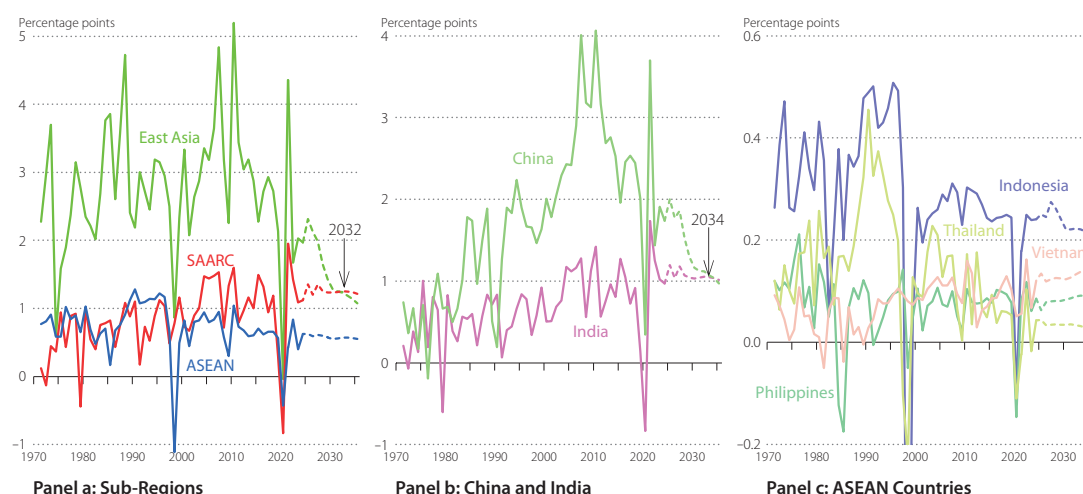


Figure 3.7 Drivers of Asia's Economic Growth, 1970–2035

Unit: Percentage point (average annual contributions to the Asia38 growth). Sources: Official national accounts in each country (including adjustments by APO-PDB) and the projections (Box 11). Note: The average annual GDP growth rate in Asia38 is 4.8% in 1970–1990, 5.4% in 1990–2010, 5.3% in 2010–2015, 4.6% in 2015–2019, and 3.8% in 2019–2024 (Table 9.3), and 3.7% in the projection period 2024–2035.

3.2 Per Capita Output and Catch-Up

Asia dominates the global population landscape, as shown in Figure 3.8. In 2024, the region was home to 59% of the world's population (56% for Asia38), making it the most populous region by far. Yet behind this aggregate figure lies striking diversity: as Table 9.4 highlights, eight economies had populations exceeding 100 million, while 14 economies in Asia38 had fewer than 10 million.

Performance comparisons based on the aggregate GDP discussed in Section 3.1 do not account for population and thus do not indicate individual well-being. Based on per capita GDP, which adjusts for the differences in population, China and India, two rising giants in the Asian economy, remain substantially less well-off than the US. Conversely, the Asian Tigers (Hong Kong, Korea, Singapore, and the ROC) are close to, or exceed, the US levels.

Figure 3.8 Asia in World Population, 2024

Unit: Percentage. Source: United Nations (2024). Note: See Section 8.5.1 for the population projections and Country and Group Definitions (p. 7) for the definitions of Asia, Asia38, Asia28, and APO21.

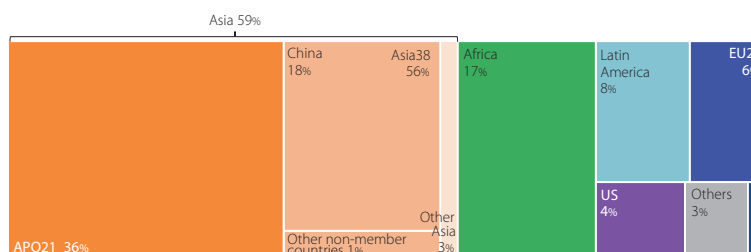


Figure 3.9 shows per capita GDP at current prices, using exchange rates as conversion rates, for Japan and the Asian Tigers relative to the US, with Australia and the EU15 included for comparison. A snapshot comparison is also presented in Table 9.5. Such snapshot comparisons can appear arbitrary; however, given the volatility of exchange rates—as illustrated by Japan's sharp peak in the mid-1990s—the rankings in Table 9.5 change considerably when PPPs are used (see Table 9.6).

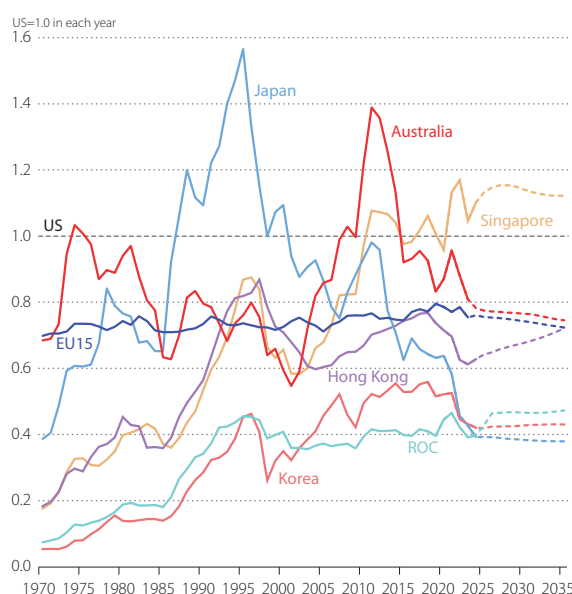


Figure 3.9 Per Capita GDP of Japan and Asian Tigers, Exchange Rate, 1970–2035

—Index of GDP at current market prices per person from 1970 to 2024 and the projection to 2035, using the exchange rate

Unit: Index (the US=1.0). Sources: Official national accounts in each country (including adjustments by APO-PDB) and the projections (Box 11). Notes: See Table 9.5 for figures. The projections are drawn with dotted lines (exchange rates are assumed unchanged after 2026).

Figure 3.10 and Table 9.6 present per capita GDP at constant prices using PPP, showing much less volatile relative values. Japan was the highest among Asian countries until Singapore overtook it in 1980—though the precise timing of such crossovers shifts with successive ICP benchmark revisions. Compared with Figure 3.9, the PPP-based picture highlights the dramatic development of the ROC and Korea,

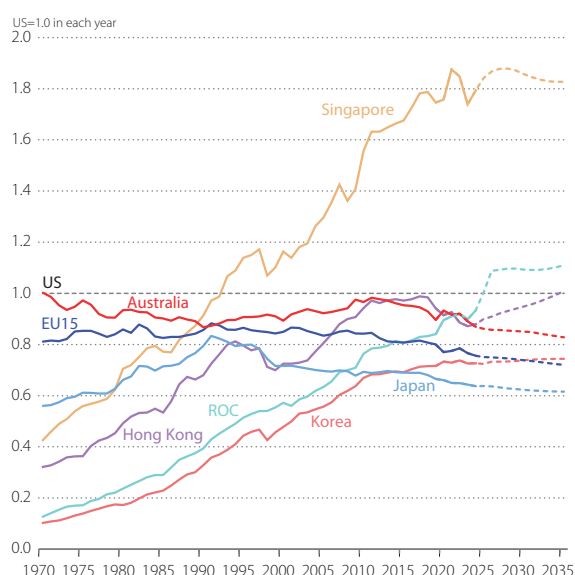
which overtook Japan in 2008 and 2014, respectively. These high per capita levels coexist with substantially undervalued exchange rates: according to the PLI for GDP (Figure 3.4), the exchange rates are undervalued by 42% in Korea and 57% in the ROC in 2024.

The relative performance of China and India, the two most populous countries in the world (1.41 and 1.45 billion in 2024, respectively), is much lower on a per capita basis. Their per capita GDP is 33% and 12% of the US in 2024, respectively, as shown in Figure 3.11. The income gap between the US and most Asian countries remains sizable. The levels achieved by Asia38, CLMV, and SAARC were 24%, 13%, and 11% of the US, respectively,¹³ indicating significant room for catch-up.¹⁴ The C5 countries follow a distinctive path: starting from a relatively high level in 1970, they contracted sharply after the dissolution of the Soviet Union, then recovered to a middle-income position comparable to ASEAN6.

Figure 3.10 Per Capita GDP of Japan and Asian Tigers, PPP, 1970–2035

—Index of GDP at constant prices per person from 1970 to 2024 and the projection to 2035, using the 2021 PPP

Unit: Index (the US=1.0). Sources: Official national accounts in each country (including adjustments by APO-PDB) and the projections (Box 11). Notes: See Table 9.6 for figures. The projections are drawn with dotted lines.



13: The informal economy is large in developing countries, and the official GDP may not fully reflect its size. For example, Roubaud and Nghiem (2022) point to a significant underestimation of household businesses in Vietnam, arguing for a possible 20% underestimation, although the extent of their inclusion in the official GDP remains unclear.

Figure 3.11 Per Capita GDP of China, India, ASEAN, C5, and SAARC, 1970–2035

—Index of GDP at constant prices per person from 1970 to 2024 and the projection to 2035, using the 2021 PPP

Unit: Index (the US=1.0). Sources: Official national accounts in each country (including adjustments by APO-PDB) and the projections (Box 11). Notes: See Table 9.6 for figures. The projections are drawn with dotted lines.

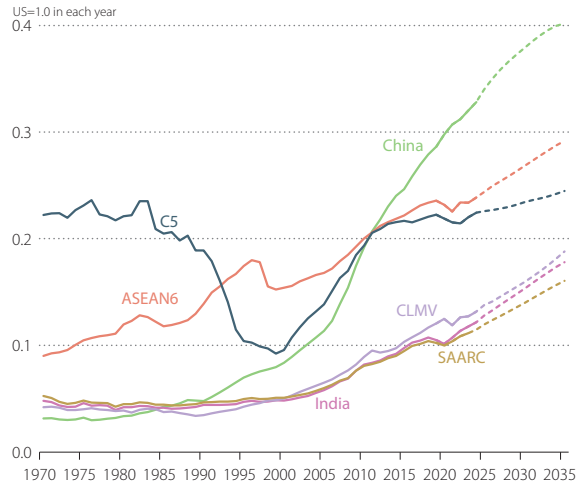


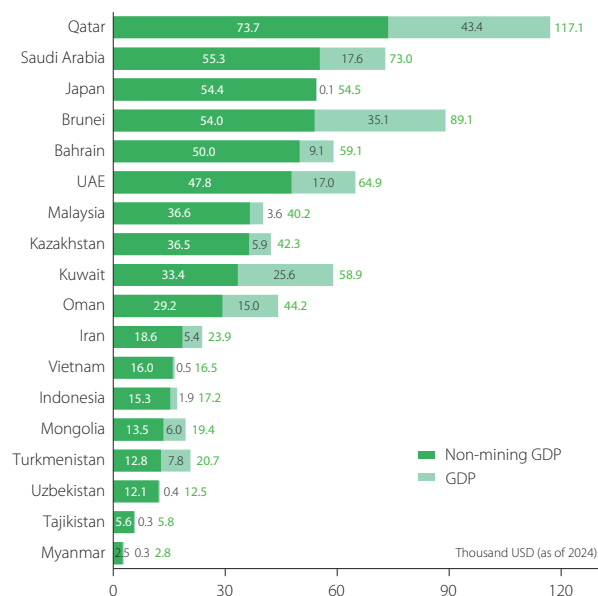
Table 9.6 also presents individual figures for resource-rich economies. At first glance, figures for 1970, and to a lesser extent those for 1990, suggest that these economies had per capita GDP levels remarkably higher than those of Japan and the US. However, measuring GDP as an indicator of production is misleading for these countries, as it erroneously includes proceeds from the liquidation of mineral and energy resources (MER) stocks as part of the income flow. In other words, GDP overstates net income in resource-exporting countries because it does not account for the depletion of their MER assets. To provide a rough indication of the extent of distortion, Figure 3.12 compares per capita GDP, excluding mining-sector production, in 2024.¹⁵ The non-mining GDP per person in the GCC countries, such as Bahrain, Saudi Arabia, and the UAE, is almost identical to Japan's level of USD 54,400, although total GDP per capita is much larger. In Mongolia, Iran, and Turkmenistan, the mining industry's share of GDP is around 20–40%, which is at the lower end of the range seen in the GCC (Figure 7.5). In other resource-rich Asian countries, the mining sector accounts for less than 10%.

Catching up to the per capita GDP levels of advanced economies is a long-term process that can take several decades. The vast literature on convergence generally shows a negative relationship between a country's income level and its pace of convergence—poorer economies tend to grow faster, although exceptions exist (see Imam and Temple (2025) for a recent discussion). By adopting proven practices and technologies from more advanced economies, less developed countries can often accelerate their per capita

Figure 3.12 Per Capita Non-Mining GDP of Resource-Rich Countries, 2024

—GDP per person, using the 2021 PPP

Unit: Thousand USD (as of 2024). Source: Official national accounts in each country, including adjustments by APO-PDB. Note: The change in mining-sector GDP share from 2000 to 2024 is provided in Figure 7.5.



14: In some economies, per capita GDP may understate welfare. In the ROC and Japan, Gross National Income (GNI) consistently exceeds GDP, with fluctuations within 8%. The Philippines is a notable exception driven by remittances from overseas Filipino workers, its GNI exceeded GDP by more than 10% in the 2010s, though the gap has narrowed in recent years (Figure 7.1).

15: See Section 8.2.6 for the consideration of MER in the APO-PDB, and Box 9 (Section 5.7) for the impact of including it as a factor of production in TFP measurement in Saudi Arabia.

GDP growth. However, as their income levels converge with those of advanced economies, their growth rates tend to decelerate. Figure 3.13 plots initial per capita GDP levels against average annual growth rates over the last half-century, from 1970 to 2024. The left panel covers countries with per capita GDP below USD 20,000 in 2024; the right panel, those at or above that level. The general negative relationship between growth rates and initial income is quite clear.

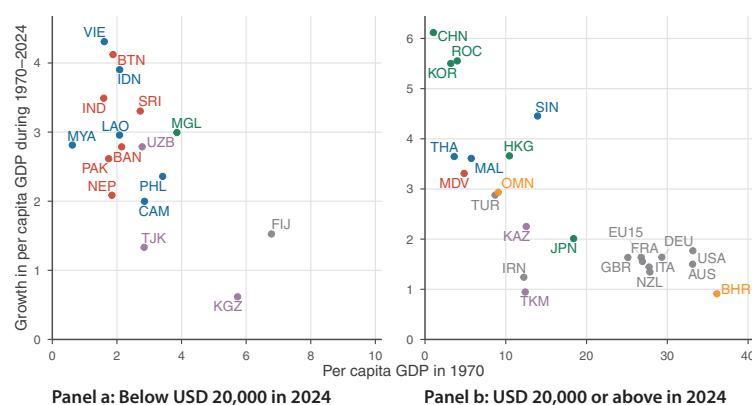


Figure 3.13 Initial Per Capita GDP Level and Growth, 1970–2024

—Growth in GDP at constant prices, using the 2021 PPP (in constant 2024 prices)

Unit: Percentage (average annual growth rate) for the vertical axis and thousand USD (Per capita GDP at constant prices) for the horizontal axis. Source: Official national accounts in each country, including adjustments by APO-PDB.

Table 3.2 summarizes Figure 3.13 by grouping countries into four initial per capita income brackets in 1970 (groups B1–B4). The speed of catch-up with the US is defined as the difference between each country's average annual growth rate of per capita real GDP and the US's (groups A1–A6). It shows that many Asian economies have closed the per capita real GDP gap with the US over the last five decades, though some have been more successful than others. One can see that the initial economic level does not fully explain the catch-up process. If it did, the table would have been populated diagonally from top left to bottom right. Singapore and Hong Kong, for example, have high initial incomes in B2 but grew very fast in A2 and A3, respectively, while Cambodia, Nepal, and Pakistan have a low initial income in B4 and grew slowly in A4. Fiji, by contrast, started at a middle-income level in B2 but has shown little catch-up (A5), illustrating that a favorable starting point does not guarantee convergence.

Table 3.2 Country Groups by Initial Economic Level and Catching-Up Pace, 1970–2024

—Level and growth of per capita GDP at constant prices, using the 2021 PPP

Per capita GDP level in 1970, relative to the US	Average annual rate of catch-up to the US during 1970–2024					
	(A6) < -1%	(A5) -1% ≤ < 0%	(A4) 0% ≤ < 1%	(A3) 1% ≤ < 2%	(A2) 2% ≤ < 3%	(A1) 3% ≤
(B1) 60% ≤	Brunei, Kuwait, Qatar, Saudi Arabia, UAE	Australia, Bahrain, EU15, France, Germany, Italy, New Zealand, UK				
(B2) 20% ≤ < 60%		Fiji, Iran, Turkmenistan	Japan, Kazakhstan	Hong Kong, Oman, Turkiye	Singapore	
(B3) 10% ≤ < 20%	Afghanistan, Kyrgyzstan		Philippines	Malaysia, Maldives, Mongolia, Thailand		ROC
(B4) 0% ≤ < 10%		Tajikistan	Cambodia, Nepal, Pakistan	Bangladesh, India, Lao PDR, Myanmar, Sri Lanka, Uzbekistan	Bhutan, Indonesia, Vietnam	China, Korea

Source: Official national accounts in each country, including adjustments by APO-PDB. Notes: Catch-up rates are the difference in per capita real GDP growth between each country and the US, 1970–2024. Table 6.1 provides another grouping of countries.

3.3 Sources of the Per Capita Output Gap

To better understand the diverse economic performance across Asian economies, per capita GDP can be decomposed into two key components: labor productivity (measured as real GDP per worker) and the employment rate (the ratio of workers to the total population). This section examines each components in terms of their gap relative to the US in 2024.¹⁶ Figure 3.14 illustrates the percentage-point differences in the per capita GDP gap, decomposed into contributions from the labor productivity gap and the employment rate gap. Most Asian countries exhibit a significant per capita GDP gap relative to the US, and their lower labor productivity is the primary source of this gap. In the Asian region, the CLMV, with its younger population structure (Figure 3.17 in Box 2), and East Asia have higher employment rates than the US, which has a modest but positive effect in narrowing the gap.

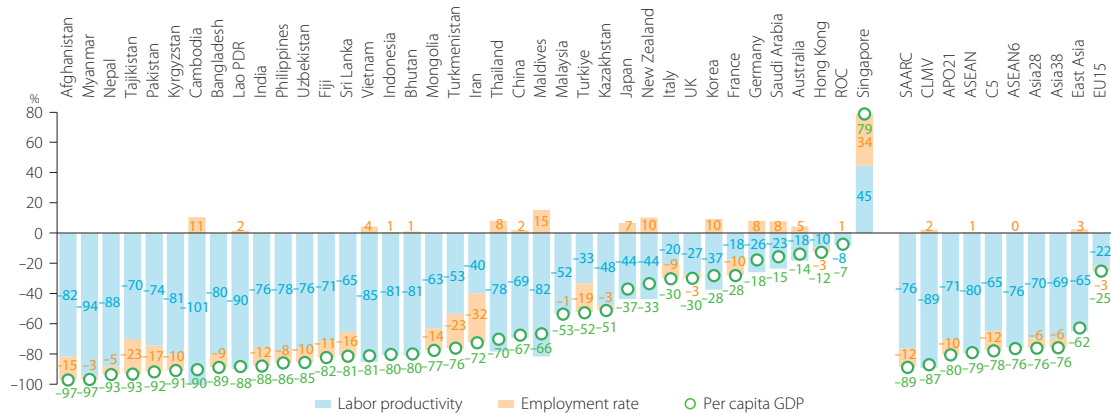


Figure 3.14 Sources of Per Capita GDP Gap, 2024

—Differentials in per capita GDP at constant prices, using the 2021 PPP, relative to the US

Unit: Percentage. Source: Official national accounts in each country, including adjustments by APO-PDB.

Figure 3.15 presents the two components of per capita GDP growth from 2010 to 2024: labor productivity growth and changes in the employment rate.¹⁷ Around two-thirds of the Asia38 economies saw an increase in their employment rates during this period. However, in most Asian economies, improvements in labor productivity contributed more to per capita GDP growth than did employment growth. The C5 countries are a notable exception: a decline in their employment rate held back per capita GDP growth over this period, reflecting the high labor productivity but lower employment that distinguishes them from ASEAN6.

16: The gap in a country x 's per capita GDP relative to the US is decomposed into the sum of the gaps in labor productivity and employment rate with respect to the US, as in:

$$\underbrace{\ln \left(\frac{GDP_x^t}{POP_x^t} \right) - \ln \left(\frac{GDP_{US}^t}{POP_{US}^t} \right)}_{\text{Gap of per capita GDP}} = \underbrace{\ln \left(\frac{GDP_x^t}{EMP_x^t} \right) - \ln \left(\frac{GDP_{US}^t}{EMP_{US}^t} \right)}_{\text{Gap of labor productivity}} + \underbrace{\ln \left(\frac{EMP_x^t}{POP_x^t} \right) - \ln \left(\frac{EMP_{US}^t}{POP_{US}^t} \right)}_{\text{Gap of employment rate}}$$

where POP_x^t is population of country x in period t and EMP_x^t is the number of employed workers.

17: Country x 's per capita GDP is decomposed into the product of its labor productivity and employment rate, as in:

$$\underbrace{\ln \left(\frac{GDP_x^t}{POP_x^t} \right)}_{\text{Per capita GDP}} = \underbrace{\ln \left(\frac{GDP_x^t}{EMP_x^t} \right)}_{\text{Labor productivity}} + \underbrace{\ln \left(\frac{EMP_x^t}{POP_x^t} \right)}_{\text{Employment rate}} \quad \text{where } POP_x^t \text{ is population of country } x \text{ in period } t \text{ and } EMP_x^t \text{ is the number of employed workers.}$$

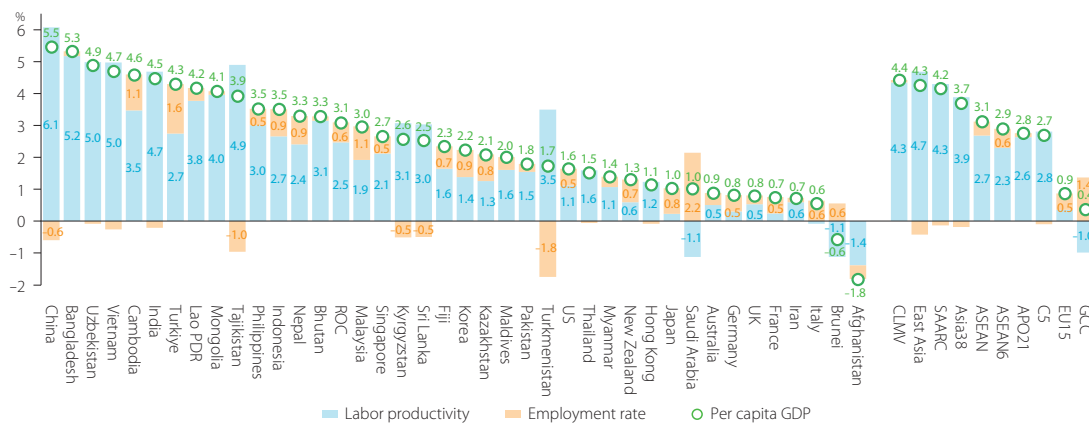


Figure 3.15 Sources of Per Capita GDP Growth, 2010–2024

—Growth in per capita GDP at constant prices, using the 2021 PPP

Unit: Percentage (average annual growth rate). Source: Official national accounts in each country, including adjustments by APO-PDB.

Box 2 Demographic Dividend in Asian Countries

The population age structure is of interest from both supply and demand perspectives in relation to economic growth. Figure 3.16 shows the shares of the dependent groups in 2024 (aged 0–14 on the y-axis and 65-and-over on the x-axis). Richer economies, clustered toward the lower right, combine a high share of the elderly with a relatively low share of the young, whereas less-developed economies show the opposite pattern. This suggests that demographic transition tends to run parallel with economic progress, although the direction of causation is uncertain. As countries move from high to low mortality and fertility rates, the demographic transition produces a “boom” generation larger than those immediately before and after. As this boom generation gradually works through a nation’s age structure, it produces a “demographic dividend” of economic growth as people reach their prime working years.

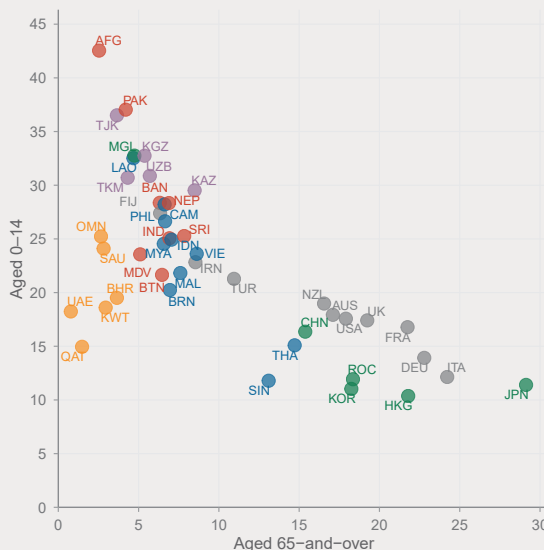


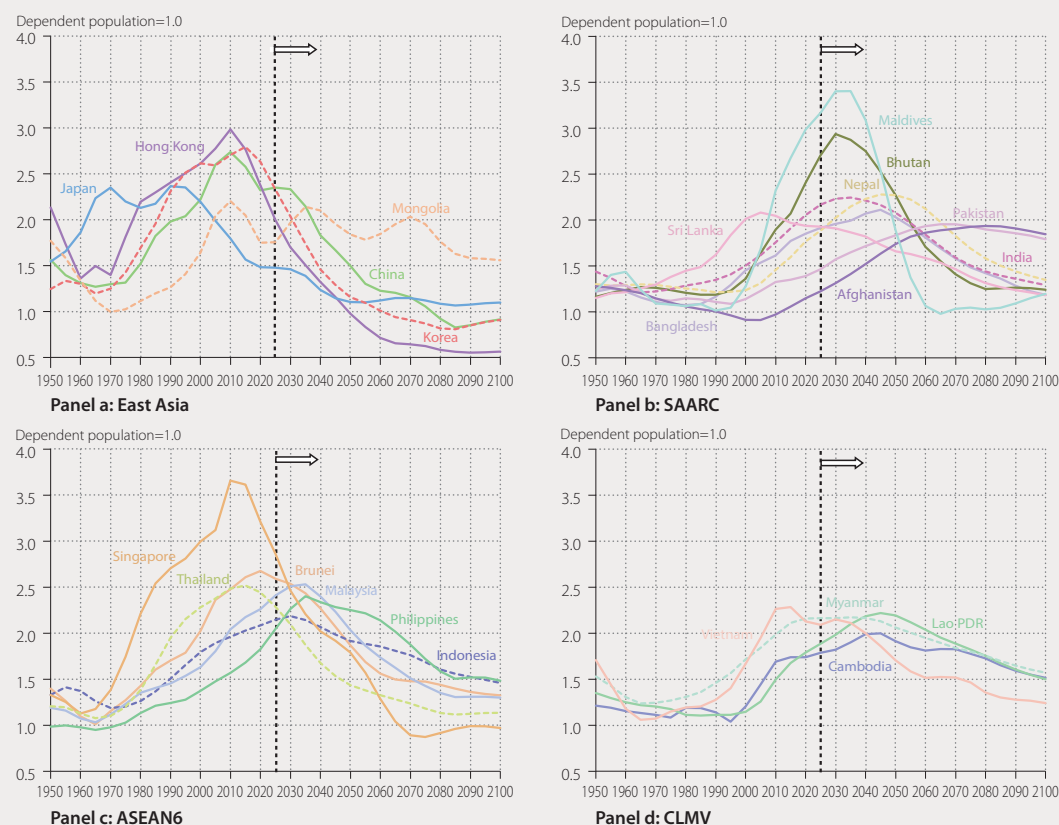
Figure 3.16 Proportion of the Dependent Population, 2024

Unit: Percentage. Sources: Population census and official national accounts in each country.

Figure 3.17 and Figure 3.18 track changes in the working population (aged 15–64) relative to the dependent population (aged 0–14 and 65-and-over) by country and country group, respectively. The higher the ratio, the more favorable its demography for economic growth. Japan was poised to capitalize on the demographic dividend in the 1960s, when its GDP grew at close to 10% per year. Similarly, China, Hong Kong, Korea, Singapore, and Thailand were poised for such a dividend in the 2000s and 2010s. Considering population projections, some ASEAN countries, such as Myanmar and Indonesia, are expected to experience such a dividend during the 2020s and 2030s, while SAARC countries (except Sri Lanka) will have to wait until the late 2030s and 2040s.

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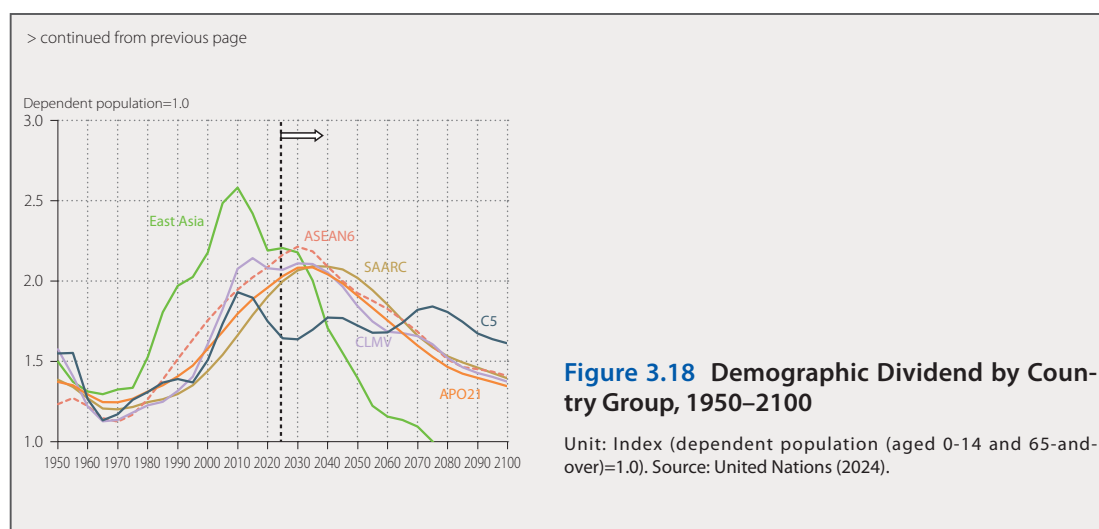
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**Figure 3.17** Demographic Dividend by Country, 1950–2100

Unit: Index (dependent population (aged 0-14 and 65-and-over)=1.0). Source: United Nations (2024).

The realization of this dividend is not guaranteed. Favorable demographics can produce a wealth-creation cycle only when combined with appropriate health, labor, financial, human capital, and growth-enhancing economic policies. These complementary factors cannot be taken for granted; they must be cultivated to realize the demographic dividend. As Chapter 5 shows, the contribution of labor to economic growth has been smaller than that of capital and TFP in most countries (Figure 5.16). This suggests that the negative effect of population aging may be more limited than often assumed, provided that robust growth in capital and TFP is sustained. Among the regional groupings, the C5 countries stand out for retaining a comparatively young age structure well into the future, in contrast to East Asia, where the dividend has already passed its peak (Figure 3.18). Understanding the demographic shift and its implications remains relevant for economic projections, providing valuable foresight for policymaking. In the projection of economic growth to 2035 (Box 11, Section 7.2), changes in demographic structure play an important role in forecasting not only hours worked for the entire economy but also qualitative changes in labor inputs.

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Changes in female employment have played a crucial role in shaping labor market dynamics. Figure 3.19 illustrates the expansion of the female employment share from 1970 to 2024. In many countries—such as the Asian Tigers, Afghanistan, Pakistan, and Saudi Arabia—this expansion has been substantial over the past half-century. Despite this progress, considerable growth potential remains across Asian economies. In some economies, such as Iran, Pakistan, and Türkiye, female employment shares remain significantly lower than in the US, at 14%, 22%, and 30% in 2024, respectively. This limited participation of women in the workforce is associated with their low total employment rates (Figure 3.20).

Figure 3.20 presents cross-country comparisons of employment rates in 1970, 2000, and 2024, based on each country's labor statistics. Employment is defined to include employees, own-account workers, and contributing family workers. The countries with the fastest catch-up in Group A1 (Table 3.2)—namely, China, Korea, and the ROC—have recorded sharp increases in employment rates over the past five decades. Several countries in A2, such as Singapore, also experienced substantial improvements. In contrast, countries that have not succeeded in narrowing the gap generally exhibited only modest growth in employment rates during this period.

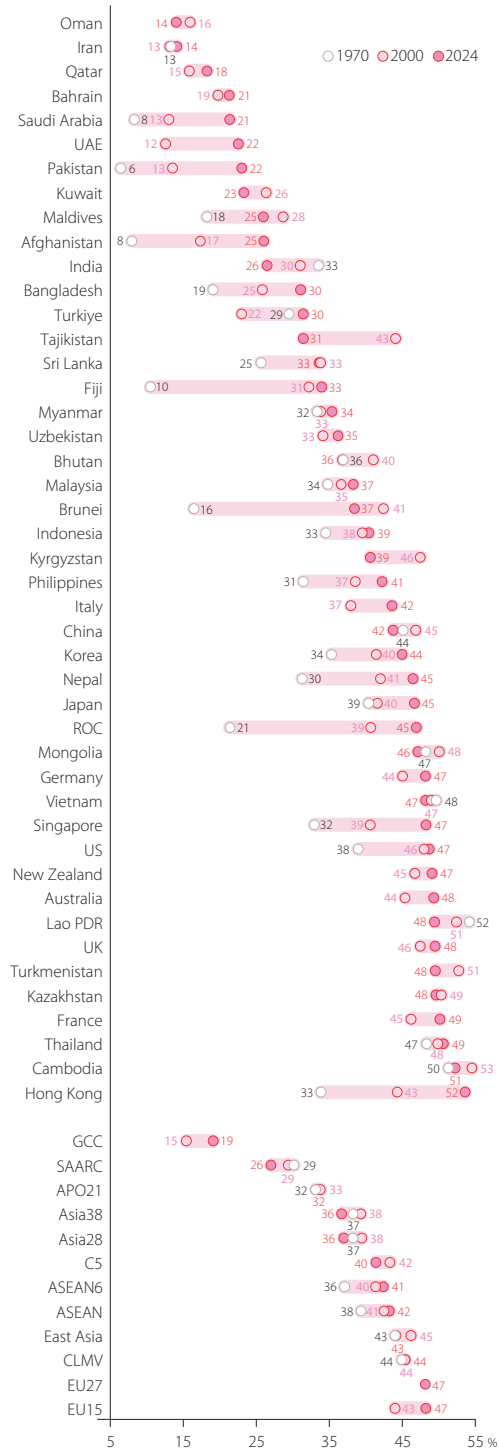


Figure 3.19 Female Employment Share, 1970, 2000, and 2024
—Share of female workers in total employment

Unit: Percentage. Sources: Population census and labor force survey in each country (including adjustments by APO-PDB), ILOSTAT database for the C5 countries, the GCC countries (excluding Saudi Arabia), Australia, the EU15, France, Germany, Italy, New Zealand, and the UK; The EU Labor Force Survey (Eurostat) for the EU27.

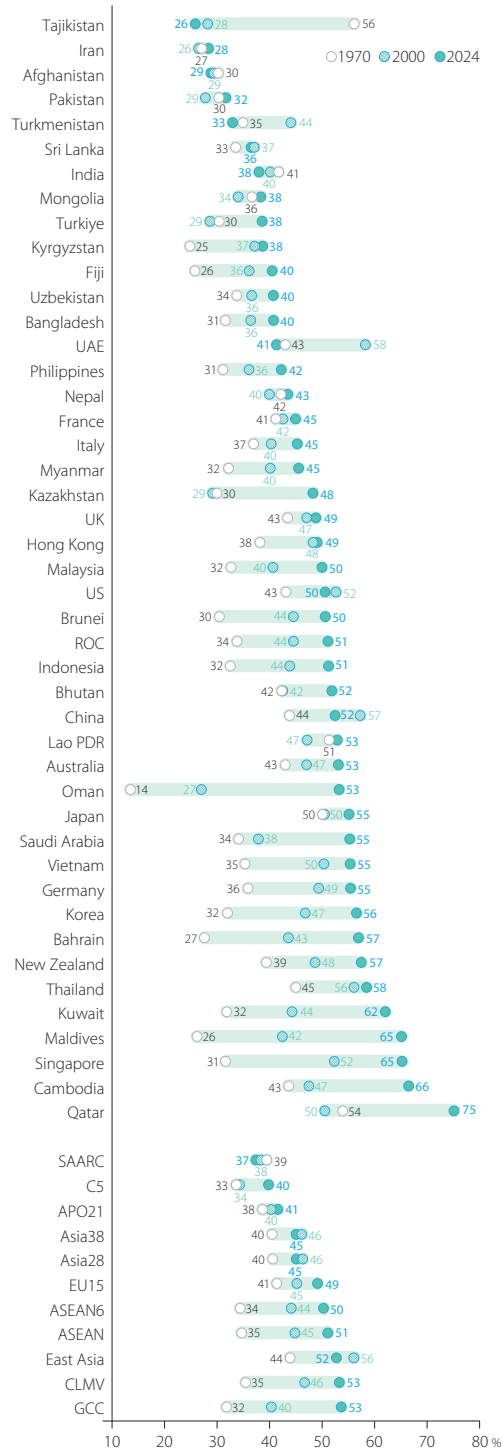


Figure 3.20 Employment Rate, 1970, 2000, and 2024
—Ratio of employment to the total population

Unit: Percentage. Sources: Employment and population data by national statistical offices in each country, including adjustments by APO-PDB.

4 Growth and Structure of Final Demand

Highlights

- In 2024, Asia38 invested 34% of GDP, well above the US (22%) and the EU15 (21%), while its household consumption share fell to 50% from 56% in 1970. Investment rates were especially high in East Asia, at 36% of GDP. Among lower-income economies undertaking large infrastructure programs, the Lao PDR stands out, with investment reaching 52% of domestic final demand, driven by foreign-financed hydropower development.
- Investment composition varies widely across Asia. While most economies still concentrate on construction, knowledge-based assets are becoming more important: Singapore records the highest combined ICT and R&D share (39% of GFCF), followed by the US (36%), Japan (32%), Malaysia, Korea, and the ROC. These differing profiles point to different sources of future productivity growth.
- Household consumption has been the main driver of demand-side growth, contributing about half of Asia38's growth from 2010 to 2024, with investment adding nearly 40%. As incomes rise, demand for income-elastic goods and services is expected to expand further.
- Asia's trade is increasingly organized around task-wise production networks—"Factory Asia"—in which parts and components cross borders repeatedly. Economies such as the ROC, Malaysia, Thailand, the Philippines, and, more recently, Vietnam are deeply integrated, exhibiting high machinery export and import shares, whereas most South Asian economies remain largely outside these networks.
- Trade structures differ sharply across Asia. Singapore and the ROC have become major net exporters (36% and 13% of GDP in 2024), while China's once-large surplus has narrowed to under 3% as domestic demand grew. Resource exporters run surpluses with low import ratios, and several South Asian economies, such as Nepal and Bhutan, post large trade deficits.

GDP is defined and measured in the SNA using three approaches: production by industry, expenditure on final demand, and income to factor inputs.¹⁸ Demand-side decompositions of GDP are vital in understanding the quality of economic growth. This chapter derives some characteristics of economic growth in Asian countries from an analysis of the expenditure side of GDP.

4.1 Structure of Final Demand

Figure 4.1 shows compares of final demand shares of nominal GDP among country groups, covering 1) household consumption, including consumption of non-profit institutions serving households (NPISHs), 2) government consumption, including individual consumption such as education and healthcare, 3) investment or, in national accounts terminology, gross fixed capital formation (GFCF) plus changes in inventories, and 4) net exports (exports minus imports). Country groups exhibit

18: In theory, the three approaches to measuring GDP are accounting identities. They should yield the same result, but in practice, they differ due to factors such as measurement error and the size of the informal sector. Based on the APO-PDB Metadata Survey 2026 for APO member economies (Section 8.1.1), Japan is exceptional in determining GDP from the expenditure side (the expenditure-side estimate is based on commodity flow data, in which production/shipment data at a detailed product classification are used as control totals). In other countries, GDP is estimated from the production side (value-added in industries). Some countries define an additional item, "statistical discrepancy," as the difference between production-based GDP and the sum of final expenditures. In the Databook, the statistical discrepancy is mainly attributed to household consumption. Readers should keep in mind that this treatment can affect the measured shares of final demand.

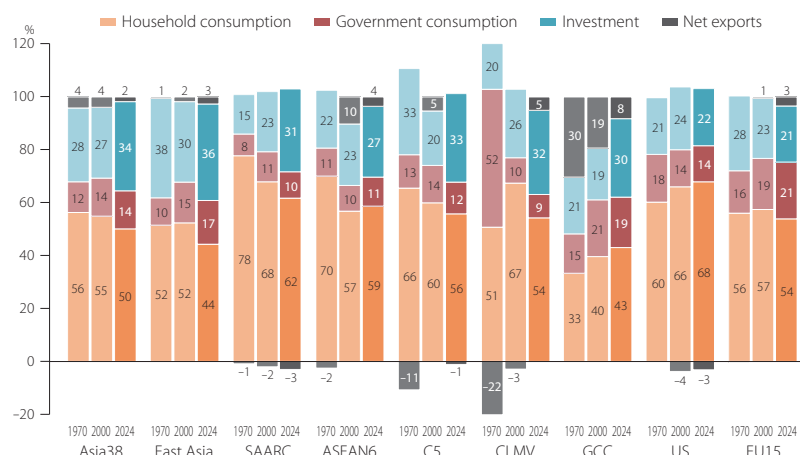
distinctive features in their final-demand composition, reflecting their stages of development and industrial structures.

In economies undergoing rapid transformation, the share of household consumption is more volatile and tends to decline. Figure 4.1 gives final-demand shares by region for 1970, 2000, and 2024, and Table 9.7 provides the numbers. The household consumption share of Asia38 fell from 56% in 1970 to 50% in 2024, and most Asian regions show a similar decline as investment expanded. The drop has been largest in SAARC and ASEAN6. However, SAARC continues to record the highest share in Asia at 62%, while the resource-rich GCC is an exception, with its share rising to 43%. The US has moved in the opposite direction, with its consumption share climbing to 68%. The counterpart to Asia's lower consumption share is its high investment rate—34% of GDP in Asia38 in 2024, well above the 22% and 21% in the US and the EU15. Net exports, meanwhile, have always been the most volatile component.

Figure 4.1 Final Demand Shares by Region, 1970, 2000, and 2024

—Shares of final demand to GDP at current market prices

Unit: Percentage. Source: Official national accounts in each country, including adjustments by APO-PDB. Notes: Final demand shares in the country groups are computed using the PPPs for GDP. Household consumption includes the consumption of NPISHs. Investment consists of GFCF plus changes in inventories.



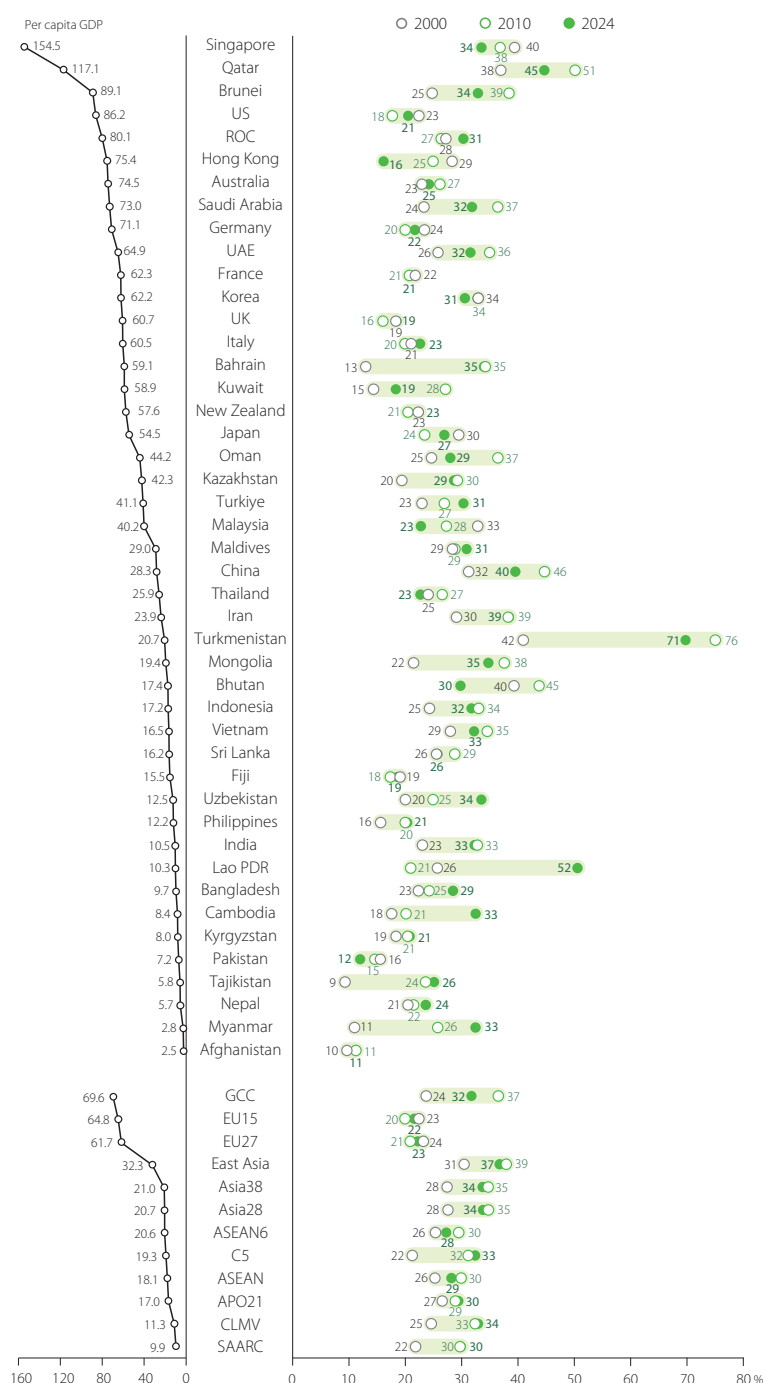
While regional averages exhibit certain characteristics, there are significant variations among countries. Figure 4.2 presents the cross-country comparisons of investment shares in domestic final demand for 2000, 2010, and 2024. Countries are listed in descending order of per capita GDP, as shown in the reference chart on the left of Figure 4.2. In the top group by per capita GDP, investment expansion is notable in some GCC countries and Brunei. However, a decline in the investment share has been evident in Singapore and Hong Kong since 2000. On the other hand, the least developed Asian countries, such as Bangladesh, Cambodia, Lao PDR, Myanmar, and Mongolia, have steadily increased their share of investment. Notably, Lao PDR recorded an exceptionally high investment share of 52% in 2024, reflecting large-scale hydropower development financed largely by foreign capital, as the country positions itself as an electricity exporter to neighboring economies.¹⁹ However, investment share remains stagnant, especially in Pakistan, the Philippines, and Fiji, where the current per capita GDP is below USD 16,000.

19: This trend is exemplified by mega-projects on the Mekong mainstream, such as the 1,285 MW Xayaburi plant—the first dam on the lower Mekong, in commercial operation since 2019 and exporting about 95% of its output to Thailand—and the 1,460 MW Luang Prabang plant, under construction since 2020 for completion around 2027, with power destined for Thailand and Vietnam. Such foreign-financed, export-oriented development—driven in part by decarbonization demand in more advanced economies—raises questions of economic sustainability, including rising external debt and the potential misallocation of resources toward capital-intensive projects with long payback periods.

Figure 4.2 Investment Share by Country, 2000, 2010, and 2024

—Share of investment in domestic final demand at current market prices

Unit: Percentage. Source: Official national accounts in each country, including adjustments by APO-PDB. Notes: The investment includes GFCF plus changes in inventories. The domestic final demand is the sum of investment and household and government consumption. The reference chart on the left shows per capita GDP at market prices in 2024, using the 2021 PPP (thousand USD).



Box 3 Reassessing India's Demand Structure

India's Ministry of Statistics and Programme Implementation (MoSPI) revised the base year of its national accounts from 2011–12 to 2022–23 in February 2026. According to MoSPI (2026), the revision incorporates new data sources, including administrative records such as the Goods and Services Tax (GST) database and survey data from the Annual Survey of Unincorporated Sector Enterprises (ASUSE) and the Periodic Labour

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Force Survey (PLFS). Methodological improvements include the adoption of double deflation for agriculture and manufacturing, greater integration of Supply and Use Tables (SUT), and the implementation of the COICOP 2018 classification for household consumption. The integration of SUTs also enables a more systematic reconciliation between the production and expenditure accounts, eliminating the statistical discrepancy in the benchmark estimates. These changes aim to improve the measurement of economic activity and better reflect structural changes in India's economy.

One notable outcome of the rebasing is a substantial downward revision in household consumption. Table 4.1 compares the revisions in final demand between the two benchmark estimates for fiscal year 2022–23. Private final consumption expenditure was revised down by about 16 trillion rupees (–10%) compared with estimates based on the previous series. As a result, the share of household consumption in GDP declines by several percentage points. According to MoSPI, the revision reflects improvements in household sector measurement and the adoption of updated data sources and classifications. In addition, the expanded use of commodity flow methods and the integration of SUTs may have reduced reliance on household consumption as a residual balancing item in earlier estimates, thereby reallocating part of expenditure to intermediate use in the production accounts.

Table 4.1 India's Final Demand Structure, FY2022–23: Revised vs. Previous Series

	a. Revised		b. Previous			
	(B2022–23)	share (%)	(B2011–12)	share (%)	diff. (a-b)	rev. (%)
1. Final consumption expenditure	178,137	68.2	192,855	71.7	–14,718	–7.6
1a. Households and NPISHs	149,228	57.1	165,279	61.5	–16,050	–9.7
1b. General government	28,909	11.1	27,576	10.3	1,333	4.8
2. Gross capital formation	89,875	34.4	90,404	33.6	–528	–0.6
2a. Gross fixed capital formation (GFCF)	84,535	32.4	83,960	31.2	575	0.7
2b. Changes in inventories	1,734	0.7	2,999	1.1	–1,265	–42.2
2c. Valuables	3,607	1.4	3,445	1.3	162	4.7
3. Net export	–6,837	–2.6	–9,606	–3.6	2,769	–28.8
3a. Export of goods and services	62,787	24.0	62,524	23.3	263	0.4
3b. Import of goods and services	–69,624	–26.7	–72,130	–26.8	2,507	–3.5
4. Statistical discrepancy	0	0.0	–4,748	–1.8	4,748	–
5. GDP at market price	261,176	100.0	268,905	100.0	–7,728	–2.9
(Income side)						
i1. Compensation of employees (COE)	86,223	33.0	89,101	33.1	–2,878	–3.2
i2. Gross operating surplus and mixed income	152,120	58.2	158,055	58.8	–5,935	–3.8
i21. Consumption of fixed capital (CFC)	36,823	14.1	31,292	11.6	5,531	17.7
i22. Net operating surplus and mixed income	115,297	44.1	126,763	47.1	–11,466	–9.0

Unit: Billion Rupees. Note: The statistical discrepancy is eliminated in the new series through the integration of SUTs.

The revision also changes the relative importance of final demand components. While gross fixed capital formation was revised only modestly in level terms, its share in GDP increases from 31.2% to 32.4%, implying a demand structure that is less consumption-driven and more investment-oriented than suggested by the previous series. This shift also implies that regional aggregates for SAARC may be somewhat less consumption-driven than previously indicated (Figure 4.1). Although the higher share of investment does not necessarily imply faster future growth, it points to a relatively larger role for capital formation in the recent economic expansion.²⁰

The revised national accounts series will eventually be extended retrospectively, with official estimates expected to be released by MoSPI by December 2026. At present, however, the revised series is available only from fiscal year 2022–23 onward. For this Databook, provisional backward estimates are constructed using simple adjustment assumptions based on the previously published series. In practice, the benchmark level for 2011–12 is maintained, and the differences observed between the two benchmark estimates for fiscal year 2022–23 are apportioned proportionally across final demand components over the period from 2011–12 to 2022–23. These provisional estimates will be replaced by MoSPI's official backward series in the next edition of the Databook.

While the main driver of economic growth from the demand side is the expansion of household consumption, the impact of investment growth is also evident in Asian countries. Figure 4.3 shows the decomposition of economic growth by final demand from 2010 to 2024.²¹ Of the 4.6% average annual growth rate in Asia38 during this period, 2.3 percentage points came from household consumption, followed closely by 1.7 percentage points from investment. Although investment maintains a relatively high share in GDP, household consumption—closely tied to income growth—plays a more fundamental role in sustaining domestic demand. Given rising incomes, demand for income-elastic goods and services is likely to continue expanding in many Asian economies. The contribution of government consumption to growth is small in most Asian economies, though some—such as Kuwait, Korea, and Bahrain—have higher shares.

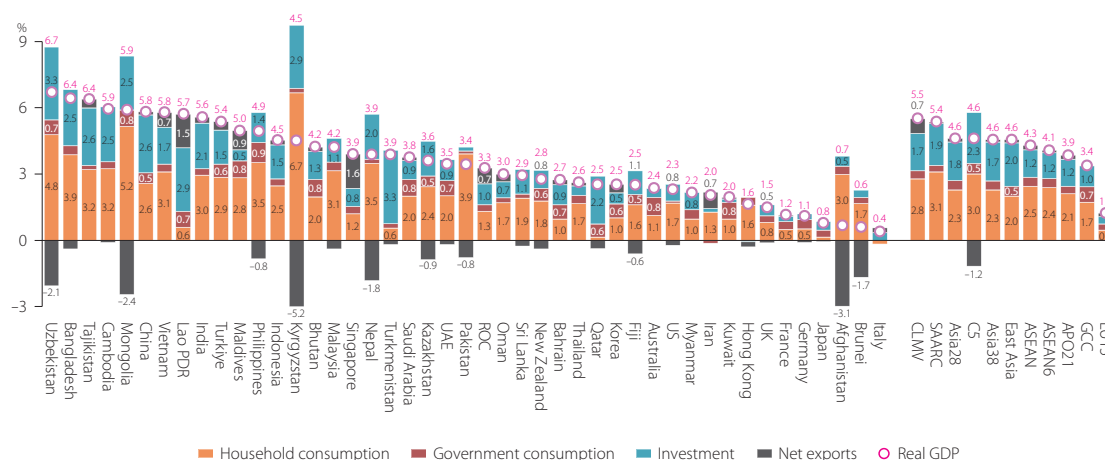


Figure 4.3 Final Demand Contributions to Economic Growth, 2010–2024

—Growth in GDP at constant prices and final demand contributions

Unit: Percentage (average annual growth rate). Source: Official national accounts in each country, including adjustments by APO-PDB.

While net exports contribute modestly to growth in most economies (Figure 4.3), this understates the role of trade: much of Asia's commerce takes the form of intra-regional flows of intermediate goods, where large gross exports and imports largely offset each other. Deepening regional and global integration thus remains central to Asian growth, a theme taken up in Box 4.

20: The rebasing also affects the income side: an upward revision to consumption of fixed capital, alongside a decline in net operating surplus, reflects both a reallocation within capital income and the downward revision to value added. Together, these imply a lower Jorgensonian ex-post nominal rate of return to capital in the revised series. The measurement of the ex-post rate of return is detailed in Section 8.2.7, with estimates for Asian economies reported in Table 8.11.

21: The translog quantity index is adopted for calculating the growth in real GDP. Using this index, the growth in real GDP can be decomposed into the contributions by the four components of final demand:

$$\ln \left(\frac{GDP^t}{GDP^{t-1}} \right) = \sum_i \underbrace{\left(\frac{1}{2} \right) \left(s_i^t + s_i^{t-1} \right) \ln \left(\frac{Q_i^t}{Q_i^{t-1}} \right)}_{\text{Contribution of final demand } i} \quad \text{where } Q_i^t \text{ is the quantity of final demand } i \text{ in period } t \text{ and } s_i^t \text{ is the expenditure share of final demand } i \text{ in period } t.$$

Thus, the real GDP growth may diverge from the official estimates or those presented in Table 9.3.

Box 4 Economic Frameworks in the Indo-Pacific: CPTPP, IPEF, and RCEP

East Asia, including Northeast Asia and Southeast Asia, is the region where international production networks (IPNs) have developed most extensively. Despite rising geopolitical tensions and growing concerns over economic security, the region has continued to deepen economic integration through a series of large-scale regional frameworks.

The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) was signed by 11 countries (Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam) in March 2018 and went into effect with six signatories in December 2018. The last ratifying country, Brunei, joined in July 2023, at which point the agreement took effect for all initial negotiating members. In the same month, the UK formally signed the CPTPP accession agreement, marking CPTPP's global expansion. CPTPP is a high-quality FTA with high-level liberalization commitments and advanced international rulemaking. The agreement has increasingly functioned as a platform for middle-sized economies seeking to support a rules-based trading regime.²²

The Regional Comprehensive Economic Partnership (RCEP) agreement is built on the core of ASEAN economic integration. ASEAN, along with six other countries, negotiated the agreement. However, at the last moment, India withdrew, and thus, 15 countries (10 ASEAN Member States, Australia, China, Japan, Korea, and New Zealand) signed in November 2020.²³ ASEAN took the initiative in designing and implementing the agreement. Although the level of liberalization and the rule-making aspects of RCEP fall short of those of the CPTPP, it covers the entire East Asian international production network. The agreement also provides an institutional framework for regular policy coordination among members, helping to reduce policy uncertainty and support a rules-based trading regime.

A more recent initiative is the Indo-Pacific Economic Framework (IPEF), launched by the US in 2022. The initiative was initially motivated in part by US efforts to promote “friend-shoring” and reduce dependence on China. However, given the reluctance of many Asian economies to choose sides, negotiations gradually shifted toward areas of practical regional cooperation. Unlike conventional FTAs, IPEF does not include market-access commitments, largely reflecting US domestic political constraints. Thus, IPEF cannot be called an FTA by the GATT/WTO definition. Negotiations formally began with 13 countries, including the US, Japan, Australia, New Zealand, Korea, India, and seven ASEAN countries (Brunei, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam).²⁴ The three ASEAN economies not participating in the IPEF—Myanmar, Lao PDR, and Cambodia—are also among those most dependent on exports to China.

IPEF and RCEP are sometimes regarded as initiatives led by the US and China, respectively. However, the substantial overlap in membership suggests that many Asian economies view the two frameworks as complementary rather than mutually exclusive. The exceptions are that IPEF includes the US, India, and Fiji, while RCEP includes China, Cambodia, Lao PDR, and Myanmar. Because differences in productivity are one of the key forces shaping the international division of labor, the distribution of labor productivity among member economies provides useful insight into the type of integration embodied by each framework. Figure 4.4 depicts the labor productivity portfolios of IPEF and RCEP members. Despite their substantial overlap in membership,

22: Whether a country can join the CPTPP is often regarded as a test of its ability to undertake and implement policy reforms. Following the UK's accession (the 12th member, December 2024), nine economies have applied to join: China, the ROC, and Ecuador (2021); Costa Rica and Uruguay (2022); Ukraine (2023); Indonesia (2024); and the Philippines and the UAE (2025). Korea has accelerated domestic consultations toward membership but has not yet submitted a formal application. Under CPTPP accession procedures, applicants must demonstrate full compliance with the agreement's rules and obtain unanimous approval from all existing members.

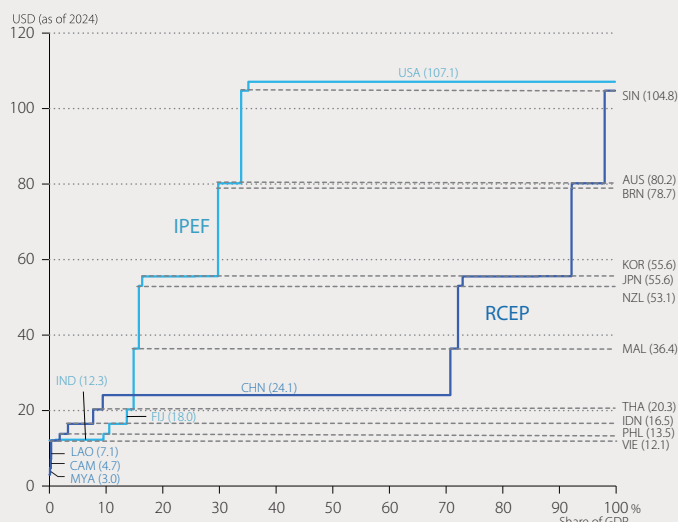
23: The agreement entered into force in Indonesia and the Philippines in 2023, completing participation by all 15 signatories. Myanmar's ratification has been complicated by questions surrounding the acceptance of the instrument submitted following the 2021 political changes, although ASEAN records the agreement as having entered into force for Myanmar in 2022. The framework is also moving toward enlargement: Hong Kong applied for accession in 2022, and several economies, including Bangladesh and Sri Lanka, have expressed interest in joining.

the two frameworks exhibit distinct productivity profiles: IPEF spans a wider range, anchored by the presence of the US, while RCEP is weighted toward China and the emerging economies of East and Southeast Asia. The overlapping membership may help reduce policy uncertainty and support a rules-based trading regime.

Figure 4.4 Labor Productivity Portfolios of IPEF and RCEP Countries, 2024

—GDP per hour (using 2021 PPP), reference year 2024, and GDP share (using exchange rate)

Unit: USD (labor productivity) per hour and percentage (share of market-price GDP at current prices). Source: Official national accounts and APO Productivity Database 2026. Notes: Numbers in parentheses are the per-hour labor productivity level in 2024. Overlapped countries are blacklined.



4.2 Consumption and Investment

This section examines the composition of domestic final demand in Asia, with particular attention to household consumption, foreign investment, and the structure of capital formation. Demographic structure is one factor that helps explain cross-country differences in consumption behavior. Figure 4.5 shows that economies with a relatively high dependent population ratio (aged 0–14 and 65 or over) tend to exhibit a higher household consumption share in domestic final demand.²⁵ This pattern is particularly evident among lower-income economies such as Afghanistan, Bangladesh, Cambodia, Nepal, Pakistan, and the Philippines. The figure also illustrates changes between 2015 and 2024. While several lower-income economies experienced declines in both dependency ratios and consumption shares, the relationship is less clear over time. In several higher-income economies—notably Singapore, the ROC, Korea, and Japan—dependency ratios increased as populations aged, yet household consumption shares declined. These contrasting movements suggest that demographic structure helps explain differences in consumption patterns across economies, but changes in consumption shares are also influenced by income levels, saving behavior, and other structural factors.

24: The framework is structured around four pillars: (i) trade, (ii) supply chain resilience, (iii) clean economy, and (iv) fair economy. Agreements for the latter three pillars were concluded in 2023–2024, while the trade pillar stalled, partly over labor provisions. Following the return of the Trump administration in 2025, the future role of the IPEF became increasingly uncertain. Given the absence of market-access commitments, doubts have emerged about the framework's long-term viability. Notably, Fiji's entry in May 2022 as the 14th member marked a symbolic expansion of the framework as the first Pacific Island nation to join.

25: Household consumption shares are also influenced by other components of domestic final demand, particularly investment and net exports. Export-oriented economies may therefore exhibit relatively low household consumption shares despite relatively high-income levels or aging populations. This is particularly relevant for highly export-oriented economies such as Singapore and the ROC (Figure 4.11).

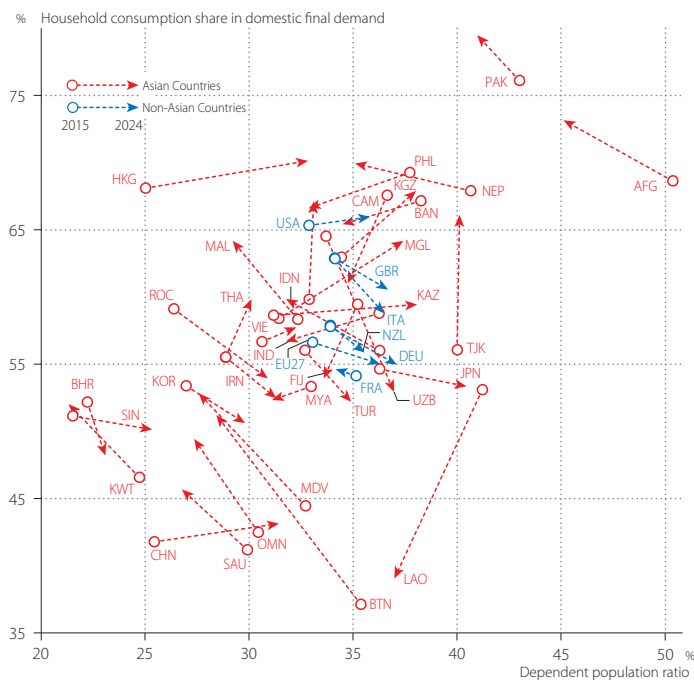


Figure 4.5 Dependent Population Ratio and Consumption Share, 2015 and 2024

Unit: Percentage. Sources: Population data by the national statistical office in each country, World Bank (2025), official national accounts in each country, and AQUALI 2026. Note: The dependent population comprises people aged 0-14 and those aged 65 and over.

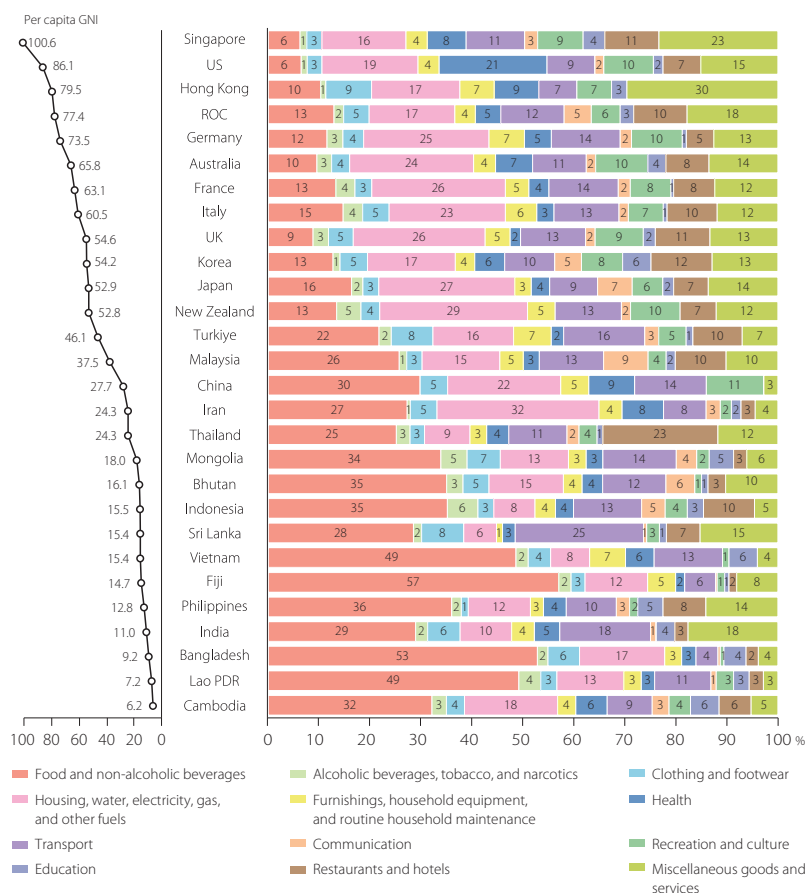
The composition of household consumption differs substantially across economies, reflecting differences in income levels, prices, and institutional arrangements. Figure 4.6 broadly illustrates Engel's Law: lower-income economies allocate a larger share of expenditure to food and non-alcoholic beverages, while this share declines as incomes rise. In contrast, higher-income econo-

mies—including the Asian Tigers and Japan—tend to devote larger shares of household expenditure to housing, utilities, and transportation. Beyond this general pattern, substantial cross-country heterogeneity remains. Education accounts for 4–6% of household consumption in Bangladesh, Cambodia,

Korea, Mongolia, and the UK are 2023, 2009, 2022, 2022, 2023, 2005, 2016, and 2023, respectively. The reference chart on the left shows per capita GNI in 2024, using the 2021 PPP for household consumption, the reference year 2024 (thousand USD).

Figure 4.6 Household Consumption Shares by Purpose, 2024

Unit: Percentage. Source: Official national accounts in each country. Notes: For data on Hong Kong, transportation includes communication; recreation and culture include hotels; miscellaneous goods and services include restaurants. For data on China, food and non-alcoholic beverages include alcoholic beverages, tobacco, and narcotics; transportation includes communication; recreation and culture include education. For data in Vietnam, transportation includes communication. The observation periods for Cambodia, Fiji, France, Germany, Italy, Lao PDR, Vietnam, and the UK are 2023, 2009, 2022, 2022, 2023, 2005, 2016, and 2023, respectively. The reference chart on the left shows per capita GNI in 2024, using the 2021 PPP for household consumption, the reference year 2024 (thousand USD).



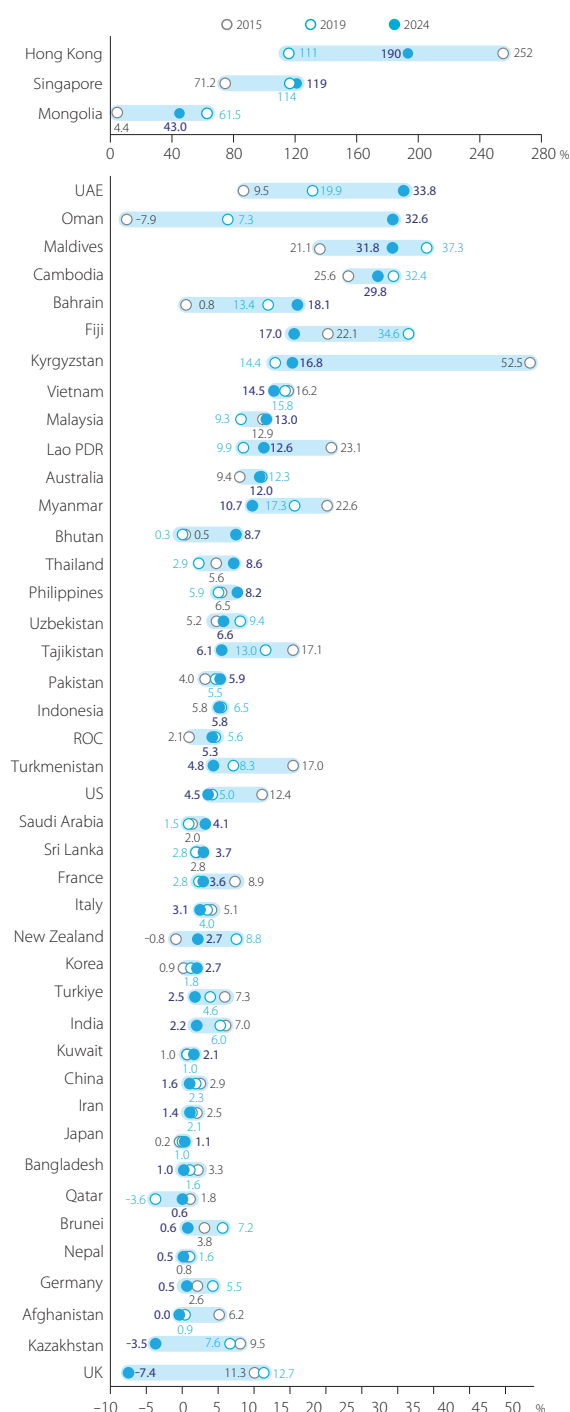
the Philippines, Singapore, and Vietnam, while health expenditure reaches 21% in the US. Such differences reflect not only consumer preferences but also institutional arrangements, including the scope of public provision and the role of private markets. In lower-income economies such as Bangladesh and Cambodia, relatively high education expenditure may reflect both limited public provision and rising demand for private educational services as incomes increase.

The role of foreign direct investment (FDI) in domestic investment differs considerably across Asian economies. Figure 4.7 shows FDI inflows as a percentage of gross fixed capital formation (GFCF) in 2015, 2019, and 2024. Especially in developing economies, FDI can contribute not only to capital formation but also to human resource development and technology transfer. In 2024, FDI inflows exceeded 10% of GFCF in 14 economies in Asia³⁸. They were particularly large in the two global financial hubs, Hong Kong (190% of GFCF) and Singapore (119%)—where ratios exceeding 100% reflect their role as conduits for capital that is often channeled onward rather than invested domestically—as well as in Mongolia (43%), the UAE (34%), Oman (33%), the Maldives (32%), Cambodia (30%), and Bahrain (18%). At the other end of the spectrum, Japan (1.1%), Bangladesh (1.0%), Qatar (0.6%), Brunei (0.6%), and Nepal (0.5%) recorded very low FDI inflows. These large differences suggest that reliance on FDI reflects not only income levels but also differences in economic structure, openness, and the role of multinational enterprises.

Although FDI is generally considered less volatile than portfolio capital during periods of financial stress, recent experience shows that it can nevertheless change sharply. Figure 4.7 indicates substantial variation across economies between 2015 and 2024. For example, following Sri Lanka's external debt default in April–May 2022, net FDI inflows fell to around 1.2% of GFCF, well below those of many regional peers, suggesting that FDI recovery remained limited in the aftermath of the crisis. These patterns highlight that while FDI can be an important source of investment financing and technology transfer, its contribution varies widely across economies and over time.

Figure 4.7 FDI Inflows, 2015, 2019, and 2024
—FDI inflows as a percentage of GFCF at current prices

Unit: Percentage. Sources: United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2025*, and APO Productivity Database 2026.



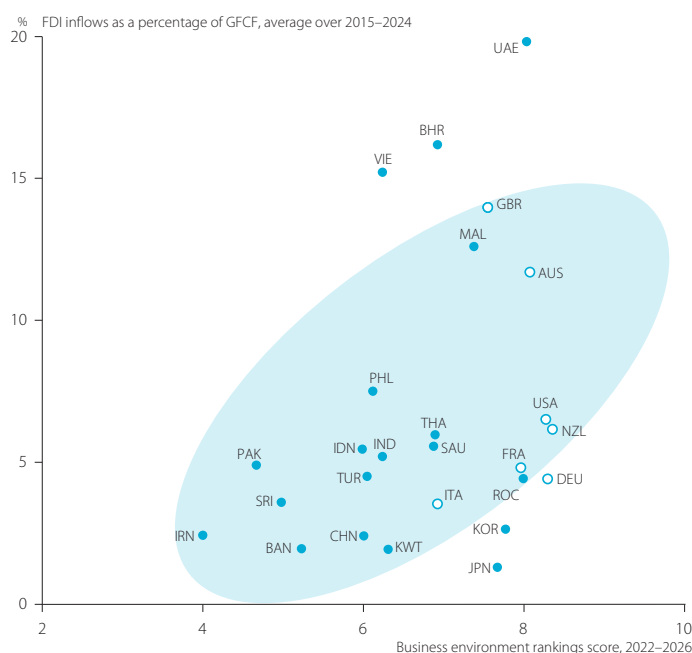


Figure 4.8 Business Environment and FDI Inflow Ratio, 2015–2024

—FDI inflows as a percentage of GFCF at current prices and business environment score

Unit: Percentage for the vertical axis and score for the horizontal axis. Sources: United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2025*, The Economist, The Economist Intelligence Unit 2021, 2022, and 2023, and APO Productivity Database 2026. Note: The evaluation period is 2022–2026 for Australia, China, Germany, Indonesia, Iran, Japan, Korea, Kuwait, Türkiye, Saudi Arabia, Singapore, Sri Lanka, and the UK.

A favorable business environment is often regarded as an important factor in attracting foreign direct investment (FDI). For lower-income economies, improving the business climate can be a key policy objective for attracting external capital and

technology, while for middle- and high-income economies it can help sustain competitiveness and investment inflows. Based on the Economist Intelligence Unit's (EIU) business environment rankings, Singapore and Hong Kong are among the highest-ranked economies in Asia. Figure 4.8 compares business environment scores with average FDI inflows, expressed as a percentage of GFCF, over 2015–2024 for the economies shown in Figure 4.7, excluding those with exceptionally high FDI inflows exceeding 20% of GFCF.

The figure suggests a positive association between the quality of the business environment and FDI inflows. Economies such as the UAE, Bahrain, Malaysia, and Australia combine relatively favorable business environments with comparatively high FDI inflows, whereas Iran, Pakistan, Bangladesh, and Sri Lanka tend to record both weaker business-environment scores and lower FDI inflows. However, the relationship is far from deterministic. Japan, for example, records one of the lowest FDI ratios despite a relatively favorable business environment, while several economies attract substantially more FDI than their business-environment scores alone would predict. These patterns suggest that business conditions are an important determinant of FDI, but geography, market size, industrial structure, regulatory frameworks, and other country-specific factors also play significant roles in shaping investment inflows.

Investment comprises distinct asset types, ranging from structures to ICT equipment and R&D. Figure 4.9 shows the nominal GFCF composition across five categories of produced assets for the Asia28 economies and regions in 2024.²⁶ Countries are arranged in ascending order of the GFCF share in GDP, as shown in the reference chart at the bottom of the figure. For most Asian economies, particularly those with GFCF exceeding 30% of GDP, investment remains heavily concentrated in construction assets, including dwellings, non-residential buildings, and other structures. This pattern is especially evident among developing economies, where rapid capital accumulation continues to rely primarily on physical infrastructure.

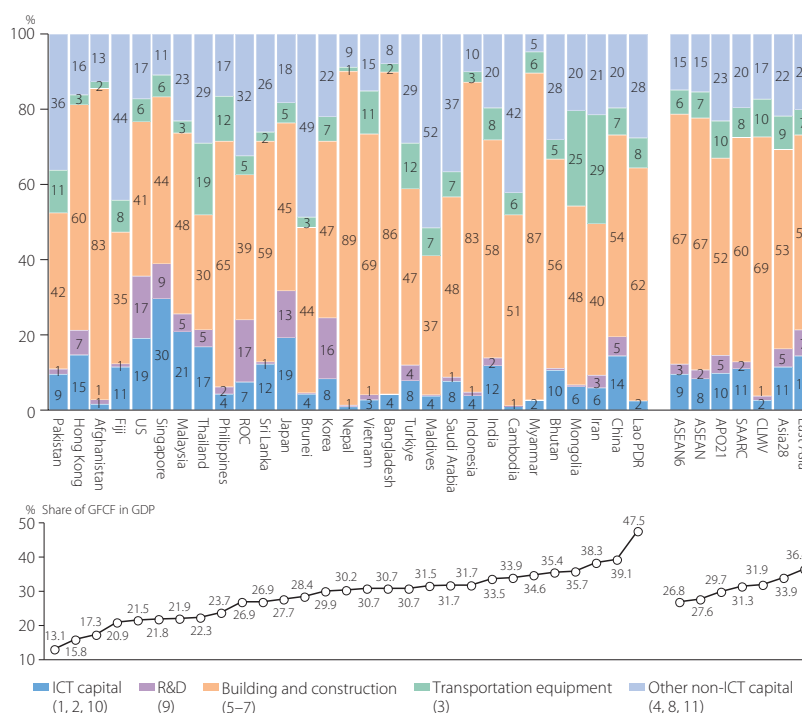
26: The investment data by type of asset includes the estimates for countries where data is unavailable in their official national accounts (Section 8.2). Although the GFCF estimates are constructed from 11 classifications of produced assets (Table 8.5), they are aggregated into five asset groups for this figure. ICT capital is defined as ICT hardware, communications equipment, and computer software.

In contrast, ICT capital and R&D account for a growing share of investment in several advanced economies. Singapore records the highest combined share of ICT and R&D investment (39% of GFCF), followed by the US (36%), Japan (32%), Malaysia (25%), Korea (24%), the ROC (24%), Thailand (21%), and Hong Kong (21%).²⁷ These differences suggest that economies with similar overall investment rates may nevertheless exhibit markedly different investment profiles. While some economies continue to emphasize construction-led capital formation, others increasingly allocate investment toward knowledge-based and digital assets, reflecting different stages of development and potentially different sources of future productivity growth.

Figure 4.9 Investment Share by Type of Produced Asset, 2024

—Share of GFCF at current prices by type of produced assets

Unit: Percentage. Source: APO Productivity Database 2026. Notes: Numbers in parentheses of the assets correspond to the code of produced assets, defined in Table 8.5. ICT capital is defined as ICT hardware, communications equipment, and computer software. See Sections 8.1.4 and 8.1.5 for data on software and R&D investment, respectively.



4.3 Trade and Production Networks

One of the defining features of Asia's economic development has been the emergence of cross-border production networks. Understanding trade patterns therefore provides important insights into how economies participate in the regional division of labor. Traditionally, international specialization was largely industry-based: production activities were conducted within national borders, and countries specialized in broad industries according to their technological capabilities and factor endowments. Trade was therefore predominantly one-way, with countries exporting final products from industries in which they held a comparative advantage. Since the late 1980s, however, this pattern has increasingly shifted toward a task-wise division of labor. In the machinery industry, in particular, production processes can be fragmented into numerous stages involving parts, components, and assembly activities that are performed across multiple economies. Initially developed through export-processing zones, these arrangements evolved into increasingly sophisticated production networks, later conceptualized as global value chains (GVCs).

Figure 4.10 illustrates this transformation by plotting the export and import shares of machinery and transport equipment for three subperiods: 1990–1999, 2000–2009, and 2010–2024. Economies deeply integrated into production networks tend to exhibit high shares of both machinery exports and imports,

27: Box 7 (Section 5.3) discusses the ICT (hardware and software) and R&D capital stocks and their implications. See Section 8.1.4 for the revision history of the estimates on ICT software investment in APO-PDB.

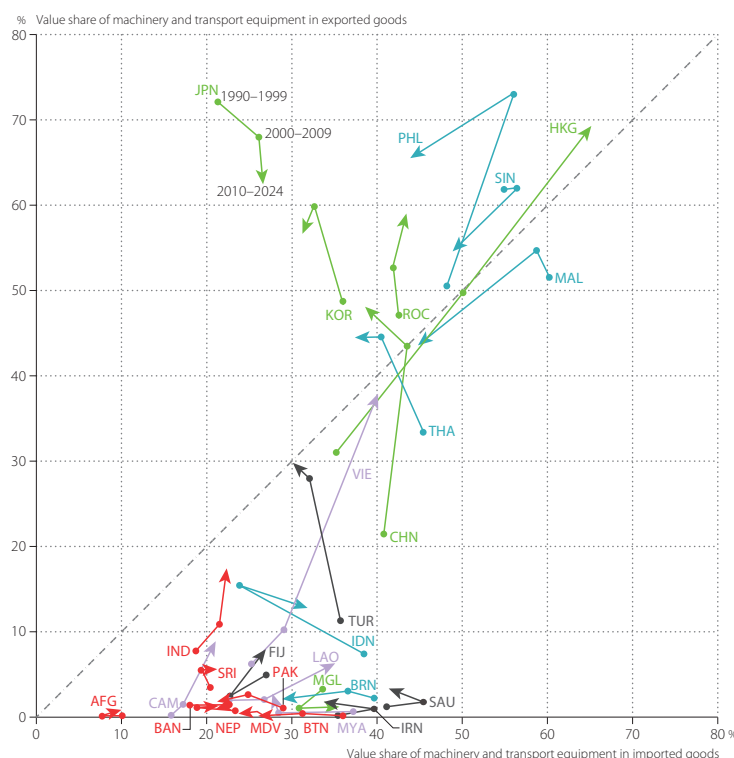


Figure 4.10 Export and Import Shares of Machinery, 1990–2024

—Average value share at current prices over three subperiods: 1990–1999, 2000–2009, and 2010–2024

Unit: Percentage. Source: APO Productivity Database 2026. Notes: The three points of the arrowed lines indicate the average shares over three subperiods: 1990–1999, 2000–2009, and 2010–2024, as illustrated for Japan. The arrows are colored by region: East Asia (green), SAARC (red), ASEAN6 (blue), CLMV (purple), and Other Asia (black).

reflecting the two-way movement of intermediate goods and components. Japan and Korea are located above the 45-degree line, with machinery exports exceeding imports, yet both maintain substantial machinery imports. Malaysia, Thailand, the Philippines, Singapore, and the ROC exhibit high shares of both exports and

imports, indicating deep participation in regional production networks. Hong Kong also records high shares, although part of this trade reflects entrepôt activities.

This pattern differs from the intra-industry trade commonly observed among advanced economies. In Europe and North America, intra-industry trade often reflects horizontal product differentiation, such as exchanges of different brands of similar products. In Asia, by contrast, a substantial share of trade consists of parts and components moving repeatedly across borders at different stages of processing. The emergence of these production networks gave rise to the concept of “Factory Asia.”

Figure 4.10 also highlights the uneven evolution of these networks across economies. China moved rapidly toward the pattern observed in established production-network economies during the 2000s, although the relative importance of machinery trade subsequently declined as its domestic market expanded. Vietnam experienced one of the most pronounced increases in machinery trade shares during the 2010s and 2020s, suggesting deeper integration into regional production networks. The Philippines has long maintained exceptionally high machinery export and import shares, reflecting sustained participation in these networks. The persistence of its highly export-oriented trade structure may also reflect a stronger role as an export-production platform than in some neighboring economies. By contrast, Indonesia has made more limited progress despite its large domestic market and manufacturing ambitions. India also rose over time but remains well below the levels observed in the core production-network economies of East and Southeast Asia, illustrating the more limited integration of South Asia into regional machinery production networks.

For many of the economies participating in Factory Asia, export and import shares of machinery appear to have stabilized or declined slightly in the 2010s. This does not necessarily imply a weakening of production networks. Rather, parts and components trade continued to expand, while trade in final products grew even more rapidly as domestic markets became larger and more attractive (Obashi and Kimura,

2018). The figure also shows that many South Asian economies remain largely outside these networks. Most SAARC economies are positioned well below the 45-degree line and continue to exhibit relatively low shares of machinery imports. More broadly, participation in task-wise international division of labor remains concentrated in a limited number of economies.

The extent of integration into regional production networks remains one of the defining features that differentiate trade structures across Asia. However, economies participate in these networks in different ways and at different stages of production. Figure 4.11 therefore examines how economies' positions within regional production networks are reflected in long-term net export positions.

Figure 4.11 plots the long-term trend of net exports as a share of GDP for selected economies from 1970 to 2024. The figure illustrates substantial differences in how economies have participated in international trade over time. Singapore, Korea, and the ROC experienced marked improvements in their external positions, transforming from net importers in earlier decades into major net exporters. In 2024, net export shares reached 36.0% in Singapore and 13.0% in the ROC. These exceptionally high shares reflect the role of highly open economies within regional and global production networks, although such levels are generally more difficult to sustain in large economies with substantial domestic markets.

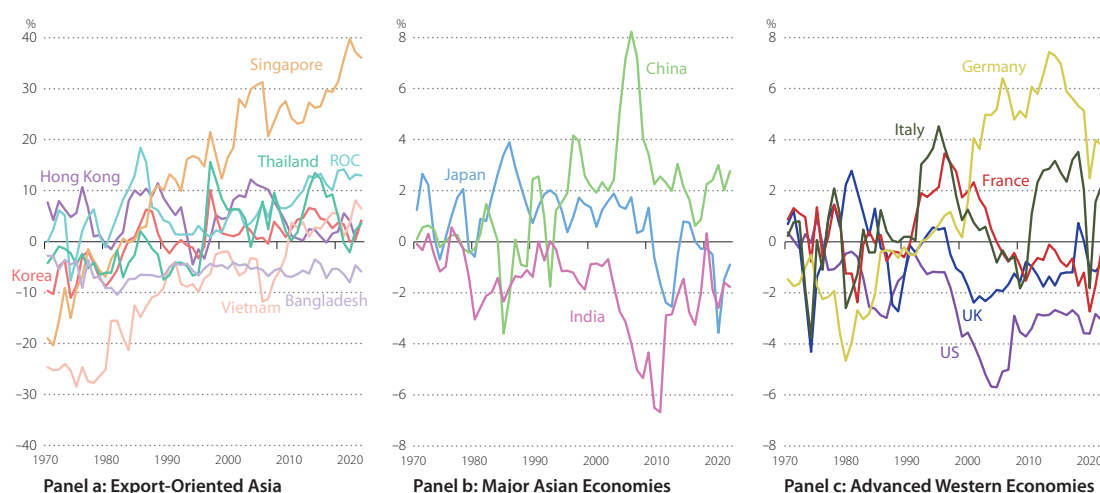


Figure 4.11 Net Export Shares in GDP, 1970–2024

—Shares of net exports to GDP at current market prices

Unit: Percentage. Source: Official national accounts in each country, including adjustments by APO-PDB.

China and Hong Kong followed a different trajectory. Their net export shares rose rapidly during the expansion of Factory Asia, peaking at 8.2% in 2007 and 12.2% in 2005, respectively. Since then, both economies have experienced declining net export shares as domestic demand became increasingly important. Nevertheless, China's net export share remained 2.8% in 2024, a level that continues to have significant implications for global trade balances given the size of its economy.

Germany, shown in the right panel, provides a useful benchmark. It maintained net export shares of around 4–8% from the mid-2000s onward—an exceptionally high level for a large economy—although the share declined to below 4% by 2024. Japan followed a markedly different trajectory. After recording persistent trade surpluses through much of the postwar period, its trade balance turned negative in 2011 (−0.6%) and deteriorated further to −2.5% in 2014, largely reflecting higher energy imports following the shutdown of nuclear power plants after the Great East Japan Earthquake. Although the balance subsequently improved, Japan remained in a modest net import position in 2024.

Figure 4.12 decomposes the net export positions shown in Figure 4.11 by presenting gross export and import shares of GDP in 2024. The figure reveals that similar net export outcomes can arise from very different trade structures. Singapore and Hong Kong recorded export shares of 175% and 182% of GDP, respectively, reflecting their roles as regional entrepôt and service hubs. Their exceptionally high export and import ratios explain why trade flows greatly exceed the size of their domestic economies.

Large trade surpluses were also observed in several manufacturing and resource-exporting economies, although the underlying structures differ substantially. Economies such as the ROC, Korea, Vietnam, and Malaysia recorded both high export and import shares, reflecting deep integration into regional production networks. In contrast, resource-rich economies including Qatar, Brunei, and Saudi Arabia generated trade surpluses with comparatively low import ratios. These differences illustrate that favorable net export positions may arise from distinct patterns of specialization.

At the other end of the spectrum, several economies continued to record substantial trade deficits in 2024. Nepal and Bhutan posted deficits of 26% and 17% of GDP, respectively, among the largest in Asia. Fiji also remained in a sizable deficit position despite recovering from the severe contraction in tourism during the COVID-19 pandemic. More broadly, Figure 4.12 highlights the diversity of trade structures across Asia and demonstrates that similar net export balances can mask markedly different combinations of export orientation, import dependence, and participation in regional production networks.

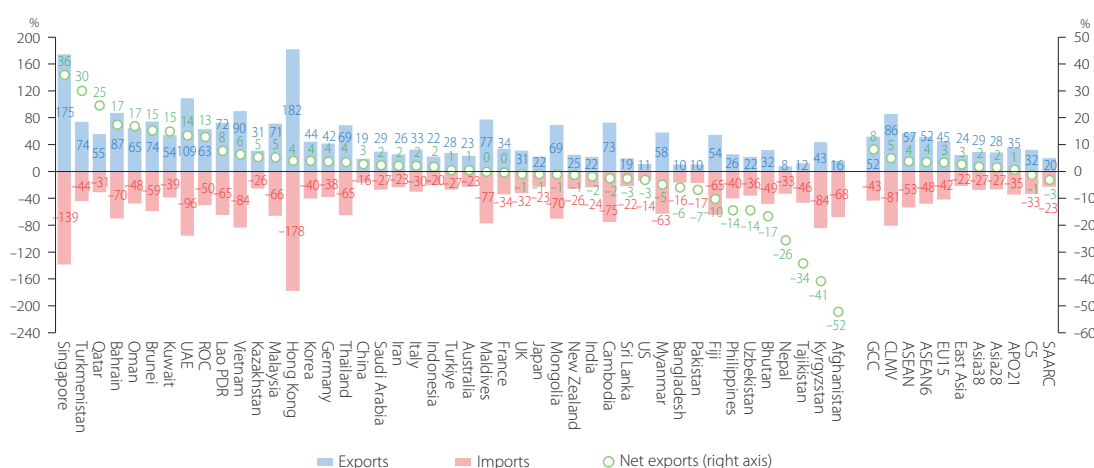


Figure 4.12 Export and Import Share in GDP, 2024

—Share of exports and imports to GDP at current market prices

Unit: Percentage. Source: Official national accounts in each country, including adjustments by APO-PDB.

Box 5 China's "New Three" Exports: Expansion and Uncertainty

The evolution of regional production networks continues to shape the composition of Asia's trade. One of the most notable recent developments is the rapid expansion of China's "New Three" exports—solar cells, lithium-ion batteries, and electric vehicles (EVs). Since the COVID-19 pandemic, the export shares of the former "Old Three" goods—home appliances, furniture, and garments—have declined. In contrast, exports of the New Three have grown significantly. By the end of 2023, their combined export value had reached nearly half that of the Old Three. Figure 4.13 shows China's nominal exports of solar cells from January 2017 to April 2026. The total export value of solar cells peaked in early 2023 but has since declined due to falling prices, halving

over the past two years. India raised its customs duties in April 2022, yet Asia remains a major destination for China's solar cell exports. However, shipments to the Netherlands—once a rapidly growing destination from 2021 to 2023—have recently declined.

While solar-cell exports rose sharply in March and remained elevated in April 2026, the underlying drivers remain uncertain. Part of the increase likely reflected front-loaded shipments ahead of the April 1 termination of China's export tax rebates. At the same time, the escalation of the Strait of Hormuz crisis in late February renewed concerns about global energy security and may have strengthened demand for renewable energy equipment. However, the available data are still too limited to determine whether the recent surge represents a temporary policy-driven adjustment or the beginning of a more sustained expansion in global demand. The sustainability of China's New Three exports therefore warrants close observation.

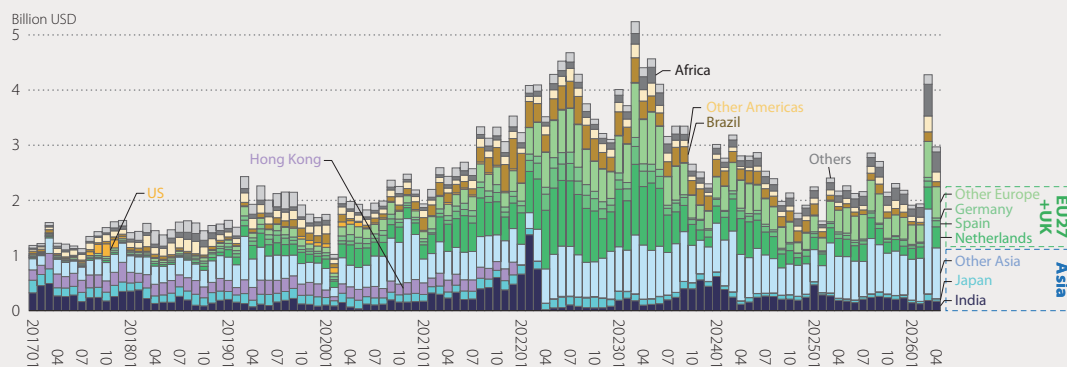


Figure 4.13 China's Solar Cells Export, January 2017–April 2026

Unit: Billion USD. Sources: The United Nations Comtrade Database and official trade statistics in China (both accessed June 17, 2026). Note: The corresponding HS codes for solar cells are 854140, 854142, and 854143.

Figure 4.14 reveals that China's lithium-ion battery exports—primarily destined for the US, Korea, Germany, and Vietnam—leveled off after 2023 but have risen gradually since early 2025.²⁸ Meanwhile, Figure 4.15 shows that EV exports peaked in late 2023 and then gradually declined in nominal terms. Since September 2024, the US has imposed a 100% tariff on Chinese EV imports, with a 25% duty applied to lithium-ion EV batteries, solar cells, and other clean-tech goods under its Section 301 rule. The European Commission added duties ranging from 17.4% to 38.1% on Chinese EVs starting in July 2024, and definitive countervailing duties took effect in October 2024, layered on top of the standard 10% automobile tariff. Under the second Trump administration in 2025, additional tariffs were imposed, and the One Big Beautiful Bill Act, enacted in July 2025, points to significant cuts to EV and clean-energy subsidies. Unlike the Old Three, which are driven by consumer demand, the New Three rely heavily on decarbonization policies in the EU, the US, Japan, and other regions. The future trajectory of the New Three is likely to differ across products. While policy support remains an important driver of demand, growing concerns over energy security and supply chain resilience may bolster demand in some segments, particularly solar and battery-related exports, even as mounting tariff barriers and subsidy cuts leave the overall outlook highly uncertain.

continued on next page >

28: Exports tend to decline in February due to the Spring Festival in China (typically late January to mid-February), during which many factories shut down for one to two weeks. This seasonality is particularly pronounced for lithium-ion batteries.

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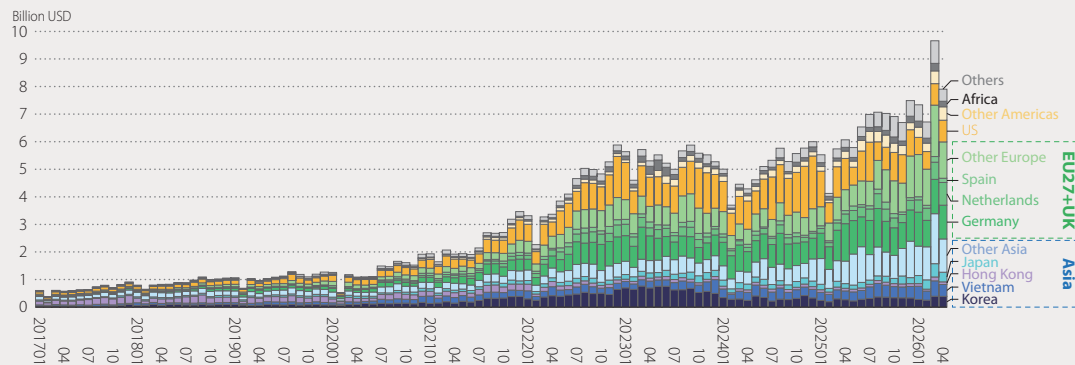


Figure 4.14 China's Lithium-ion Batteries Export, January 2017–April 2026

Unit: Billion USD. Sources: The United Nations Comtrade Database and official trade statistics in China (both accessed June 17, 2026).
Note: The corresponding HS code for lithium-ion batteries is 850760.

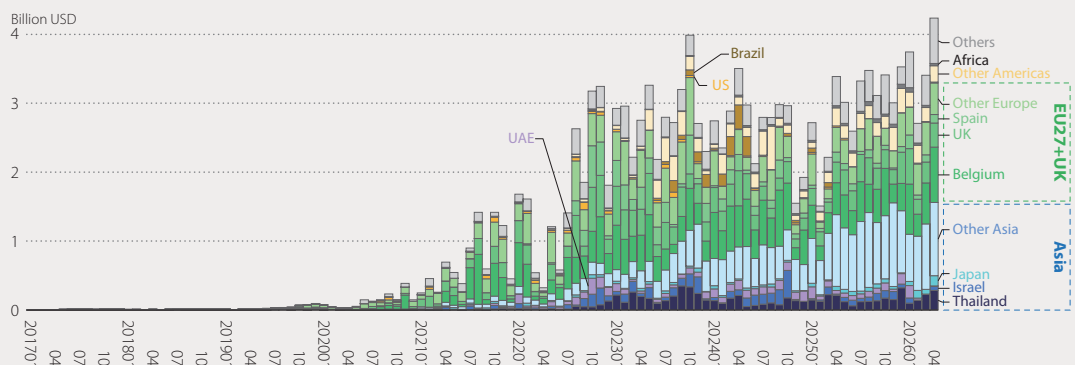


Figure 4.15 China's EV Export, January 2017–April 2026

Unit: Billion USD. Sources: The United Nations Comtrade Database and official trade statistics in China (both accessed June 17, 2026).
Note: The corresponding HS code for EVs is 870380.

5 Productivity Growth Drivers

Highlights

- Based on GDP per hour worked, the US has maintained a lead of more than 30% over even the highest-performing Asian economies, the exception being Singapore, where the gap had narrowed to about 2% by 2024. Over the past half-century, Hong Kong and the ROC improved by factors of 7 and 15, respectively, surpassing Japan in the late 2000s.
- Per-hour labor productivity in Asia28 grew at 4.2% per year over 2010–2024, with the most recent sub-period (2019–2024) at 3.7%, led by China (5.8%), Vietnam (4.5%), India (4.4%), and Bangladesh (3.9%). Regional average labor productivity rose 6.2-fold over the past half-century, and the share of hours worked at less than USD 10 per hour fell from 90% in 1970 to 10% in 2024.
- Asia28 TFP growth was 0.4% per year in 1970–1990, rising to 1.4% in 1990–2010, and was 1.2% over 2010–2024, with the 2019–2024 sub-period at 1.0% after the pandemic contraction. Among subregions, SAARC recorded the highest TFP growth in 2019–2024 at 1.8%, while TFP growth in ASEAN6 was essentially flat.
- A new decomposition of Asia28 TFP growth into country contributions shows that the region's 1.0% TFP growth in 2019–2024 was driven mainly by China and India, while nearly half of the Asia28 economies recorded negative contributions; within SAARC, the contribution came almost entirely from India, and within CLMV, only Vietnam contributed positively.
- Long-run growth in Asia28 over 2000–2024 was driven primarily by capital input (57% of the total—51% non-ICT and 6% ICT), with TFP contributing 28%. Capital deepening was the main source of labor productivity growth (45%), but the pattern differs by region: in ASEAN, labor quality accounted for 62% of labor productivity growth—about double East Asia's contribution—while far weaker capital deepening (0.4 points from non-ICT capital, against 2.3 in East Asia) held ASEAN's labor productivity growth (3.2%) well below East Asia's (5.3%).
- In 2024, Asia38 produced 48% of world output while accounting for 50% of world energy consumption and 60% of energy-related CO₂ emissions. China's energy productivity rose to about 80% of the US level, reflecting domestic structural shifts, whereas its gap with Japan and the EU15 has widened since the late 2010s—coinciding with the acceleration of decarbonization policies in advanced economies and a shift of energy-intensive production toward emerging Asia.

Labor productivity can be measured in various ways, depending on how output and labor inputs are defined—for example, using GDP per worker versus GDP per hour worked. This chapter examines both measures.²⁹ Section 5.1 first introduces labor productivity in terms of output per worker. Because workers in high-performing Asian economies tend to work longer hours than those in the US (Figure 8.8), this worker-based metric may portray Asian economies more favorably. The section then turns to labor productivity measured by output per hour worked. While this per-hour measure allows for more precise cross-country comparisons in principle, it should be interpreted with caution due to variations in the accuracy and consistency of working hours data across countries (see Section 8.3 for measurement issues).

29: GDP is valued at basic prices in this chapter, as opposed to GDP at market prices used in the previous chapters. GDP at basic prices is defined as GDP at market prices minus net indirect taxes on products. This may be regarded as the price received by the seller/producer, which is the basis for TFP accounting. As most Asian countries do not provide official estimates of GDP at basic prices in their national accounts, GDP at basic prices is calculated from available tax data (Section 8.1.7).

Subsequent sections (5.2 onward) extend the analysis using a Jorgensonian growth-accounting framework, examining the roles of capital input and total factor productivity (TFP) in economic growth. The chapter also considers energy productivity, which has emerged as an important policy concern for sustainable growth in many Asian economies.

5.1 Labor Productivity

Cross-country comparisons of per-worker labor productivity levels in 2024, measured as GDP per worker in constant basic prices (reference year 2024) using the 2021 PPP, are presented in Figure 5.1.³⁰ On this measure, Singapore is the leading economy with USD 226,200 per worker, which is 36% higher than the US (USD 166,200). The ROC, Hong Kong, and Saudi Arabia follow, with labor productivity exceeding USD 100,000 per worker. Korea, Türkiye, Japan, Iran, and Malaysia are in the next tier with over USD 75,000, 38–53% below the US. These rankings partly reflect cross-country differences in employment rates, since lower employment tends to raise output per worker. Iran is the most notable example, having the lowest employment rate in Asia28 (Figure 3.20).

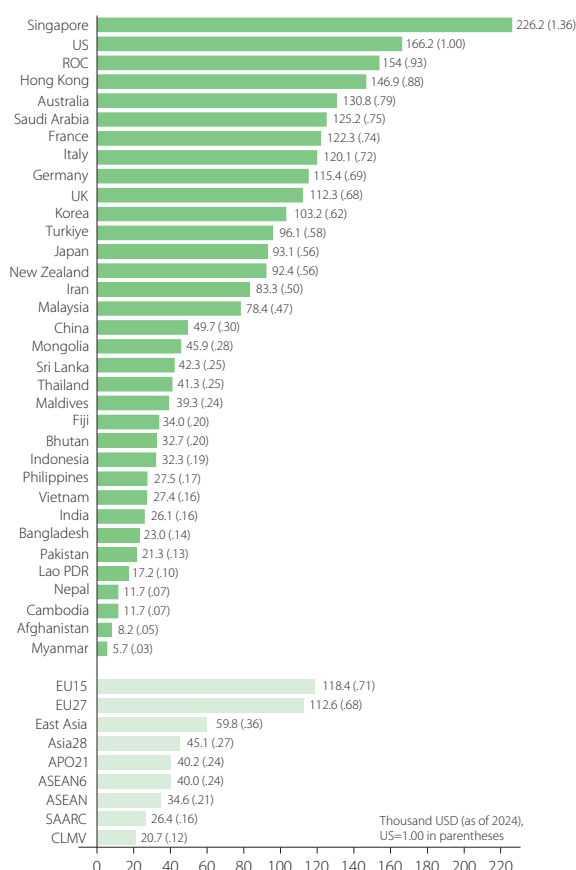
Following this group of leaders, many Asian countries have labor productivity levels below 30% of the US level. This pulls down the average Asia28 performance to 27% of the US, 24% for ASEAN6, 16% for SAARC, and 12% for CLMV. In 2024, the productivity levels of the two most populous countries, China and India, were 30% and 16% of the US level, respectively.

The per-worker labor productivity gaps with the US shown in Figure 5.1 are likely conservative, as workers in many high-performing Asian economies tend to work longer hours than their US counterparts. To account for this difference, total hours worked have been estimated in the AQALI database for the Asia28 economies, although the quality of these estimates may vary considerably across countries.³¹

Figure 5.1 Per-Worker Labor Productivity Level, 2024

—GDP at constant basic prices per worker, using the 2021 PPP, the reference year 2024

Unit: Thousand USD. Sources: Official national accounts in each country and APO Productivity Database 2026. Notes: The number in parentheses is the ratio to the US level. See Table 9.8 for the time-series comparison from 1970.



30: Cross-country comparisons of productivity levels are inherently uncertain and sensitive to data limitations. As such, the estimates should be interpreted as indicative of broad groupings rather than exact rankings. This caution applies in particular to Singapore, whose relative position is markedly higher under the ICP 2021 PPP benchmark than under earlier benchmarks; such level comparisons are generally far more sensitive to benchmark revisions than comparisons of growth rates.

Figure 5.2 shows how the productivity gap with the US in 2024 varies depending on which measure of labor productivity is used.³² The productivity gap with the US widens for all Asian countries when the differences in working hours are considered (marked in light green). The choice of labor productivity measure makes a significant difference for the economies that ranked highest on a per-worker basis, such as Singapore (from 36% higher on a per-worker basis to 2% lower on an hourly basis) and Hong Kong (from 12% lower on a per-worker basis to 36% lower on an hourly basis). On the other hand, European countries tend to work fewer hours per capita than the US, and the labor productivity gap between the EU15 and the US narrows from 29% on a per-worker basis to 27% on an hourly basis (marked in dark green).

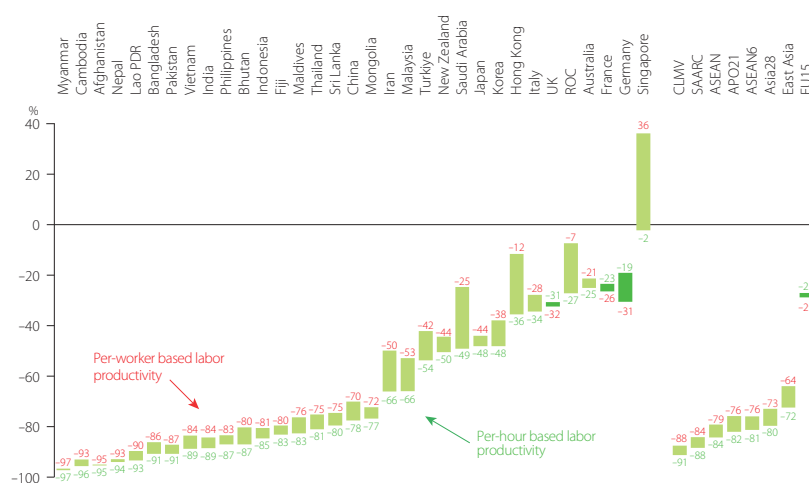


Figure 5.2 Per-Worker versus Per-Hour Labor Productivity Gap, 2024

—Differentials of basic-price GDP at constant prices per worker and hour (using the 2021 PPP) relative to the US

Unit: Percentage. Sources: Official national accounts in each country and APO Productivity Database 2026. Note: Light green indicates countries where the per-hour labor productivity gap is larger than the per-worker gap, while dark green indicates the reverse.

Based on GDP at constant basic prices per hour worked, US labor productivity has maintained a sizeable—though gradually narrowing—lead over high-performing Asian economies for more than half a century, starting in 1970, as shown in Figure 5.3 (see Table 9.10 for numerical details). However, the gap between the US and the regional leader, Singapore, has virtually disappeared since around 2021. Hong Kong and the ROC recorded remarkable improvements—by factors of 7 and 15, respectively—over this period, surpassing Japan in 2007 and 2009. Korea and Turkiye were at similar levels in the early 2000s, but while Turkiye experienced stagnation in the late 2000s, Korea continued to improve, widening the gap between the two. Japan's stagnation since the mid-2010s marks a notable shift from earlier trends. By the early 2020s, Korea had effectively caught up with Japan in per-hour labor productivity. These trends reflect a structural shift in Japan's relative position in the region, as other Asian economies have continued to converge toward and, in some cases, surpass earlier regional leaders.

31: Chapter 19 of the SNA 2008 recommends developing the estimate of total actual hours worked as a standardized measure of labor input (United Nations 2009). In the Asian countries studied, only Japan published data on total hours worked as part of the official national accounts, but not for the entire period covered in this report. Section 8.3.1 explains the estimation procedures for total hours worked. The validity of the per-hour labor productivity measure depends on the accuracy of this estimate. The Data-book considers this as a benchmark indicator of labor productivity while continuing to improve its measurements in AQALI.

32: The labor productivity gap for country x is the country x 's labor productivity divided by the US's labor productivity in Figure 5.2.

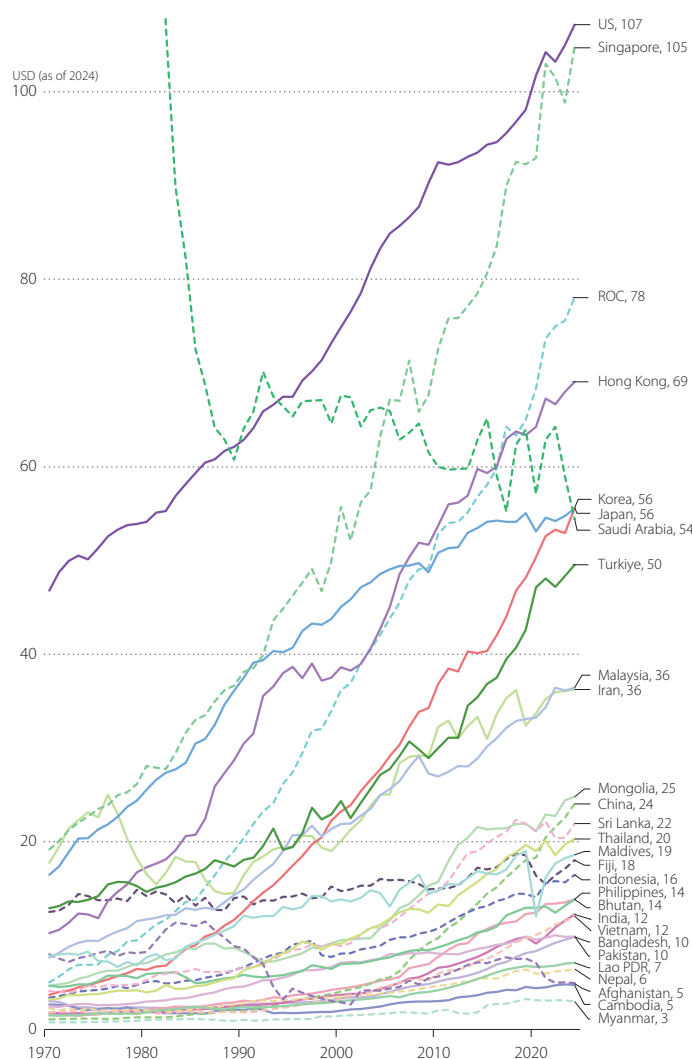


Figure 5.3 Per-Hour Labor Productivity Level in the Long Run, 1970–2024

—GDP at constant basic prices per hour, using the 2021 PPP, the reference year 2024

Unit: USD. Source: APO Productivity Database 2026. Note: See Table 9.10 for figures.

Figure 5.4 compares the average growth rates of hourly labor productivity over more than half a century—across three sub-periods (1970–1990, 1990–2010, and 2010–2024)—for the Asia28 economies and subregions, along with selected reference economies (see Table 9.11 for numerical details). For Asia28 as a whole, labor productivity growth accelerated to 4.2% per year during 2010–2024, despite the pandemic-related disruptions. This compares with average growth rates of 3.9% in 1990–2010 and 2.2% in 1970–1990.

Figure 5.5 presents recent productivity performance for the 2010–2024 period, broken down into three sub-periods: 2010–2015, 2015–2019, and 2019–2024, to highlight the impact of the pandemic. As a region, Asia28 recorded robust labor productivity

growth of 3.7% per year from 2019 to 2024. This rate, however, was lower than the peak of 4.9% achieved in 2010–2015, which was driven by exceptional growth in China (8.0%), and fell short of the pre-pandemic level of 4.0% in 2015–2019.

The main contributors to regional productivity growth in the most recent period (2019–2024) were China (5.8%), Vietnam (4.5%), India (4.4%), Bangladesh (3.9%), the ROC (3.7%), and Turkiye (3.0%). This relatively strong performance, despite pandemic-related disruptions, reflects continued structural transformation in South and Southeast Asia, particularly in export-oriented manufacturing and services. It also suggests that several economies maintained their investment momentum during the crisis period.

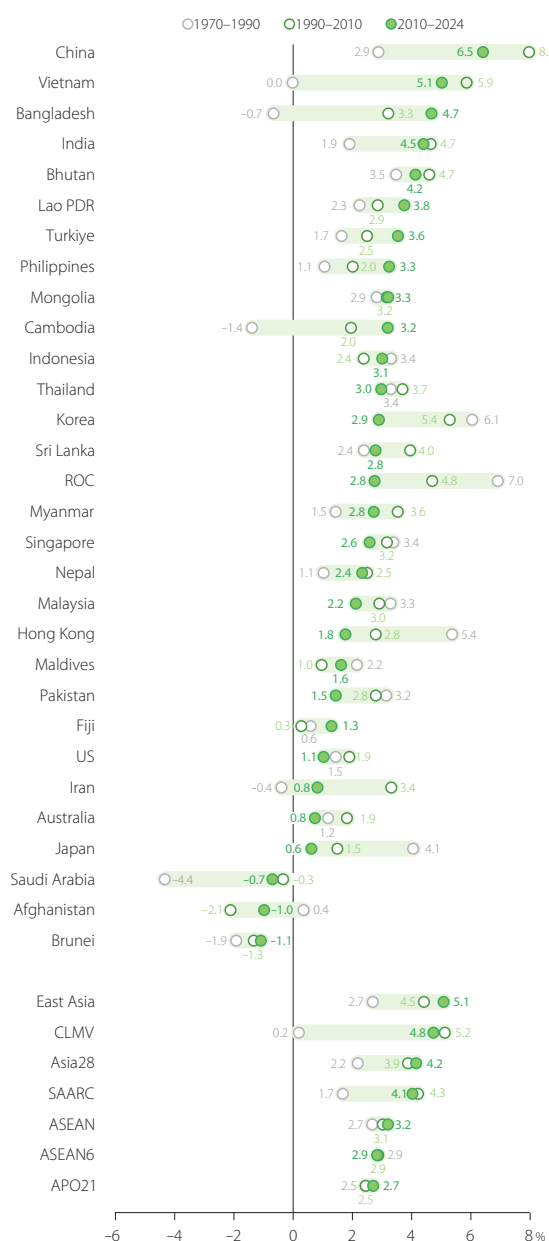


Figure 5.4 Labor Productivity Growth Averaged over Long Periods, 1970–2024

—Growth in per-hour GDP at constant prices over three subperiods: 1970–1990, 1990–2010, and 2010–2024

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

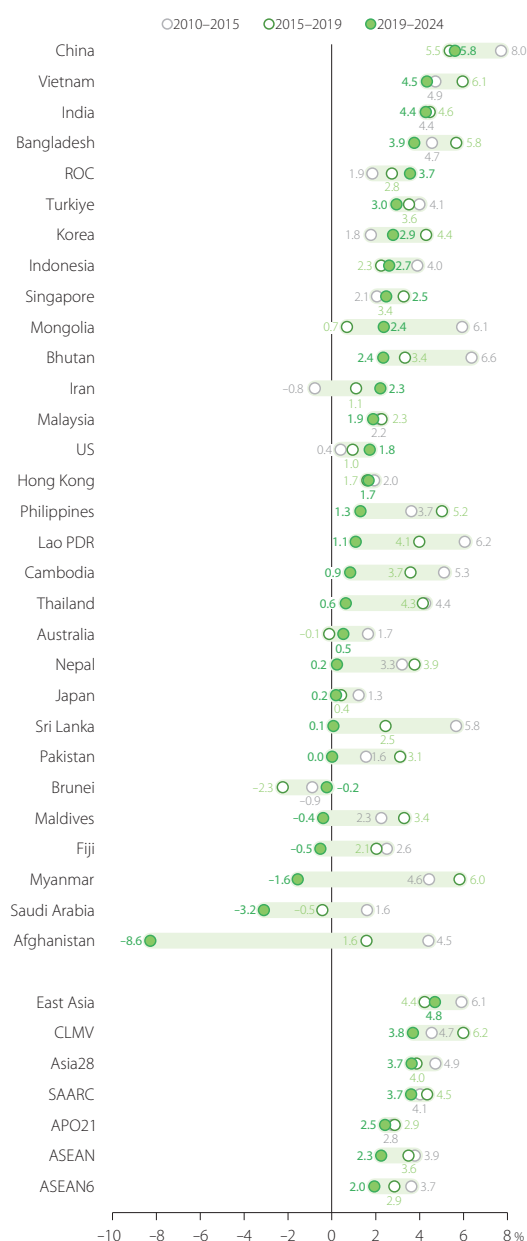


Figure 5.5 Labor Productivity Growth in the Recent Periods, 2010–2024

—Growth in per-hour GDP at constant prices over three subperiods: 2010–2015, 2015–2019, and 2019–2024

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

The potential for improving labor productivity in Asian countries is significant. Figure 5.6 depicts the distribution of hours worked in Asia28 by hourly labor productivity: the vertical axis is a productivity threshold (GDP per hour at constant prices), and the horizontal axis is the cumulative share of total Asia28 hours worked below that threshold. The distributions for 1970, 2000, 2010, and 2024 are shown, illustrating the improvement in productivity levels over the past half-century. The regional average labor productivity improved from USD 3.5 per hour worked in 1970 to 7.5 in 2000 and to 21.7 in 2024 (Table 9.10). These substantial labor productivity improvements over the past half-century occurred during a period of population growth, when total hours worked in Asia28 rose from 1.7 trillion hours in 1970 to 3.4 trillion in 2000 and to 4.1 trillion in 2024. This combination pushed the Asia28 real GDP from USD 6.1 trillion to 26.4 trillion and 91.9 trillion in the respective years (Table 9.2).

The 6.2-fold increase in average Asia28 labor productivity over the past half-century is largely due to a marked narrowing of the productivity gap, as indicated by changes in the shape of the productivity distribution in Figure 5.6. The share of Asian hours worked at less than USD 10 per hour accounted for 90% of total hours worked in Asia28 in 1970 and 2000, but this proportion fell to 10% in 2024, as many regions achieved higher productivity levels. Nevertheless, substantial labor reserves remain across the region: the surplus labor population in Asia28 is estimated to exceed 300 million, as shown in Figure 6.9 (Chapter 6). There remains significant potential for catch-up within the Asian region, with regional average labor productivity of USD 29.6 in East Asia compared to USD 16.9 in ASEAN and USD 12.4 in SAARC (Table 9.10).³³

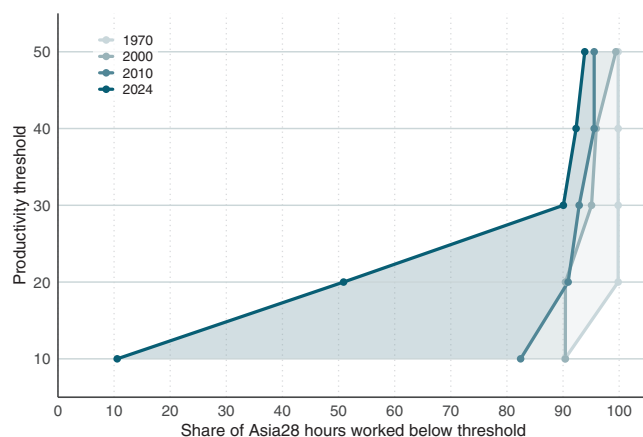


Figure 5.6 Productivity Distributions and Dynamics in Asia, 1970, 2000, 2010, and 2024

—Cumulative distribution of Asia28 hours worked by hourly productivity threshold, 1970, 2000, 2010, and 2024

Unit: Productivity threshold in constant 2024 USD per hour on the vertical axis, and the cumulative share of total Asia28 hours worked below that threshold (%) on the horizontal axis. Notes: A leftward/upward shift of the curve over time indicates that a smaller share of hours is worked below each productivity threshold, that is, rising productivity across the region.

One can identify where countries stand today in terms of hourly productivity, set against the backdrop of Japan's historical experience. Figure 5.7 illustrates the long-term trend in Japan's per-hour labor productivity from 1885 to 2024, represented by the green line, expressed relative to Japan's 2024 level (set to 1.0).³⁴ A structural break was observed during World War II when output collapsed. Each country's hourly productivity level relative to Japan in 2024 is mapped against this Japan growth path (marked with circles). Here, the corresponding year is the one in which Japan's hourly productivity was closest to the current level of each country in question. Most Asian countries experienced hourly productivity levels similar to Japan's between the early 1960s and the early 1980s. Myanmar and Cambodia, with the lowest hourly productivity in 2024, have levels comparable to Japan's in the 1930s. The figure also conveys the

33: This distribution is constructed from country-level averages of hourly labor productivity and the corresponding hours worked; within-country dispersion of productivity (for example, across sectors or between formal and informal activities) is therefore not captured. The figure should be read as a cross-country distribution rather than a distribution across workers or establishments.

34: While one should keep in mind that level comparisons of productivity among countries and over periods are subject to a great degree of data uncertainty, they provide a rough sketch of the productivity divergence in Asia.

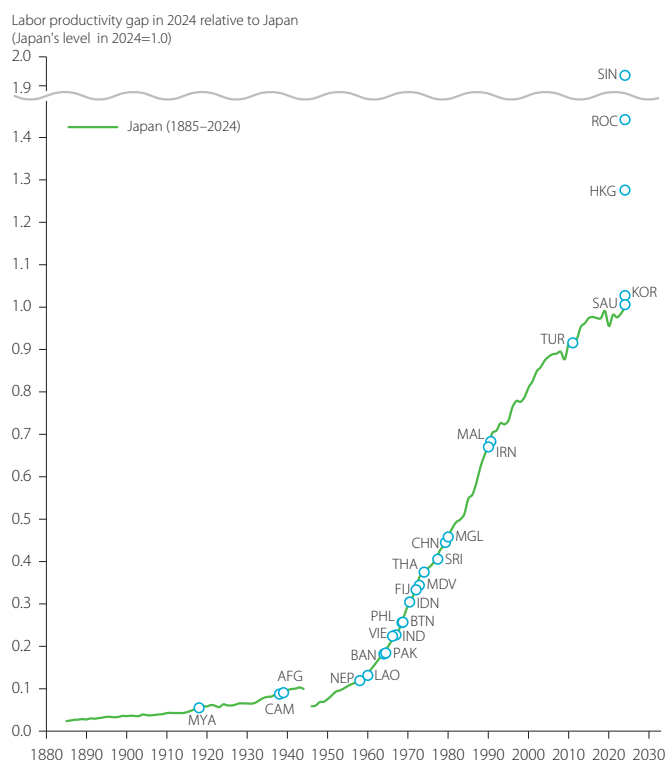


Figure 5.7 Evolution of Japan's Labor Productivity and Asia's 2024 Level

—Japan's per-hour GDP at constant prices from 1885 to 2024 and for Asian countries, using the 2021 PPP

Unit: Index. Sources: Japan's historical GDP is based on Ohkawa, Takamatsu, and Yamamoto (1974) from 1885 to 1954 and on the JSNA by the Economic and Social Research Institute, Cabinet Office of Japan, from 1955 to 2024 (including adjustments by APO-PDB). The hours worked data for Japan is based on the KEO Database at Keio University, covering the period from 1955 to 2024. Between 1885 and 1954, the average hours worked per person were assumed to be constant. The labor productivity level of Asian countries in 2024 is based on the APO-PDB 2026.

sheer scale of the catch-up involved. For the economies at the lower end of the distribution, reaching Japan's 2024 level would, on a simple arithmetic basis, take on the order of 80 years even at Asia28's long-term growth rate of 3.4% per year—a reminder that productivity convergence unfolds over generations.

The productivity leaders among Asian economies have already surpassed Japan, while others are still approaching its level (Figure 5.7). Figure 5.8 compares the number of years each economy took to raise its labor productivity from 15% to 35% of Japan's current level (measured in the units used on the y-axis of Figure 5.7). Japan itself made this transition in 11 years (1962–1973) during its high-growth era. Among Asian economies, the ROC, Korea, China, and Iran spanned the same range over a comparable 12–13 years, while latecomers such as Malaysia, Mongolia, Sri Lanka, and Thailand took roughly two decades. Although the catch-up pace among these economies has been broadly similar, this convergence occurred over different periods and under different resource endowments and external conditions. The transition reflects slow-moving transformations in industrial structure and capital composition, and most Asian economies remain clustered near Japan's earlier development levels in Figure 5.7, indicating that full convergence will still require considerable time.

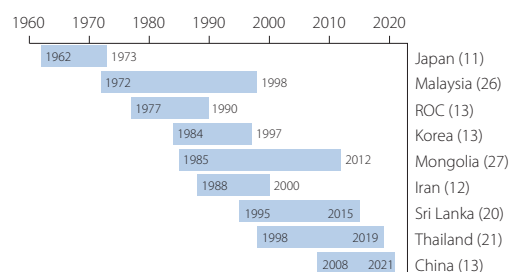


Figure 5.8 Time Taken to Improve Labor Productivity by Japan and Emerging Asian Economies

Unit: Years. Source: See Figure 5.7. Notes: The numbers in parentheses after the country name are the years each country took to raise its labor productivity from 15% to 35% of the current Japanese level.

5.2 Total Factor Productivity

Labor productivity is a partial measure of productivity and does not capture overall production efficiency. Low labor productivity may indicate inefficiency, but it can also reflect deliberate choices in production methods, especially under specific capital–labor price conditions. In populous Asian economies with abundant labor at lower wages, production is often organized to utilize this relatively abundant, lower-cost input intensively. As a result, such economies tend to exhibit low labor productivity but high capital productivity. To assess overall efficiency, economists turn to total factor productivity (TFP)—output per unit of combined labor and capital inputs.

Measuring capital input is crucial for accurately estimating TFP. Capital services are defined as the flow of services derived from productive capital stocks, in accordance with the 2008 SNA and OECD guidelines.³⁵ Estimating capital services requires appropriately constructed capital stocks disaggregated by asset type. The SNA recommends constructing the national balance sheet accounts within the framework of official national accounts. However, this is not a common practice in the national accounts of many Asian countries. Even when estimates of net capital stocks are available for the entire economy, assumptions and methodologies can differ considerably among nations. In response to this challenge, harmonized estimates of capital stocks and services have been constructed and compiled within the APO-PDB using a common methodology and set of assumptions.

APO-PDB 2026 constructs growth accounts for the Asia28 economies, which decompose the sources of economic growth into growth in ICT and non-ICT capital services,³⁶ hours worked, labor quality, and TFP.³⁷ In addition, regional growth accounts are developed for six country groups: Asia28, APO21, East Asia, SAARC, CLMV, and ASEAN6.³⁸

Cross-country comparisons of TFP growth for Asia28 and the US are presented in Figure 5.9, covering the period 2010–2024 and compared with the earlier two-decade averages for 1970–1990 and 1990–2010. Asia28 accelerated its average TFP growth from 0.4% in 1970–1990 to 1.4% in 1990–2010 and maintained a similar pace of 1.2% from 2010 to 2024. The modest slowdown in the most recent period largely reflects the sharp contraction during the COVID-19 pandemic, from which the region has since substantially recovered.

35: See OECD (2009) and the 2008 System of National Accounts (United Nations 2009, Chapter 20) for the conceptual framework of capital services. Section 8.2 describes the measurement of capital stock and capital services in APO-PDB. The capital input index aggregates 23 asset types—including produced assets, land, inventories, and mineral and energy resources (MER)—using a translog index formula (Table 8.5).

36: Changes in the capital quality are incorporated into the measurement of capital services in two ways: changes in the composition are captured by explicitly differentiating assets by type (footnote 35). For ICT capital, appropriate harmonized prices are applied to reflect the rapid changes in quality embodied in ICT-related assets (Section 8.2). ICT capital is a composite asset of ICT hardware (computers, electronic computing equipment, copying machines, and other office machinery), communications equipment, and computer software. See Box 12 in Section 8.2.4 for revision history. Readers should bear in mind that the quality of data on investment in ICT capital varies considerably across countries, despite harmonization efforts within the APO-PDB (Sections 8.1.4 and 8.2.1).

37: In measuring TFP, income generated from domestic production should be separated into labor and capital compensation. The national accounts readily provide estimates of compensation of employees as a component of value added in many countries. Compensation for the self-employed is not separately estimated but is combined with returns to capital in mixed income. The assumption on wages for self-employed and contributing family workers in APO-PDB 2026 is presented in Section 8.3.3. Refer to Box 13 for the sensitivity of the labor income assumptions to the TFP results.

38: See Section 8.5 on the PPPs for output and capital and labor inputs to develop the regional productivity accounts in APO-PDB.

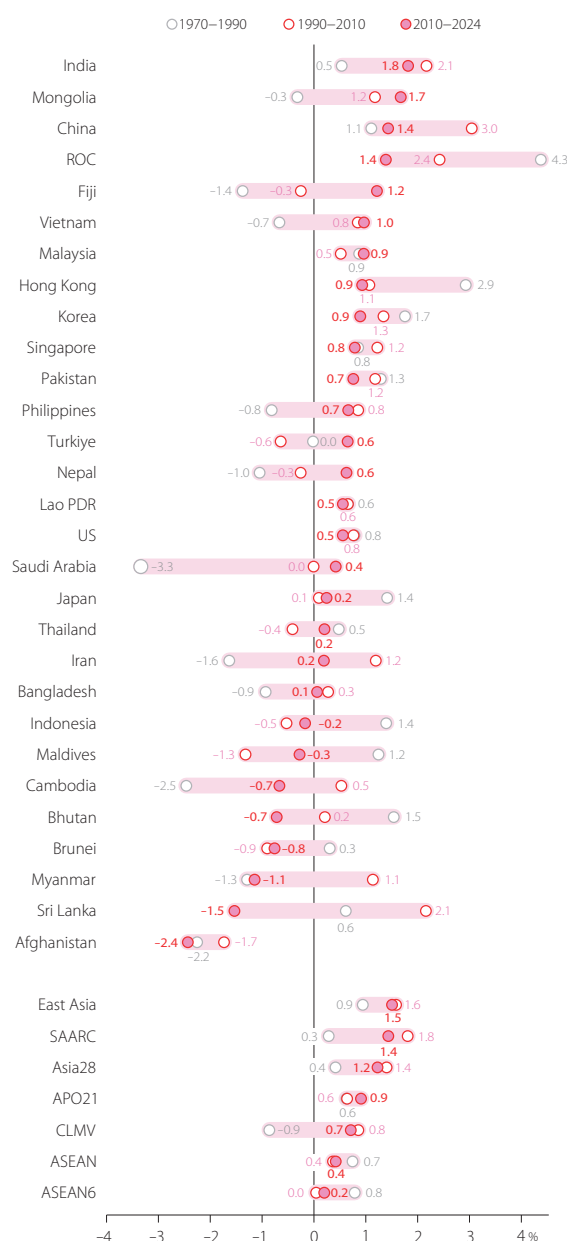


Figure 5.9 TFP Growth Averaged over Long Periods, 1970–2024

—Growth in total factor productivity over three subperiods: 1970–1990, 1990–2010, and 2010–2024

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

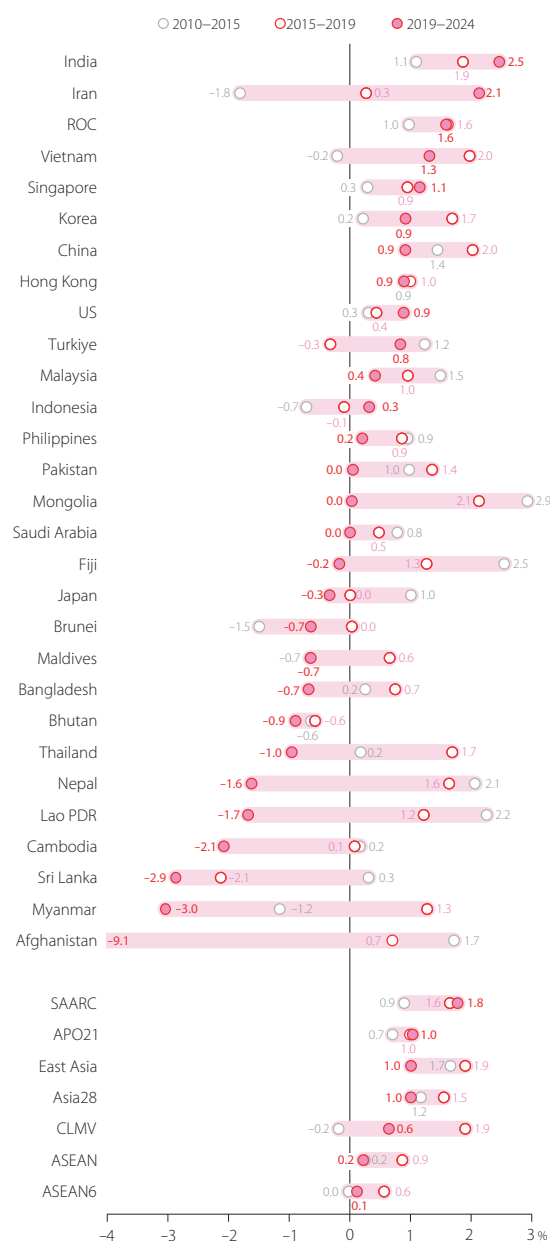


Figure 5.10 TFP Growth in the Recent Periods, 2010–2024

—Growth in total factor productivity over three subperiods: 2010–2015, 2015–2019, and 2019–2024

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

Figure 5.10 further explores the TFP growth performance during 2010–2024 by dividing the period into three sub-periods: 2010–2015, 2015–2019, and 2019–2024. Although nearly half of the Asia28 economies recorded negative TFP growth in the final sub-period, the region still achieved a growth rate of 1.0% in 2019–2024, comparable to 1.2% in 2010–2015 and not far below the pre-pandemic pace of 1.5% in 2015–2019.

Figure 5.11 decomposes the region's TFP growth of 1.0% over 2019–2024 into individual country contributions. The aggregate conceals wide cross-country divergence: much of the region's TFP growth was driven by China and India, while nearly half of the Asia28 economies recorded negative contributions. Among subregions, SAARC's sizable contribution came almost entirely from India; within CLMV, only Vietnam contributed positively, while contributions across East Asia and ASEAN6 were more mixed.³⁹

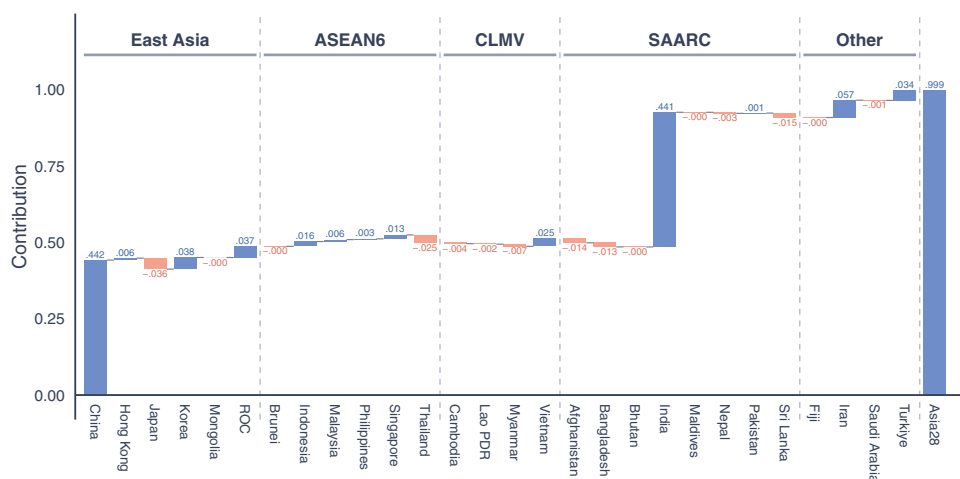


Figure 5.11 Country Contributions to Asia28 TFP Growth, 2019–2024

Unit: Percentage points (average annual growth rate). Source: APO Productivity Database 2026.

Figure 5.12 compares over-half-century trends in the TFP index for the Asia28 economies from 1970 to 2024. The long-run performance of TFP varies markedly across countries. Among the Asian Tigers, the ROC experienced the strongest growth—its TFP increased by a factor of 4.7—followed by China (2.8 times),⁴⁰ Hong Kong (2.5 times), India (2.2 times), and Korea (2.1 times). In contrast, Singapore's long-term TFP gain was more modest, at 1.7 times, with most of the improvement occurring only from the mid-2000s onward. TFP growth has stagnated or declined in 11 of the Asia28 economies over the 54-year period. In a further four economies, the index rose but by less than 20%. For some countries, such as Cambodia, Afghanistan, and Myanmar, conflict and instability have led to outright declines in productivity.

These outcomes underscore a fundamental insight from development economics: productivity growth is not an automatic byproduct of economic expansion. Structural transformations—such as sectoral shifts from agriculture to industry and services, the adoption of efficient technologies, and the reallocation of resources toward more productive firms—are a prerequisite for sustained TFP improvement. In countries where growth has relied heavily on factor accumulation or external demand, without accompanying efficiency gains, long-run productivity has often stagnated. Conversely, economies such as Vietnam have shown notable improvements in TFP since the mid-2010s, reflecting gradual structural upgrading.

39: The decomposition of regional TFP growth into country origins follows the framework in Nomura (2018). The corresponding decomposition for the APO21 group is presented in Figure 10.1 (Chapter 10).

40: China's productivity estimates were revised in this edition based on updated growth accounting methods (see PRN2614). Adjustments included imputed rent, labor share, labor quality, the price index for government consumption, and land stock prices (see Section 8.4).

	1970	1980	1990	2000	2010	2024
ROC	1.00	1.55	2.38	3.20	3.85	4.67
China	1.00	0.99	1.24	1.74	2.28	2.77
Hong Kong	1.00	1.38	1.79	1.81	2.21	2.51
India	1.00	0.96	1.11	1.32	1.71	2.20
Korea	1.00	1.15	1.42	1.68	1.85	2.09
Pakistan	1.00	1.04	1.29	1.58	1.63	1.81
Singapore	1.00	1.14	1.18	1.27	1.51	1.68
Malaysia	1.00	1.20	1.19	1.19	1.31	1.50
Mongolia	1.00	0.97	0.94	1.09	1.18	1.49
US	1.00	1.07	1.17	1.27	1.36	1.46
Lao PDR	1.00	1.04	1.14	1.13	1.30	1.40
Sri Lanka	1.00	1.08	1.13	1.41	1.73	1.40
Japan	1.00	1.13	1.32	1.33	1.35	1.39
Bhutan	1.00	1.18	1.36	1.37	1.41	1.28
Vietnam	1.00	0.91	0.87	1.08	1.03	1.18
Indonesia	1.00	1.19	1.32	1.12	1.18	1.16
Philippines	1.00	0.97	0.85	0.85	1.00	1.10
Thailand	1.00	1.04	1.10	0.88	1.01	1.04
Türkiye	1.00	0.88	0.99	0.96	0.87	0.96
Maldives	1.00	1.01	1.28	1.06	0.98	0.94
Iran	1.00	0.78	0.72	0.83	0.91	0.94
Bangladesh	1.00	0.83	0.83	0.81	0.88	0.88
Fiji	1.00	0.89	0.76	0.71	0.72	0.85
Nepal	1.00	0.86	0.81	0.75	0.77	0.84
Myanmar	1.00	0.99	0.77	0.91	0.97	0.82
Brunei	1.00	1.63	1.06	1.01	0.89	0.80
Cambodia	1.00	0.49	0.61	0.63	0.68	0.62
Saudi Arabia	1.00	0.85	0.51	0.52	0.51	0.54
Afghanistan	1.00	0.76	0.64	0.25	0.45	0.32

Figure 5.12 Half-Century TFP Index by Country, 1970–2024

Unit: Index (1970=1.0). Source: APO Productivity Database 2026. Notes: The countries are sorted by their TFP index in 2024 (relative to 1970). The country ranking reflects divergent development paths rather than any fixed hierarchy.

The long-run record in Figure 5.12 shows that sustained TFP growth has been uneven across the region, and that economic expansion has not always been accompanied by efficiency gains. The extent to which growth has rested on capital accumulation rather than on productivity improvement is examined through growth accounting in the following section.

Box 6 Trade Openness and TFP: Evidence from ASEAN and SAARC

The experience of the South Asian Association for Regional Cooperation (SAARC) highlights the constraints that political tensions can impose on regional integration. Since its establishment in 1985, the persistent rivalry between India and Pakistan has been widely seen as constraining SAARC's effectiveness, coinciding with slower progress in cooperation initiatives and the development of intra-regional economic linkages. Despite these constraints, SAARC's economic performance invites comparison with ASEAN. While ASEAN has a higher per capita GDP and a smaller population, SAARC has exhibited relatively strong aggregate growth in recent decades.

In the 1970s, ASEAN and SAARC were broadly comparable in economic size. Since then, SAARC has expanded more rapidly, and by 2024 its aggregate GDP exceeded that of ASEAN by over 50% (Figure 3.5). Per-capita income in SAARC nonetheless remains substantially lower, reflecting its larger population and leaving considerable scope for catch-up (Figure 3.11). Figure 5.13 compares these two regions with respect to economic growth, intra-regional trade shares, and TFP growth. Real GDP growth in SAARC has consistently matched or exceeded that of ASEAN since the 1980s (left panel). The two regions differ markedly in intra-regional trade share (center panel). ASEAN's intra-regional trade share has remained moderate at 20–28%, reflecting an externally oriented, network-based integration closely linked to global value chains. In

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contrast, SAARC's intra-regional trade share remains low at 4–8%, indicating limited regional connectivity and cross-border specialization.

Standard theory predicts that greater trade openness enhances TFP through increased competition, technology diffusion, and economies of scale. However, the right panel of Figure 5.13 shows that the more open trading but richer region (ASEAN) experienced lower TFP growth than SAARC. Since the 1980s, TFP growth in SAARC has exceeded that in ASEAN by 0.7–1.9 percentage points.

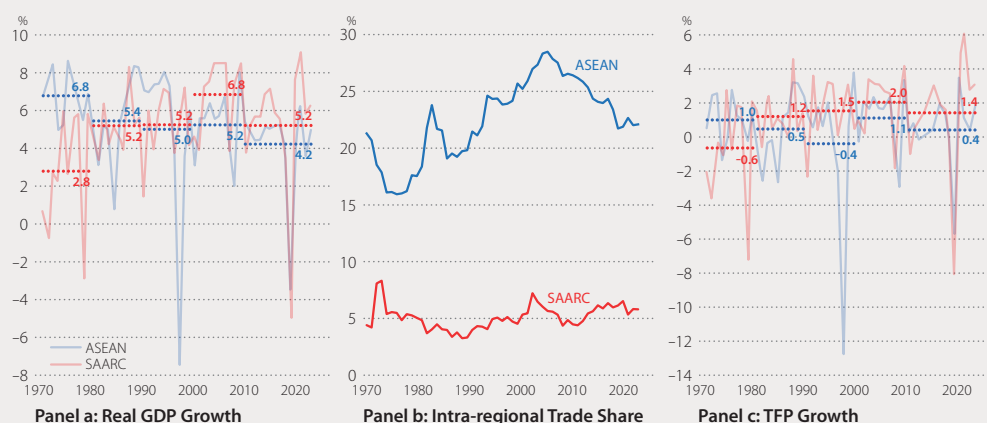


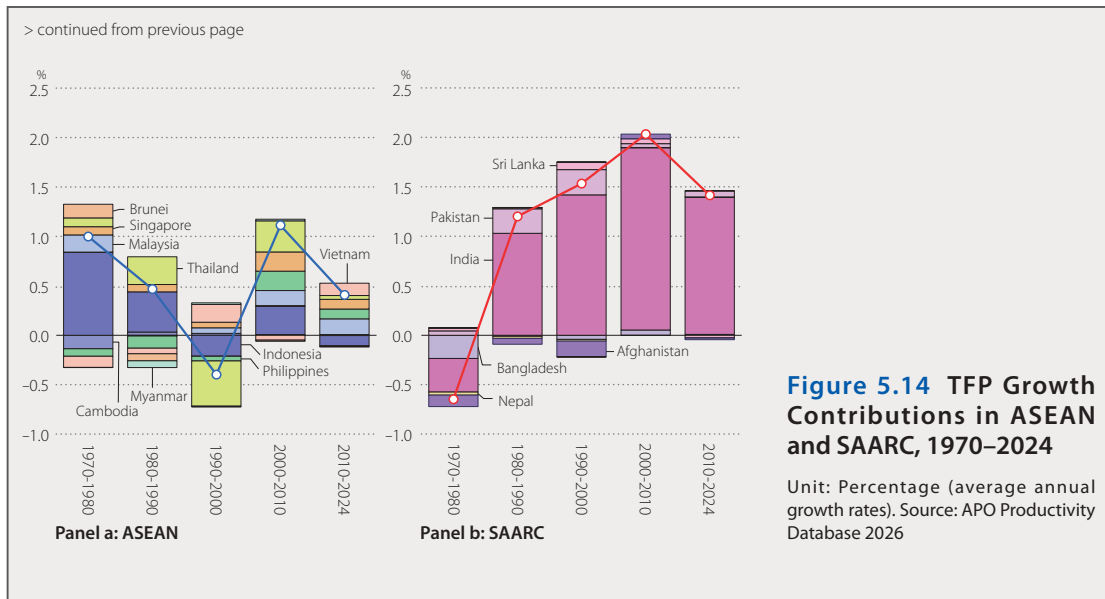
Figure 5.13 Economic Comparison of ASEAN and SAARC, 1970–2024

Unit: Percentage. Sources: APO Productivity Database 2026.

Focusing on country contributions to regional TFP growth, Figure 5.14 shows that TFP growth in SAARC is highly concentrated in India, whereas ASEAN exhibits more balanced contributions across economies such as Thailand, Malaysia, the Philippines, and Vietnam. Growth in ASEAN has been driven largely by capital deepening, while India's TFP gains are commonly attributed to institutional reforms, greater competition, ICT adoption, and the expansion of the service sector.

This apparent disconnect between trade openness and productivity may reflect structural differences across regions. ASEAN economies were more exposed to external shocks, including the aftermath of the 1997 Asian financial crisis, while India's relatively lower exposure to global capital flows may have been associated with a more stable TFP trajectory. These findings suggest that the relationship between trade openness and productivity is context-dependent, shaped by domestic institutions, sectoral composition, and the nature of global integration. At the same time, the concentration of TFP gains in a single economy (India) indicates that regional productivity growth has been narrowly based.

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5.3 Sources of Economic Growth

Suppose growth has been driven mainly by capital accumulation rather than by the assimilation of existing technology from advanced economies (measured as TFP growth). In that case, sustaining growth may require continuously high rates of investment, which can be costly for less affluent economies.

Figure 5.15 shows absolute contributions to GDP growth by country and region, averaged over 2000 to 2024 (the corresponding decomposition for the full 1970–2024 period, by five-year intervals, is presented in Figure 5.20). For example, Asia28's average annual growth of 5.2% consists of 0.3 percentage points from ICT capital, 2.6 from non-ICT capital, 0.3 from hours worked, 0.4 from labor quality, and 1.4 from TFP growth. Figure 5.16 presents the percentage contribution of each factor to economic growth, summing to 100% (note that TFP contributions can be negative). The results show that 57% of Asia28's growth was driven by capital accumulation—51% from non-ICT capital and 6% from ICT capital—far exceeding the 28% contribution from TFP growth.

This high contribution of capital to growth is also evident in various regions and countries in Asia. In these two charts, countries are listed in order of their economic growth rates during this period. Figure 5.15 illustrates that in high-growth countries, which tend to have lower initial per capita incomes, the contributions of TFP and labor quality improvement to economic growth are not necessarily substantial. The exception is India, which has a low initial income but a high TFP contribution of 34%. The contribution shares shown in Figure 5.16 indicate that improvements in TFP and labor quality typically play a larger role in higher-income countries, suggesting a greater role for capital accumulation, especially in the early and middle stages of economic development.⁴¹

41: The division between capital and TFP is not clear-cut, since part of measured capital accumulation reflects technologies embodied in physical assets, especially in developing economies. On the labor side, Box 8 and Chapter 10 (APO21 economy profiles) provide an alternative view on labor input, focusing on college and non-college labor inputs.

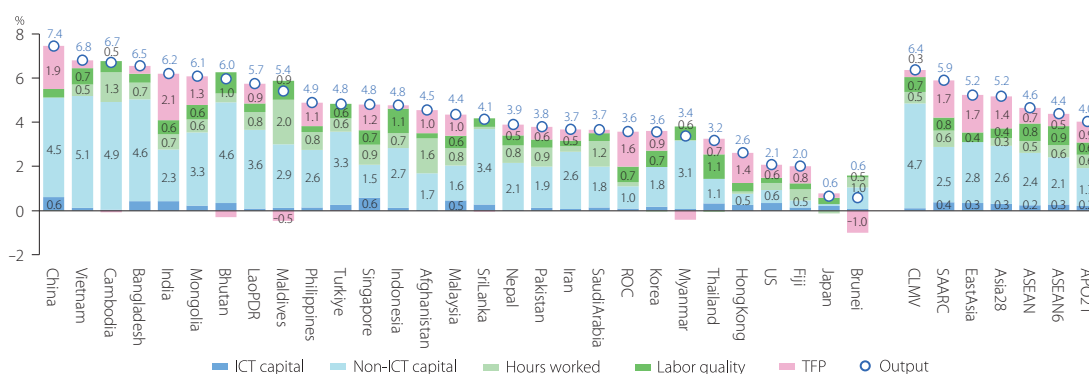


Figure 5.15 Sources of Economic Growth, 2000–2024

—GDP growth and contributions of capital, labor, and TFP

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

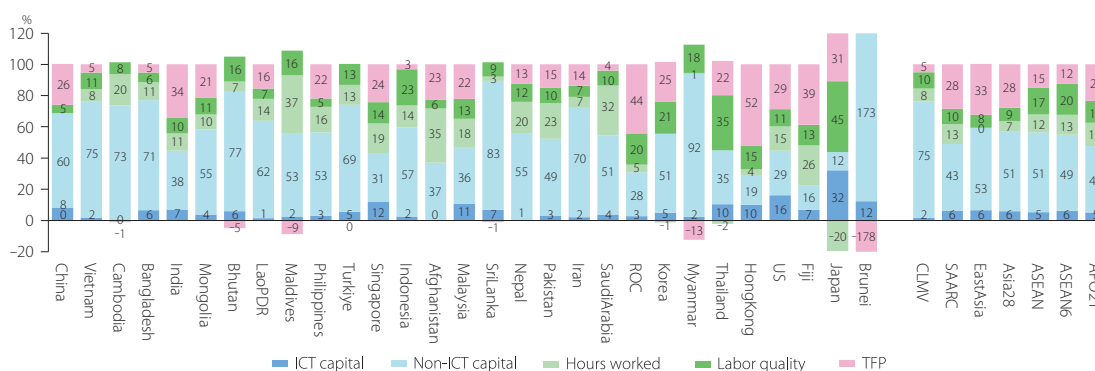


Figure 5.16 Contribution Shares of Economic Growth, 2000–2024

—Contribution shares of capital, labor, and TFP

Unit: Percentage (average annual contribution shares). Source: APO Productivity Database 2026.

In Asia, TFP growth in Hong Kong and the ROC over the past 20 years has been quite significant, explaining 52% and 44% of their economic growth, respectively, as shown in Figure 5.16. Figure 5.17 in Box 7 indicates that the ROC has an R&D stock estimated at three times the ICT capital stock in 2024, the second-largest share in Asia after Korea. Conversely, Hong Kong's ICT capital stock was nearly twice its R&D stock in 2024. Although the direct effects of increased capital inputs due to R&D and ICT capital stock expansion are already accounted for in growth accounting (Figure 5.16), the high TFP growth rate may partly reflect the external effects of such R&D and ICT capital.

Box 7 Rise of ICT and R&D Capital in Asia

The Databook presents the decomposition of capital stock, including ICT and R&D capital. Figure 5.17 shows these stocks relative to GDP in 2024. R&D capital is regarded as the basis of scientific knowledge and a crucial input to innovation. As shown in Figure 5.17, the ratio of R&D capital to GDP is highest in Korea and remains comparatively high in the US, the ROC, Japan, and China, whereas lower-income Asian economies generally show much smaller ratios—pointing to a wide gap in R&D intensity between high-income economies and the rest. A common view holds that innovation capability, supported by R&D capital within a

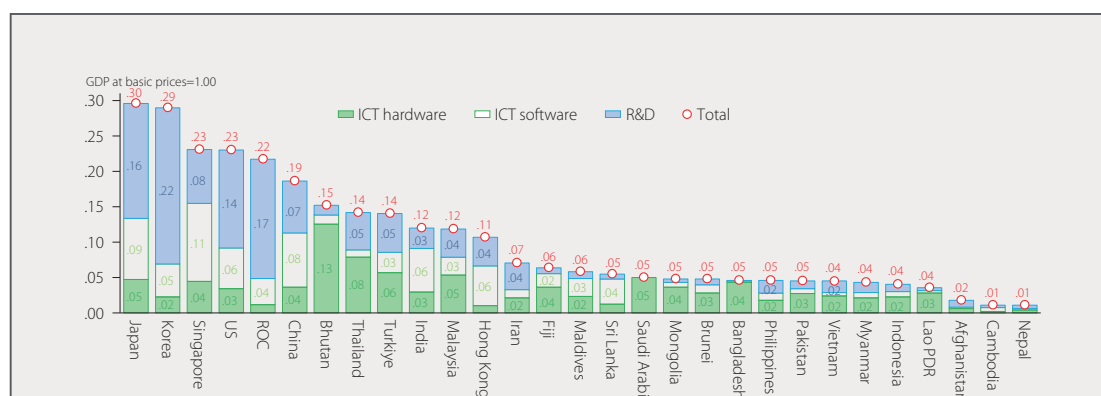


Figure 5.17 ICT and R&D Capital Stock relative to GDP, 2024

—Ratios of the end-of-year capital stocks of ICT and R&D to the basic-price GDP at current prices

Unit: Percentage. Source: APO Productivity Database 2026.

well-developed national innovation system, plays an important role in the transition from upper-middle-income to high-income status.

However, the ICT capital data may offer a different perspective. ICT capital, as defined here, includes both software and hardware components, such as computers, communication equipment, televisions, radios, and mobile phones. In most lower-income economies, the stock of ICT capital relative to GDP is substantially larger than that of R&D capital, and the gap with high-income economies is notably narrower in ICT than in R&D. Such economies typically engage in little frontier innovation but actively adopt and diffuse existing technologies, often in ways not fully captured by formal R&D statistics. Notably, Bhutan exhibits a particularly high share of ICT capital, largely reflecting its large-scale cryptocurrency mining activities (Nomura 2025, Chapter 5). More broadly, higher-income Asian economies, including the Asian Tigers and Japan, tend to hold substantial ICT software capital.⁴² However, because embedded software is often classified as hardware, and accounting practices vary considerably across countries, the distinction between ICT hardware and software may not always be meaningful for international comparisons.⁴³

Unlike earlier technological advances, which were largely confined to manufacturing, ICT diffuses across sectors and drives productivity gains in traditionally low-productivity areas such as wholesale and retail, finance, transportation, and telecommunications. Given the service sector's substantial share of the economy (Table 9.15), the potential for ICT to drive broad-based productivity growth is significant.

In Japan, the shift toward ICT capital began in earnest in the mid-1990s, when ICT's share of total capital input growth rose from around 20% in the early 1990s to over 40% by the decade's end (Figure 5.18, left panel).⁴⁴ This reallocation coincided with a slowdown in overall investment following the collapse of the asset bubble, prompting a shift in capital composition from non-ICT toward ICT assets. The US had made this transition earlier and more gradually. Since the early 1980s, US ICT capital consistently accounted for over 25% of capital input growth, peaking above 40% in the late 1990s (Figure 5.18,

42: Japan's 2020 benchmark revision substantially raised measured software capital, widening the gap between capital services and capital stock growth—the “capital quality” component. See PRN2613.

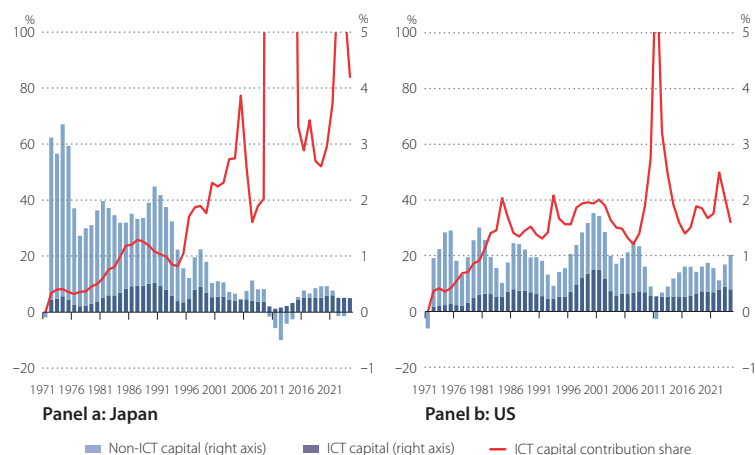
43: The 2008 SNA (United Nations 2009) formally acknowledged the importance of the ICT sector by making it identifiable and distinct within industry classifications and asset types. Building on that, the 2025 SNA—adopted by the UN Statistical Commission in March 2025 (United Nations 2025)—further advances this treatment by incorporating elements such as digital SUTs and the formal capitalization of data assets, reflecting the growing analytical importance of digitalization in modern economies.

44: The break in the contribution share for Japan in the early 2010s (left panel of Figure 5.18) is due to the negative growth of total capital input, despite an expansion in ICT capital input.

Figure 5.18 ICT Capital Contribution Share in Japan and the US, 1970–2024
— ICT capital contribution share in capital input growth

Unit: Percentage. Source: APO Productivity Database 2026.

right panel). Since around 2000, ICT capital has contributed roughly 40% of capital input growth in both countries, although this share has fluctuated in line with the pace of total capital formation.



A similar shift toward ICT capital is observed among the Asian Tigers (Figure 5.19, left panel). In all four economies, the share of ICT in capital input growth rose through the late 1990s. Thereafter, the paths diverged: in Hong Kong and Singapore, the share continued upward, reaching roughly 30–40% by the 2010s—approaching the levels seen in Japan and the US—whereas in the ROC and Korea, it declined during the 2000s and has since remained comparatively low. China, with its emphasis on construction investment (Figure 4.9), has been a latecomer to ICT capital deepening; its share of ICT contribution has risen to around 20% only in recent years (Figure 5.19, right panel). India has an unusually large ICT-services sector relative to its per-capita income, and its ICT contribution share was higher than China's through much of the period, though it has eased in recent years as China's share has risen.

Figure 5.19 ICT Capital Contribution Share in Selected Countries, 1970–2024
— ICT capital contribution share in capital input growth

Unit: Percentage. Source: APO Productivity Database 2026.

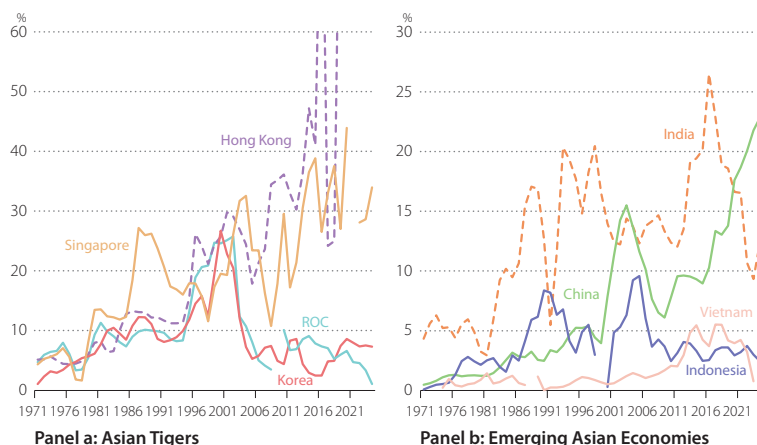






Figure 5.20 Sources of Economic Growth by Country and Region, 1970–2024
—GDP growth and contributions of labor, capital, and TFP

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

5.4 Capital Productivity

Labor productivity is often highlighted because of its close relationship with per capita GDP (Section 3.3). Under the growth accounting framework, the growth of average hourly labor productivity can be decomposed into three components. First, qualitative improvements in labor—captured as quality-adjusted labor input per hour worked—reflect increases in workforce skills (Box 8). Second, capital deepening refers to the extent to which workers are equipped with more capital, measured as capital input per hour worked. Third, TFP captures improvements in the overall efficiency with which labor and capital are used (Section 5.2). In essence, labor productivity growth is driven by better-skilled labor, greater capital intensity, and more efficient use of all production inputs (Section 5.5).

Figure 5.21 examines capital deepening during 2010–2024, broken into three sub-periods: 2010–2015, 2015–2019, and 2019–2024. Most countries experienced sustained capital deepening across all sub-periods, with few exceptions. In the Maldives, investment slowed following an earlier boom, while in countries like Pakistan, persistently low investment has often been associated with institutional and structural factors (Figure 4.2). For Asia28 as a group, the pace of capital deepening has remained steady at 5–6% per year since 2010. This reflects the region's consistently high investment rates, which have led to rapid increases in capital per hour worked. The data suggest that capital deepening is a fundamental feature of the growth process in Asia. Between 2019 and 2024, China, Bangladesh, Cambodia, and Vietnam recorded the highest capital deepening rates.

While labor productivity steadily improved across most countries (with a few exceptions), as shown in Figure 5.4, capital productivity—another partial productivity measure—declined in many cases over time, as shown in Figure 5.22. Between 2019 and 2024, labor productivity increased by 5.8% per year in China and by 4.5% per year in Vietnam (Figure 5.5), driven by rapid capital deepening at annual rates of 8.2% and 5.1%, respectively (Figure 5.21). However, capital productivity declined by 2.5% and 0.6% in the two countries, respectively. This pattern reflects a common outcome of capital deepening: as more capital is used per worker, capital productivity tends to decline unless offset by sufficient gains in TFP. As long as TFP remains stable or improves, such a decline is not necessarily a sign of inefficiency; it can reflect a shift in the input mix accompanying labor productivity growth.

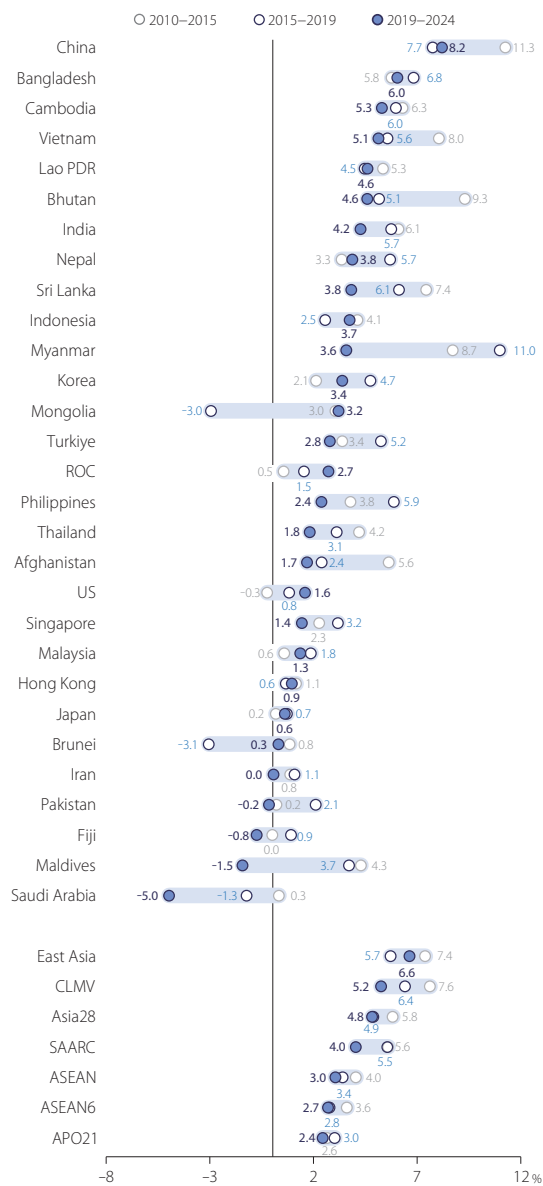


Figure 5.21 Capital Deepening, 2010–2024
—Growth in capital input per hour worked over three subperiods: 2010–2015, 2015–2019, and 2019–2024
Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

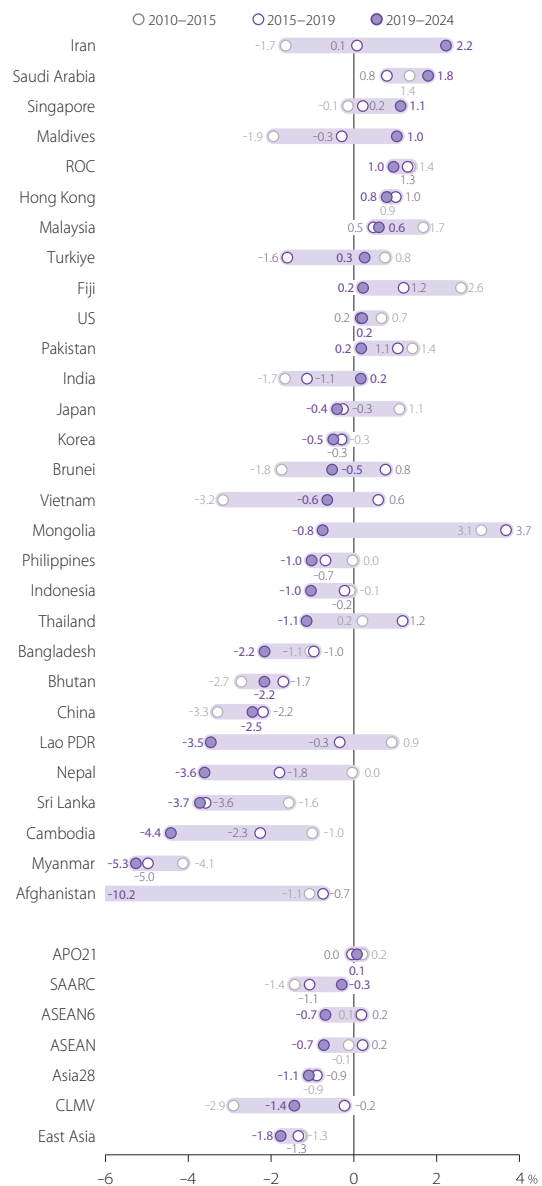


Figure 5.22 Capital Productivity Growth, 2010–2024
—Growth in GDP per capital input over three subperiods: 2010–2015, 2015–2019, and 2019–2024
Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

5.5 Sources of Labor Productivity Growth

Capital deepening is expected to raise labor productivity, all else being equal. Figure 5.23 presents the contributions to per-hour labor productivity growth (in percentage points), while Figure 5.24 shows their contribution shares for 2000–2024 (adding up to 100%). In East Asia, capital deepening remains the dominant source of labor productivity growth, accounting for 51% of the total (45% from non-ICT and 6% from ICT capital). Improvements in labor quality contributed 17%, while TFP accounted for 32%. A similar pattern is observed in the SAARC region, where labor quality improvements contributed 24% and TFP 37%.

In contrast, in ASEAN, labor quality emerged as the primary driver, accounting for 62% of labor productivity growth, given a relatively modest average TFP growth of 0.7% per year, contributing only 22%. ASEAN's labor quality contribution—about 2.0 points per year, roughly double East Asia's—reflects the rapid expansion of education and skill formation across the region (Box 8). Even so, ASEAN's labor productivity grew by 3.2% over 2000–2024, well below East Asia's 5.3%, as this strength in labor quality was outweighed by far weaker capital deepening—0.4 points from non-ICT capital, against 2.3 points in East Asia.

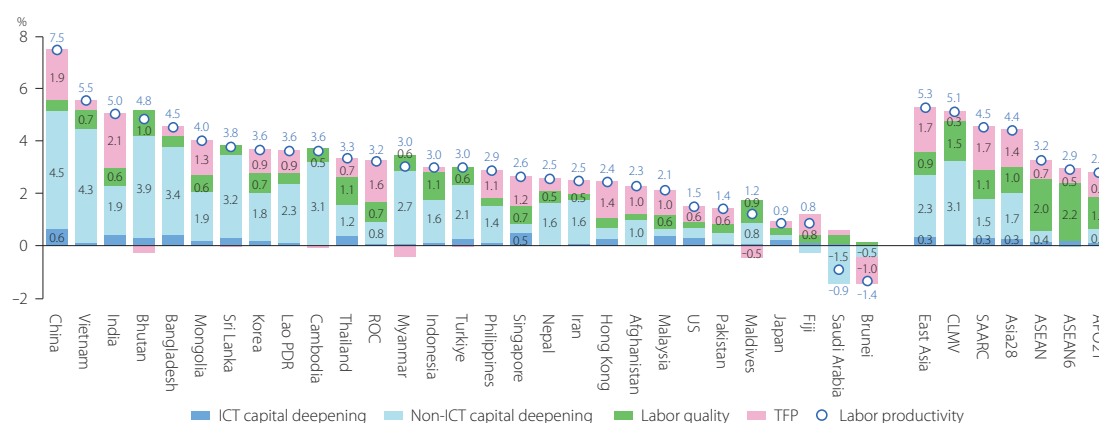


Figure 5.23 Sources of Labor Productivity Growth, 2000–2024

—Decompositions of the growth of GDP per hour to ICT and non-ICT capital deepening, labor quality, and TFP

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

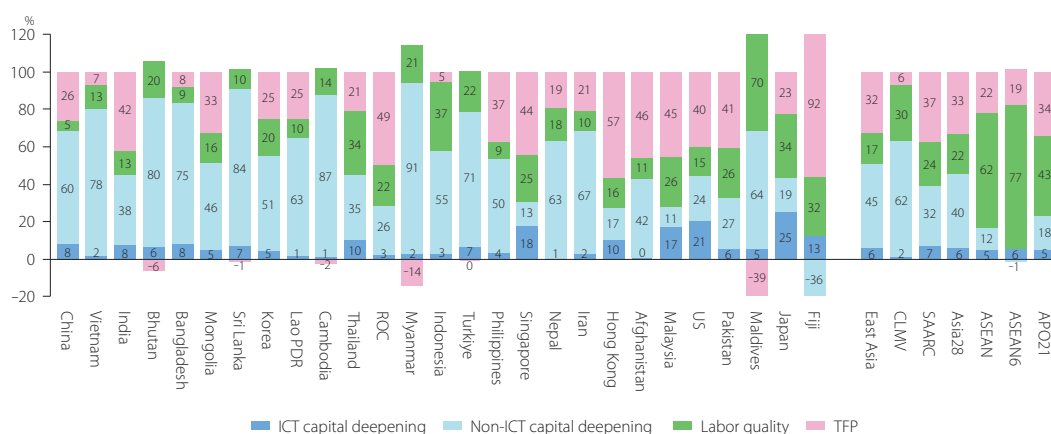


Figure 5.24 Contribution Shares of Labor Productivity Growth, 2000–2024

—Contribution shares of ICT and non-ICT capital deepening, labor quality, and TFP

Unit: Percentage. Source: APO Productivity Database 2026. Note: Countries with negative labor productivity growth are excluded.

Box 8 College Workers' Contribution to Economic Growth

The labor input measure for the Asia28 economies in this Databook accounts for wage rate differences across worker groups defined by gender, education, and age, reflecting differences in relative productivity. The term “labor quality” refers to the productivity effect arising from shifts in workforce composition—for example, an increasing share of college-educated workers, who command higher wages, raises the quality index (see Section 8.3 for details). Growth in labor input is decomposed into changes in total hours worked and changes in labor quality, based on the AQALI database developed by KEO. The database also enables further decomposition of labor input into components for college-educated and non-college-educated workers.

Figure 5.25 illustrates the long-term trends in the share of college-graduate workers among total hours worked in Asian countries. While it may be surprising that college labor is still expanding even in the US, there is even more rapid change in Asia. Korea increased its college share at an accelerated pace since the late 1990s and now accounts for more than 50% of total hours worked.

Among East Asian countries, Mongolia's high share of college workers, alongside a modest per capita GDP (PPP-adjusted) of USD 19,400 (Table 9.6), is distinctive. Mongolia had many students studying in Russia before 1991, when it became a market economy, and the female employment share was also high (Figure 3.19). Since the beginning of the 2000s, the number of college workers has expanded rapidly. While the country's recent economic growth has relied heavily on expansion in mining (coal and copper) and agriculture (Chapter 6), the higher quality of this labor force suggests scope for productivity gains in other sectors.

Figure 5.25 College Worker Share, 1970–2024

—Share of college labor in total hours worked

Unit: Percentage. Source: AQALI 2026.

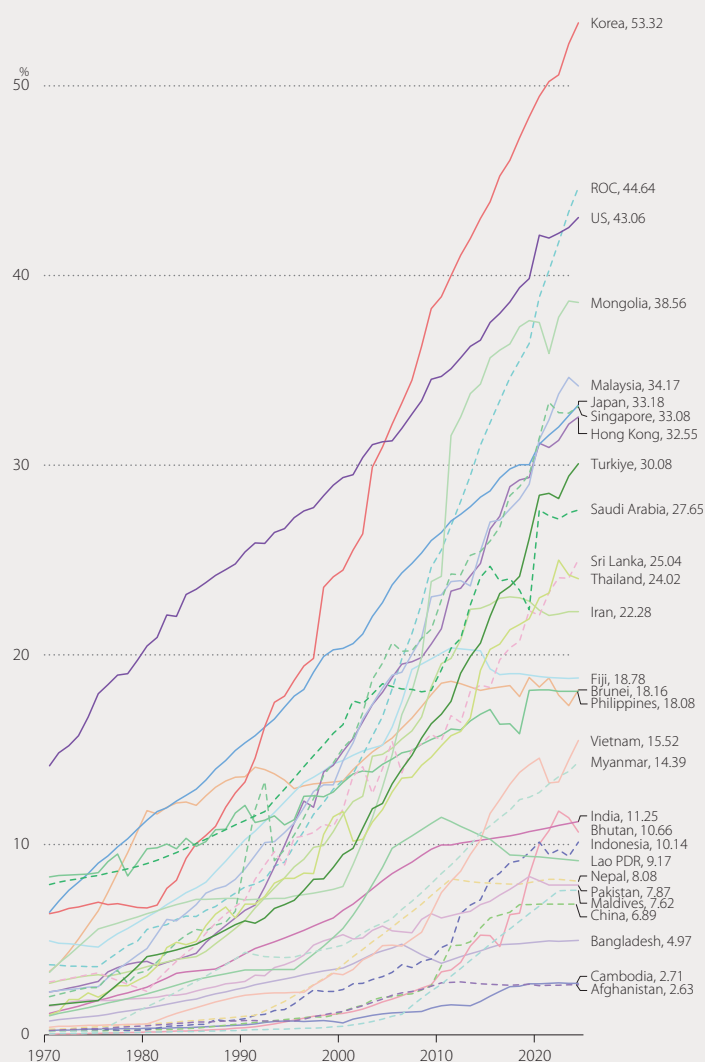


Figure 5.26 shows the contributions of the college and non-college labor input to economic growth in 2000–2024. The countries are listed in descending order of their economic growth rates during this period (see Figure 5.15 for the complete growth accounting, including capital input and TFP). The US, Japan, Korea, the ROC, and Hong Kong recorded economic growth due to the expansion of college labor, while non-college labor declined. On the other hand, in the CLMV (except Myanmar), Afghanistan, Bangladesh, Brunei, the Maldives, and Pakistan, economic growth is dominated by the expansion of non-college labor. Within a single country, or even across countries, there can be many differences in the quality of college labor. Despite these limitations, the decomposition helps clarify how improvements in labor quality contribute to economic growth.

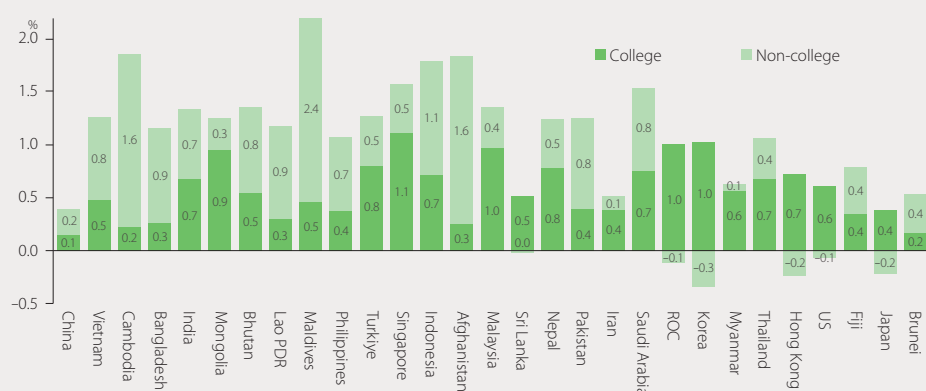


Figure 5.26 College and Non-college Labor Contributions to Economic Growth, 2000–2024

—Contributions of college and non-college labor to economic growth

Unit: Percentage (average annual contributions). Sources: AQALI 2026 and APO Productivity Database 2026.

5.6 Comparison with OECD Countries

To provide readers with a broader perspective on the results, this section compares the performance of Asian countries with that of OECD countries, as reported in the OECD Productivity Database (OECD 2025). For this comparison, the growth accounting for Asian countries is re-estimated using the OECD-compliant methodology presented specifically in this section of the Databook.

There are three main differences between the two methods. First, land, inventory, and mineral and energy resources are not considered capital inputs in the OECD-compliant methodology.⁴⁵ This adjustment tends to accelerate capital accumulation, thereby constraining the rate of TFP growth relative to the results in the other sections of the Databook. Second, changes in labor quality are not accounted for. Labor input is measured in hours worked; thus, the calculated TFP growth rate includes the effect of labor quality improvements, whereas the APO method separates these effects. Third, the APO method incorporates

45: Due to this methodological change, the ex-post rate of return on capital is re-estimated endogenously (Section 8.2.7). The OECD Productivity Database (OECD 2025) measures total input as a translog index of total hours worked and capital services. The estimates in this section are aligned with this approach, but two assumptions still differ: capital services of residential buildings are included (consistent with output that includes imputed owner-occupied housing rent), and capital compensation is measured as the residual of value added after labor compensation (defined as compensation for employees, the self-employed, and contributing family workers), whereas the OECD imputes it from an ex-ante rate of return. These differences affect the weights used to aggregate labor and capital, but their impact on volume estimates of capital services is considered limited.

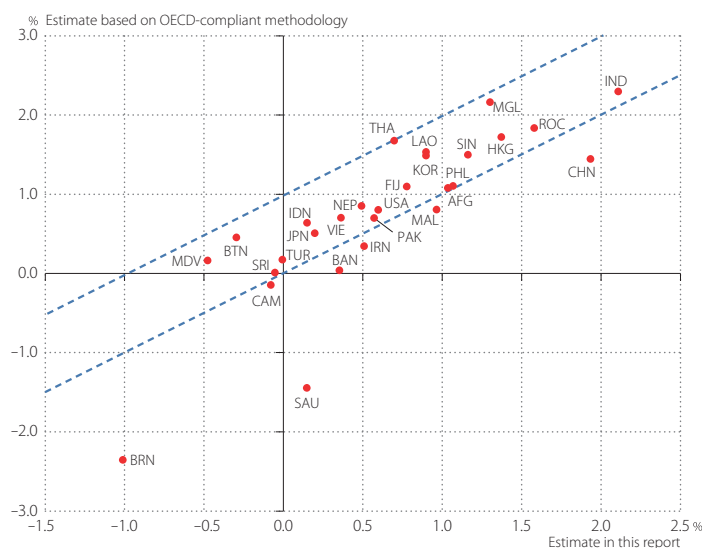


Figure 5.27 Comparison of TFP Estimates Based on Different Methodologies, 2000–2024

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026. Note: See footnote 45 for differences between the OECD-compliant methodology and the methodology of this report.

conceptual adjustments to the original national accounts of certain economies that are not reflected in the OECD-compliant figures.

Figure 5.27 provides the revision of the two-decade average TFP growth by country from 2000 to 2024, resulting from these two

methodological changes. The higher TFP under the OECD-compliant method places most economies above the 45-degree line. This largely reflects the omission of labor quality, whose contribution averages about 0.4% per year for Asia28 (Figure 5.15); since this method does not separate labor quality from TFP, such gains are absorbed into measured TFP. China is one of the exceptions, lying below the line. Because land is roughly constant in real terms, including it (as in the APO method) lowers the measured growth rate of total capital, whereas excluding it, as the OECD-compliant method does, raises the measured growth rate of capital and thus lowers residual TFP. This effect is large in China because land's high share of capital service costs outweighs the upward effect from omitting labor quality.

Figure 5.28 compares the sources of growth between Asian countries (based on the OECD-compliant methodology) and OECD countries for 2000–2024. Using the common method, Asian countries show higher TFP growth rates than OECD countries. Although these mature economies grow at a more subdued pace, TFP nonetheless accounts for a substantial share of their growth.

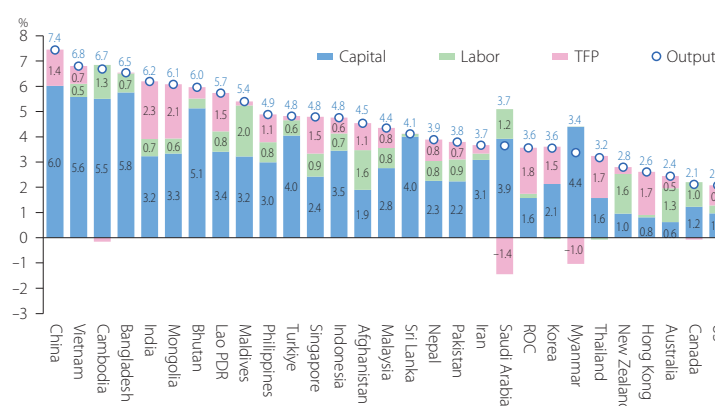


Figure 5.28 Comparison of Sources of Economic Growth with OECD Countries, 2000–2024

—GDP growth and contributions of capital, labor (hours worked), and TFP (based on the OECD-compliant methodology)

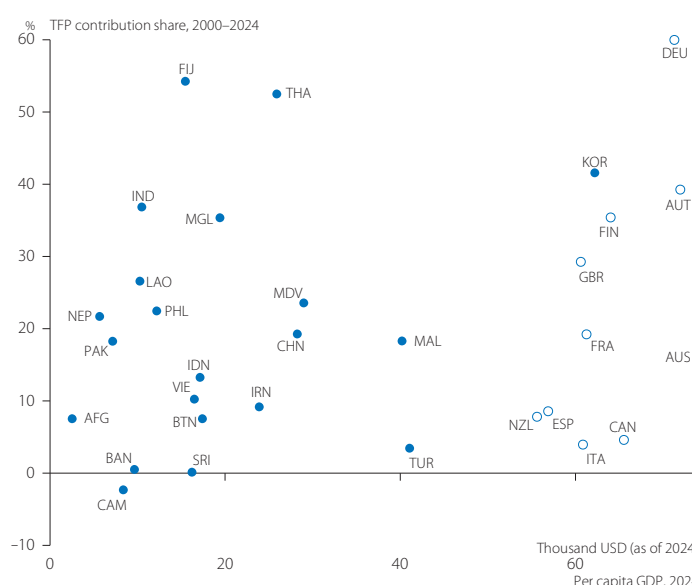
Unit: Percentage (average annual growth rate). Sources: APO Productivity Database 2026 for the Asia28 economies and the US. The OECD.Stat (Dataset: Productivity growth rates) and OECD (2025) for OECD countries (except Japan, Korea, Türkiye, and the US). Notes: In this methodology, the impacts of changes in labor quality are reflected in TFP, and land, inventory, and MER stock are excluded from capital inputs. The final year is 2022 for New Zealand and 2023 for Italy and Spain.

Figure 5.29 plots the TFP contribution share over 2000–2024 against per capita GDP in 2024 for the Asia28 economies (dark dots), alongside OECD countries (white circles). The TFP contribution share varies widely across income levels: among higher-income OECD economies, it ranges from near zero to about 60%, with a comparably broad spread across lower- and middle-income Asian economies. Within a similar income range, for instance, Fiji, Thailand, India, and Mongolia record relatively high TFP shares, whereas Cambodia, Bangladesh, and Sri Lanka show low or negative shares. The absence of a clear income gradient suggests that TFP growth is not confined to high-income economies; over the medium to long run, it can also play a substantial role in lower-income economies.

Figure 5.29 Comparison of TFP Contribution Share with OECD Countries, 2000–2024

—Contribution share of TFP in economic growth (based on the OECD-compliant methodology)

Unit: Percentage (contribution share) for the vertical axis and thousand USD for the horizontal axis. Sources: APO Productivity Database 2026 for the Asia28 economies and the US. The OECD.Stat (Dataset: Productivity growth rates and Productivity levels) and OECD (2025) for OECD countries (except Japan, Korea, Türkiye, and the US). Notes: The impacts of changes in labor quality are reflected in TFP, and land, inventory, and MER are not included as capital inputs. The ending year is 2022 for New Zealand and 2023 for Italy and Spain.



5.7 Energy Productivity

While labor, capital, and total factor productivity remain the core indicators of economic performance, resource productivity has become increasingly important in assessing long-term sustainability and competitiveness. Energy productivity provides one such perspective. Given current concerns about energy security and climate change, this section examines the relationship between output and energy inputs.⁴⁶

In Asia38, to produce 48% of the world's output in 2024 (Figure 3.2), 50% of the world's energy was consumed (Figure 5.30), and 60% of the world's CO₂ was emitted (Figure 5.31), compared to 14%, 9%, and 6%, respectively, for the EU27. This indicates that, at the aggregate level, Asia has lower energy productivity—defined as output per unit of final energy consumption⁴⁷—and a higher carbon intensity of energy use than the EU27. A major difference between the regions is that the richer EU has a bigger share of services in aggregate GDP.

46: Due to publication lags in energy consumption and CO₂ emissions statistics, energy productivity estimates in previous editions were typically available one year later than the other productivity indicators. In this edition, provisional estimates have been developed to align the reference year with the rest of the Databook, allowing energy productivity to be reported for 2024 (see Section 8.5.3 for data sources).

47: Final energy consumption refers to the energy delivered to end-users, distinct from primary energy consumption, which includes losses from energy transformation, transmission, and distribution. This measure sums energy quantities across different types in physical units (e.g., tons of oil equivalent, toe), unlike the translog index-based energy price measure used in Section 2.4.

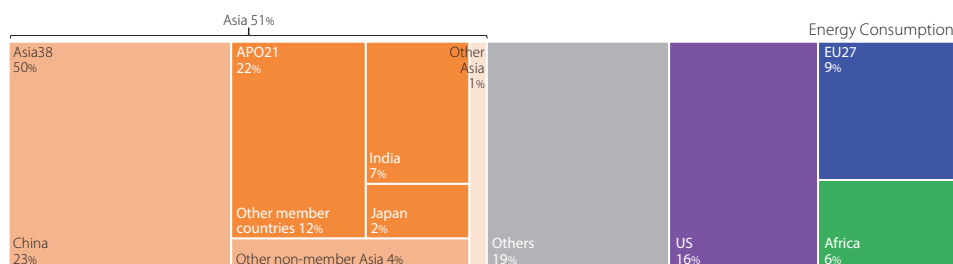


Figure 5.30 Asia in World Energy Consumption, 2024

Unit: Percentage (World final energy consumption=1.0). Source: APO Productivity Database 2026. Note: See Country and Group Definitions (p. 7) for the definitions of Asia, Asia38, Asia28, and APO21.

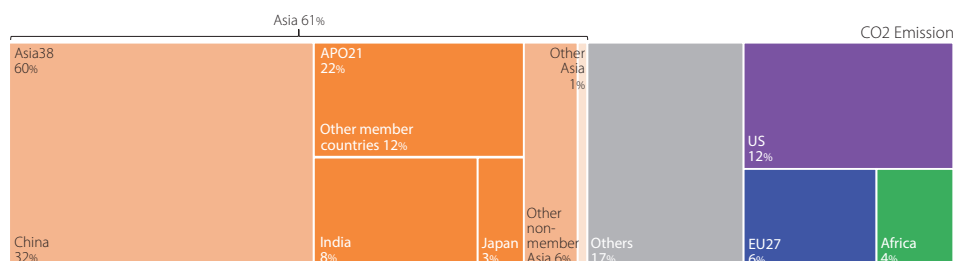


Figure 5.31 Asia in World CO₂ Emissions, 2024

Unit: Percentage (World CO₂ emission from fuel combustion=1.0). Source: APO Productivity Database 2026. Note: See Country and Group Definitions (p. 7) for the definitions of Asia, Asia38, Asia28, and APO21.

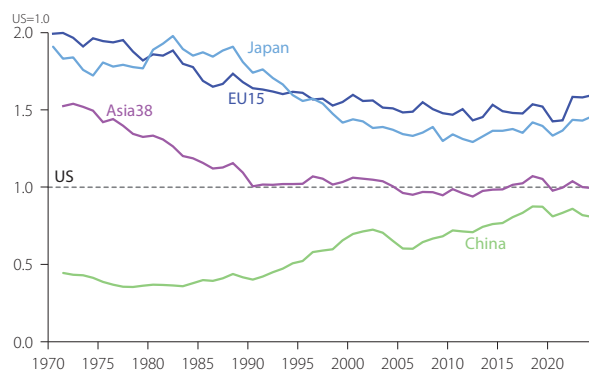
There is considerable diversity in energy productivity across major regions. Figure 5.32 compares energy productivity trends for Japan, China, Asia38, and the EU15 relative to the US from 1970 to 2024. Such aggregate-level comparisons should be interpreted with caution, but they can still offer useful insights. Japan's energy productivity was on par with that of the EU15 in the early 1990s but has since fallen behind. However, this apparent divergence partly reflects more pronounced industrial hollowing-out in the EU, where a larger share of energy-intensive production has been offshored (see Section 2.4). As a result, aggregate energy productivity in the EU15 may appear to have improved more than it actually has in terms of domestic production efficiency.⁴⁸ Based on this gross measure, the energy productivity levels of Japan and the EU15 remain considerably higher than those of the US and Asia38, which enjoys lower energy prices.

China, by contrast, had energy productivity levels below 50% of the US in the 1970s and 1980s. Since the 1990s, however, China has

Figure 5.32 Energy Productivity of Japan, China, Asia38, and the EU, 1970–2024

—Index of GDP at constant prices (using the 2021 PPP) per final energy consumption relative to the US

Unit: Index (the US = 1.0). Sources: Official national accounts in each country (including adjustments by APO-PDB) and IEA (2025).



48: The divergence between broad industry-level gains and the aggregate, driven by shifts in industrial structure, is analyzed for Japan in PRN2615.

improved substantially, reaching about 80% of the US level by 2024. This catch-up largely reflects domestic structural shifts—a rising share of services and a declining share of manufacturing in GDP, peaking in the late 1990s (see Figure 6.19). The gap with Japan and the EU15, however, has not narrowed and has, if anything, widened since the late 2010s. This divergence is unlikely to stem from domestic efficiency alone. It coincides with the acceleration of decarbonization policies in advanced economies, which appears to have shifted a growing share of energy-intensive production toward emerging Asia—the mirror image of the hollowing-out noted earlier. To this extent, part of the apparent productivity gap reflects where energy-intensive output is located rather than how efficiently it is produced.

Figure 5.33 illustrates the relationship between labor and energy productivity in 2024, with labor productivity on the vertical axis, energy productivity on the horizontal axis, and bubble size indicating per capita GDP. Read in order of per-capita income, the economies trace a path through the figure. The lowest-income economies (such as Nepal, Cambodia, and Lao PDR) cluster in the lower-left. As development proceeds, energy productivity rises while labor productivity remains low, shifting economies toward the lower-right (Bangladesh, Sri Lanka, and the Philippines). Industrialization and capital accumulation then raise labor productivity at the expense of energy productivity, moving economies upward and to the left (China and Thailand). At higher levels of development, both improve together, lifting economies toward the upper-right (Japan, Korea, and the EU15). The path is therefore entered from below: economies move rightward along the bottom of the figure, turn upward and to the left as manufacturing expands, and finally rise toward the upper-right as energy pricing comes to reflect internal and external costs more fully and activity shifts toward services, which consume less energy, resulting in a recovery of energy productivity.

Figure 5.33 Labor Productivity and Energy Productivity, 2024

—Per-hour labor productivity level and energy productivity level

Unit: USD (labor productivity) per hour for the vertical axis and thousand USD (energy productivity) per toe for the horizontal axis. Bubble size and shading both indicate per capita GDP level in 2024. Source: APO Productivity Database 2026.

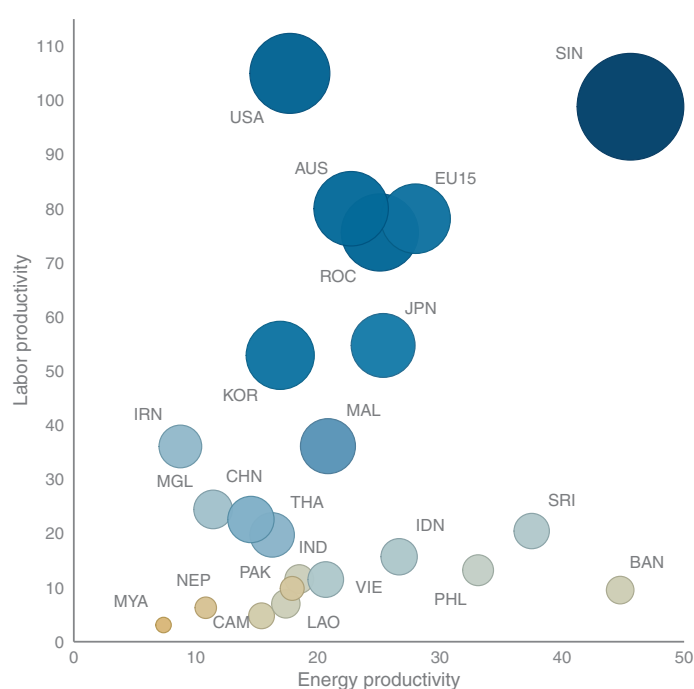


Figure 5.34 decomposes the sources of growth in CO₂ emissions from fuel combustion in Asian countries from 2000 to 2024, using the Kaya identity. This framework attributes changes in CO₂ emissions to three factors: real GDP growth, the carbon intensity of energy, and energy productivity (shown with a negative sign, since gains in energy productivity reduce emissions). In all countries where CO₂ emissions increased (marked by the circles), output growth was the dominant driver. While energy productivity improved across all countries during this period, these gains were generally insufficient to offset the increase in energy consumption driven by economic expansion.

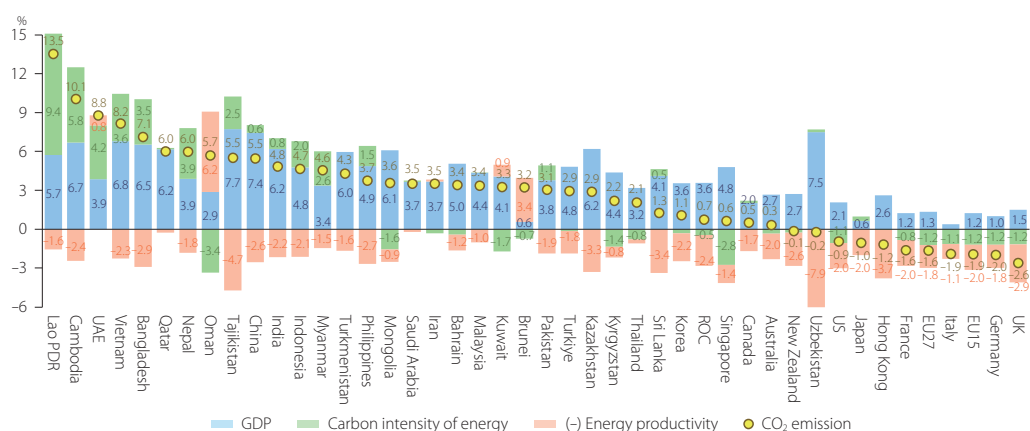


Figure 5.34 Sources of CO₂ Emission Growth, 2000–2024

Unit: Percentage (average annual growth rate). Sources: Official national accounts in each country (including adjustments by APO-PDB) and IEA (2024, 2025).

While developed countries and a few rich Asian countries have seen a decline in their energy carbon intensity, in many Asian economies it has increased. This is primarily due to increased coal consumption. Japan achieved some improvement in energy productivity from 2000 to 2024. However, the carbon intensity of energy increased due to the low operation rate of nuclear power plants following the Fukushima Daiichi nuclear disaster in March 2011. Singapore realized a significant improvement (decrease) in the carbon intensity of energy through the shift from oil to LNG in electricity power generation. This helped largely offset the increases in CO₂ emissions that accompanied strong economic growth, despite a modest improvement in energy productivity.

During this period, the decoupling of GDP growth and CO₂ emissions is evident in the EU15, Japan, and the US, as shown in Figure 5.34. However, this may be largely due to the shift of energy-consuming manufacturing activities to Asian countries, where producing the same output requires more energy and emits more CO₂—so that global emissions may not fall, or may even rise. In this sense, the apparent decoupling overstates the global reduction in emissions. There is still a need for an international institutional design that can effectively curb global emissions.

The implications differ for economies still in the earlier stages of the path traced in Figure 5.33—where raising labor productivity through industrialization and capital accumulation tends to come at the temporary expense of energy productivity—prioritizing decarbonization before this productivity base is established risks slowing the very gains in labor productivity that underpin long-term development. Environmental sustainability remains an essential long-term objective, but the sequencing of productivity and decarbonization goals matters, and the appropriate balance differs across stages of development.

Box 9 Energy Resources and TFP: Evidence from Saudi Arabia

Omitting MER from capital input can lead to biased assessments of TFP, particularly in resource-rich economies. In such cases, changes in resource stocks, especially depletion, may be incorrectly attributed to TFP, distorting the interpretation of growth performance. Since the 2023 edition, the APO-PDB incorporates MER as a capital input, based on the ANRD developed at KEO.

Figure 5.35 illustrates the implications of this framework for Saudi Arabia, newly incorporated into the APO-PDB in this edition. The left panel shows the composition of capital relative to GDP, highlighting the dominant role of MER, particularly oil, in the capital stock. The right panel compares TFP indices with and without accounting for MER. When MER is excluded, TFP exhibits a pronounced downward trend, reflecting the depletion of resource stocks. In contrast, when MER is included as capital inputs, the TFP path is substantially revised upward and appears more stable over time.

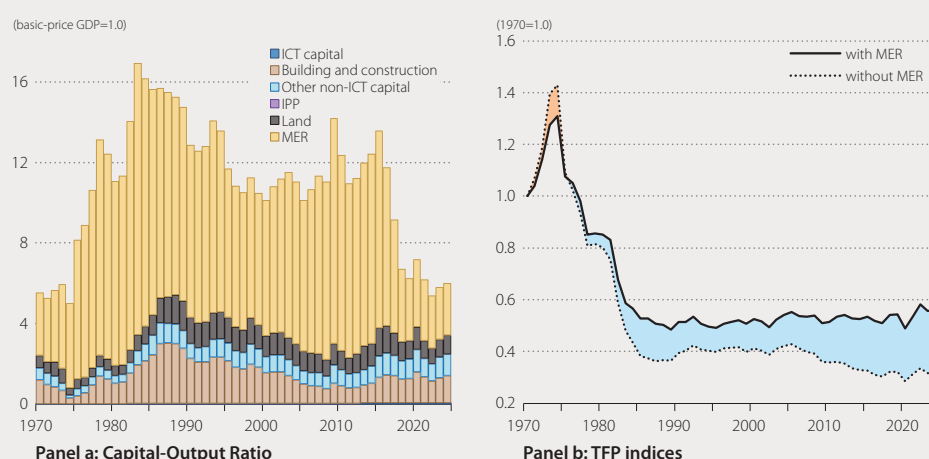


Figure 5.35 Capital Composition and TFP Measurement in Saudi Arabia, 1970–2024

—TFP indices with and without MER capital

Unit: Share (basic-price GDP=1.0) and Index (TFP in 1970=1.0). Sources: APO Productivity Database 2026 and ANRD 2026. Notes: In the right panel, the bold solid lines represent TFP estimates based on a measurement framework that includes MER as capital inputs, while the dotted lines show TFP estimates excluding MER. GDP series incorporates GASTAT's 2023 benchmark comprehensive revision (released in May 2025); see Jeyhun (2026) for an independent verification of the revision.

This contrast underscores a key measurement issue. In resource-rich economies, the decline in extractable resource stocks represents a reduction in capital input rather than a deterioration in productive efficiency. Failure to account for this distinction leads to an underestimation of TFP and misinterpretation of growth dynamics. The case of Saudi Arabia illustrates how incorporating MER can fundamentally alter the assessment of productivity performance.

Estimates of MER stocks in the ANRD are constructed using production-based measures and involve several assumptions regarding valuation and depletion (Section 8.2.6). While these estimates are subject to measurement uncertainty, they provide a consistent framework for incorporating natural resource capital into growth accounting and improving cross-country comparability.

6 Growth from Industry Perspective

Highlights

- While Asian economies are diversifying away from agriculture, forestry, and fishing, the sector still dominates employment, accounting for 28% of total employment in Asia38 in 2024, down from 68% in 1980. Its share in value added fell more moderately, from 16% to 9% over the same period.
- Manufacturing accounted for over 20% of total value added in 11 of the Asia38 economies in 2024, reaching 37% in the ROC, 29% in Cambodia and Korea, 27% in Vietnam, 25% in China, and 24% in Thailand. It is led by machinery and equipment in most economies, with exceptions such as Bangladesh and Cambodia, which concentrate on light manufacturing such as textiles and food.
- Manufacturing's contribution to economic growth in Asia38 fell from 28% in 1990–2010 to 24% in 2010–2024, as growth shifted toward services. For labor productivity growth, services now contribute as much as manufacturing, with no significant difference between the manufacturing and non-manufacturing sectors in Asia38.
- The manufacturing sector contributed 28% to regional labor productivity growth in East Asia and the CLMV in 2010–2024, but somewhat less in SAARC, at 16%. In SAARC, 47% of labor productivity growth came from services, compared with 37% in East Asia and 34% in the CLMV.
- Several lower-income economies have raised per capita income while manufacturing shares remained low, raising the question of premature deindustrialization. Manufacturing peaks vary widely, from the mid-twentieth century to the 1970s in mature economies to the 2000s in parts of Southeast Asia, and the ROC and Korea show an atypical twin-peaked pattern.

Decomposing aggregate growth accounts to the industry level provides essential insights into the drivers of a country's economic dynamics that shape its overall performance, strengths, and vulnerabilities. A broad industry base reflects diversification and sophistication in the economy, making it more resilient to economic shocks. Relying on a narrow industry base leaves an economy more vulnerable to shocks and susceptible to volatility in commodity prices. Differences in the composition of economic activities across countries are one of the main sources of the gap in average labor productivity observed at the aggregate level in Chapter 5. By analyzing the industry structure of the Asian economies, one can trace the path of economic development and identify each country's stage based on its composition of production activities.⁴⁹

6.1 Industrial Structure

Table 3.2 presents country groupings based on stages of development, as measured by long-run economic growth from 1970 (using per capita GDP relative to the US). Table 6.1 regroups countries using the same set of criteria as in Table 3.2, but applies the grouping using 2024 income levels instead of 1970

49: Constructing the industry origins of labor productivity growth requires collecting data from different sources. Data inconsistencies arising from the fragmentation of national statistical frameworks pose enormous hurdles for researchers in this field. The industry data in this chapter is mainly based on official national accounts. Where back data is unavailable, series are spliced together using different benchmarks and growth rates. Data inconsistencies in concepts, coverage, and data sources have yet to be fully addressed, although the levels of breakdown are deliberately chosen to minimize the potential impact of these inconsistencies. APO-PDB examines the problems of time-series data connections in each country, but issues remain. Readers should bear these caveats in mind in interpreting the results.

Table 6.1 Country Groups by Current Economic Level and Catching-Up Pace, 2010–2024
 —Level and average annual growth rate of per capita GDP at constant market prices, using the 2021 PPP

Per capita GDP level in 2024, relative to the US	Average annual rate of catch-up to the US during 2010–2024					
	(C6) < -1%	(C5) -1% ≤ < 0%	(C4) 0% ≤ < 1%	(C3) 1% ≤ < 2%	(C2) 2% ≤ < 3%	(C1) 3% ≤
(D1) 100% ≤	Brunei, Qatar			Singapore		
(D2) 70% ≤ < 100%	UAE	Australia, EU15, EU27, France, Germany, Hong Kong, Saudi Arabia, UK	Korea	ROC		
(D3) 40% ≤ < 70%	Kuwait, Oman	Bahrain, Japan, New Zealand	Kazakhstan	Malaysia	Türkiye	
(D4) 20% ≤ < 40%		Iran, Thailand	Maldives, Turkmenistan	Bhutan	Mongolia	China
(D5) 10% ≤ < 20%			Fiji, Sri Lanka	Indonesia, Philippines	India, Lao PDR	Bangladesh, Uzbekistan, Vietnam
(D6) < 10%	Afghanistan	Myanmar	Kyrgyzstan, Pakistan	Nepal	Cambodia, Tajikistan	

Source: APO Productivity Database 2026. Notes: The annual catch-up rates in the column are based on the estimates for 2010–2024. Another country grouping is provided in Table 3.2.

incomes, and focuses on how quickly each group (D1 to D3) has been catching up to the US since 2010. Korea and the ROC, which started in the highest catch-up column at low-income levels in Table 3.2, are now rich and have moved to the upper rows of Table 6.1. Indonesia and Sri Lanka have also climbed the income ladder, though their pace of catch-up has since slowed. On the other hand, Afghanistan remains in the bottom-left corner, with very low growth, despite being a low-income country. Pakistan, Myanmar, and Cambodia also stay in the bottom row. China, Malaysia, and Türkiye continue to exhibit high rates of catch-up growth.

Countries at the lower rungs of the development ladder tend to have a greater value-added share in their agriculture, forestry, and fishing sector.⁵⁰ Based on the measures using the one-digit industry classification, this primary industry dominates in eight countries: Afghanistan, Lao PDR, Myanmar, Nepal, Tajikistan, Pakistan, India, and Fiji. Figure 6.1 illustrates the industry composition of the Asia38 economies and regions in 2024, with per capita GDP presented in the left panel.⁵¹ In the figure, the countries are listed in descending order of per capita GDP. There is a clear negative correlation between the share of the primary industry (represented in red) and income per capita. The outliers are rich New Zealand, with a 5% share in agriculture, and poor Bangladesh, with only 12% in agriculture versus 23% in manufacturing. The changes in industry shares of value added are presented in Table 9.15.

50: In Chapter 5, GDP is adjusted to be valued at basic prices for all countries (or, where official estimates are unavailable, the estimates in APO-PDB). In this chapter, however, the industry-level definition of GDP differs across countries due to data availability, ranging from factor cost to market prices. See Section 8.1.7 for the country-by-country classification.

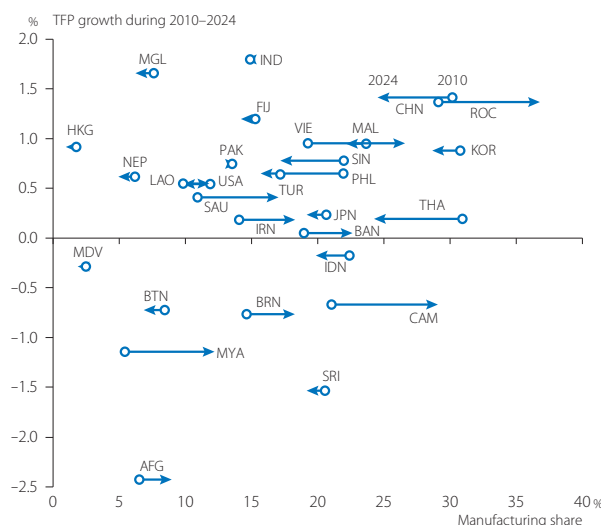
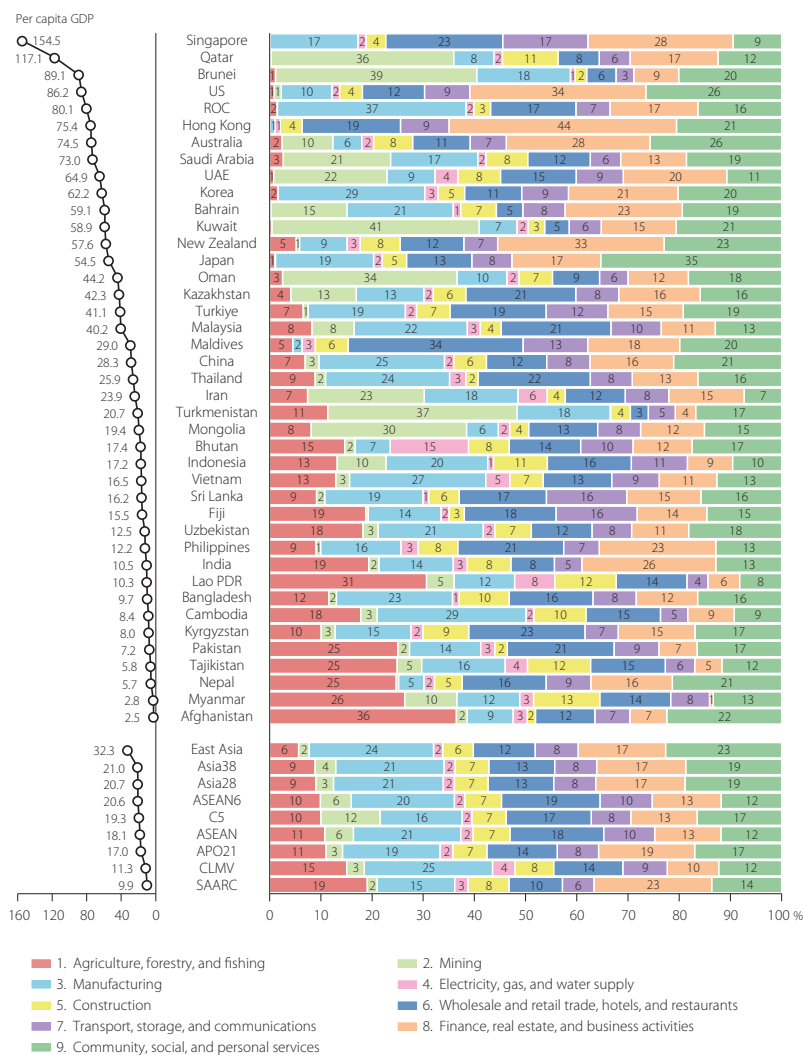
51: The nine industries are 1–agriculture, forestry, and fishing; 2–mining; 3–manufacturing; 4–electricity, gas, and water supply; 5–construction; 6–wholesale and retail trade, hotels, and restaurants; 7–transport, storage, and communications; 8–finance, real estate, and business activities; and 9–community, social, and personal services. The regional averages of industry shares in value added are calculated based on each country's industry-level GDP, using economy-wide GDP PPPs. These estimates do not account for cross-country differences in the relative prices of industry-specific outputs.

Figure 6.1 Industry Value-added Share, 2024

— Industry share of GDP at current prices

Unit: Percentage. Source: APO Productivity Database 2026. Notes: The left panel shows per capita GDP, using the 2021 PPP for GDP, the reference year 2024 (thousand USD). The countries covered are the Asia38 economies, along with the US, Australia, and New Zealand as reference countries.

Adopting technologies from advanced economies remains a crucial pathway to fostering productivity growth in less-developed countries. From this perspective, manufacturing has traditionally played a pivotal role in enabling economies to advance in their development trajectories. In 2024, manufacturing accounted for over 20% of total value added in 11 of the Asia38 economies (Figure 6.1). Figure 6.2 compares the manufacturing shares in 2010 and 2024 and average TFP growth rates during 2010–2024. Across most economies, higher manufacturing shares tend to



to accompany higher TFP growth, with China and the ROC combining high manufacturing shares with relatively high TFP growth.

Figure 6.2 Manufacturing GDP Share and TFP Growth, 2010–2024

Unit: Percentage (average annual growth rate for the vertical axis and current-price share for the horizontal axis). Source: APO Productivity Database 2026. Notes: The arrows show changes in manufacturing share from 2010 (white circle) to 2024 (arrowhead).

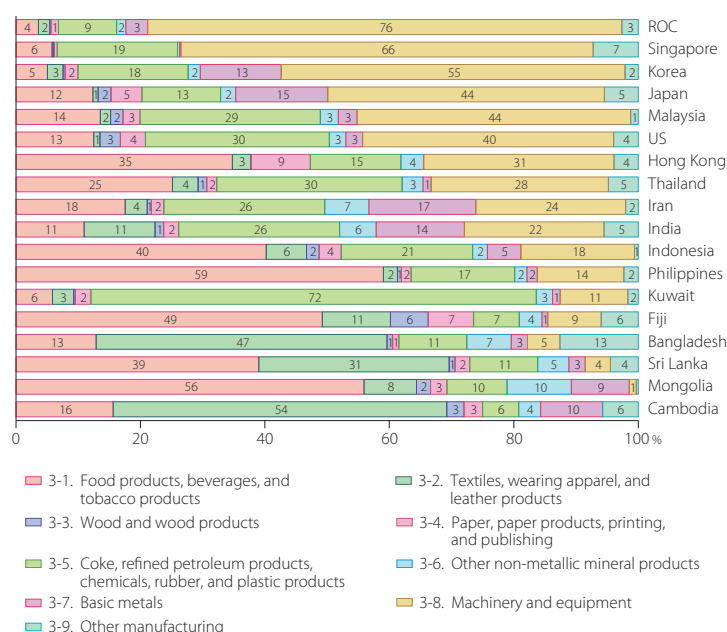


Figure 6.3 Industry Shares of Value Added in Manufacturing, 2024

—Shares of sub-industry GDP at current prices in manufacturing

Unit: Percentage. Source: Official national accounts in each country, including adjustments by APO-PDB.

Several economies, however, depart from this pattern. Thailand is an exception within the middle-income group, where, despite its high 31% share of manufacturing in 2010, it recorded weak TFP growth of 0.2% during 2010–2024. Conversely, India, with a relatively low 15% share of manufacturing, achieved the strongest TFP gain of 1.8%. India did experience a structural

shift, but more from low-productivity agriculture to high-value service sectors, such as ICT and digital outsourcing, and less toward manufacturing.

Figure 6.3 illustrates the breakdown of industry GDP shares within the manufacturing group, comprising nine sub-industries, for 17 selected Asian economies and the US, as of 2024.⁵² Countries are sorted based on the size of their share of industry 3.8, which includes machinery and equipment manufacturing (including vehicles, as shown in the yellow bars). The dominance of machinery and equipment manufacturing is apparent in the Asian Tigers and Japan. At the other end are countries dominated by light manufacturing, e.g., 3.1—food products, beverages, and tobacco products sector in Mongolia, the Philippines, and Fiji; 3.2—textiles, wearing apparel, and leather products in Cambodia and Bangladesh. Industry 3.5—coke, refined petroleum products, chemicals, rubber, and plastic products—has been important for Kuwait, the US, Malaysia, Thailand, India, and Iran, with the shale revolution in the US and geopolitical shifts raising crude imports from Russia to India, which may have further affected the sector's composition in recent years.

Figure 6.4 illustrates the decline in the share of the agriculture, forestry, and fishing industry in total value added over time in poorer Asian economies, those with a per capita GDP lower than 40% of the US in 2024. This could reflect the decline in agricultural output and/or the more rapid expansion in other sectors. In the lowest-income economies of Group-D6 (Table 6.1), where per capita GDP is below 10% of the US level in 2024, agricultural shares generally remain high, and the downward trend is less pronounced than in other groups (Figure 6.4, right panel). There is a broad tendency for the agricultural GDP share to settle in the 10–20% range in many of these economies, for example, by the 2000s in Group-D5 (center panel) and the 2010s in Group-D4 (left panel), though Lao PDR remains above this level.

52: Manufacturing consists of nine sub-industries: 3.1—food products, beverages, and tobacco products; 3.2—textiles, wearing apparel, and leather products; 3.3—wood and wood products; 3.4—paper, paper products, printing, and publishing; 3.5—coke, refined petroleum products, chemicals, rubber, and plastic products; 3.6—other non-metallic mineral products; 3.7—basic metals; 3.8—machinery and equipment; and 3.9—other manufacturing.

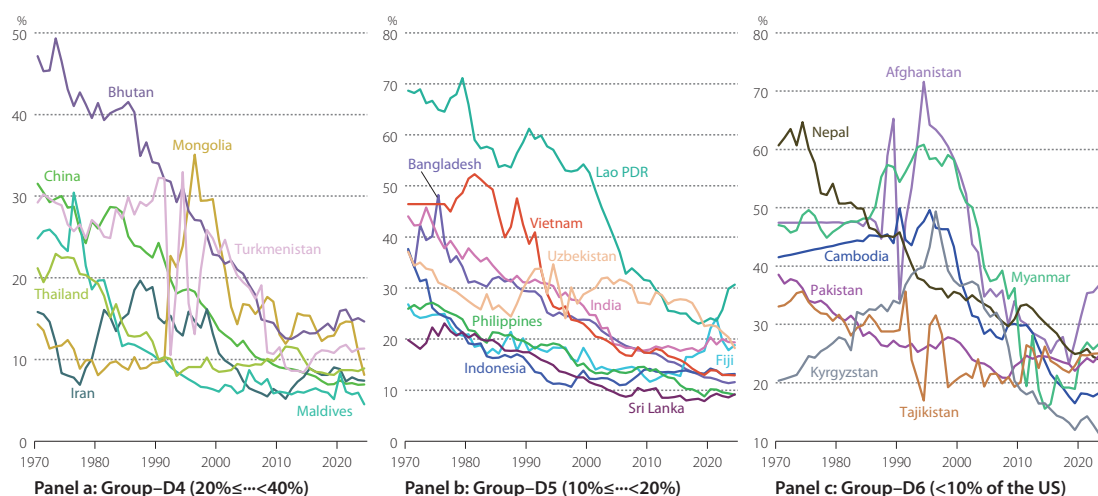


Figure 6.4 Value-added Share of Agriculture, Forestry, and Fishing, 1970–2024

—Share of agriculture, forestry, and fishing sector in GDP at current prices

Unit: Percentage. Source: Official national accounts in each country, including adjustments by APO-PDB. Note: Countries are grouped by per capita income in 2024 relative to the US, as defined in Table 6.1.

6.2 Employment Allocation

Despite the relative decline in the share of agriculture, forestry, and fishing in total value added, employment in the sector still accounts for 28% of total employment in Asia³⁸ in 2024. Figure 6.5 shows industry shares of total employment by country and region, ranked by per-worker labor productivity in 2024.

Figure 6.6 traces the historical trajectory of Japan's employment share of agriculture from 1885 to 2024. The share for each country in 2024 is mapped against this history (as circles). Large shares of agriculture, forestry, and fishing employment—over 30% in 11 countries—correspond to Japan's level at the end of the 1950s and the onset of high economic growth. This may indicate room for improvement in labor productivity and per capita income if more productive industries are developed and jobs are created, following the Japanese model.

Figure 6.7 presents the trend of agricultural employment share over time for the same three groups of countries as in Figure 6.4, namely, D4, D5, and D6. These trends suggest that the relative decline in the share of agriculture, forestry, and fishing in total value added has been accompanied by a downward trend in its share in total employment.⁵³ This trend is unmistakable in most of the countries plotted in Figure 6.7.⁵⁴ Between 1970 and 2024, the employment share in this sector dropped from 81% to 21% in China and from 77% to 29% in Thailand.

Comparisons of the value-added and employment shares reveal some interesting facts. Agriculture, forestry, and fishing is the only industry sector that consistently has a disproportionately higher employment

53: Nepal's employment-by-industry figures are constructed by interpolating benchmark data from its labor force survey and population census. Figure 6.7 indicates that its share of agriculture has increased since 2001. This reflects the employment share of agriculture at 61% in the population census of 2001 and its share of 70% in the labor force survey of 2008.

54: However, the decline in a share does not always reflect an actual fall in employment for the agriculture sector. Rather, it could reflect total work rising faster than employment in agriculture. Countries experiencing a consistent fall in actual employment in the agriculture sector are, for example, the ROC, Hong Kong, Japan, and Korea. In contrast, employment has risen in Bangladesh, India, Iran, Lao PDR, Nepal, and Pakistan. Other countries such as Indonesia, Malaysia, Singapore, Sri Lanka, Thailand, and Vietnam have yet to establish a trend in employment growth. However, China has seen employment in agriculture falling since the turn of the millennium.

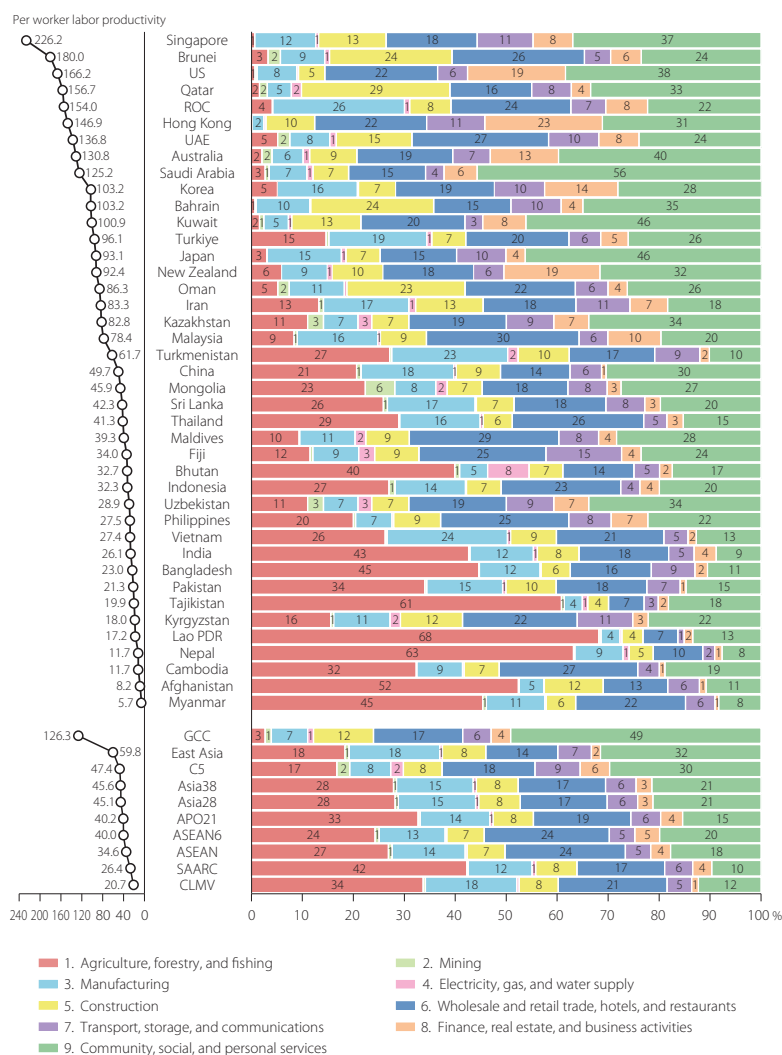


Figure 6.5 Industry Shares of Employment, 2024

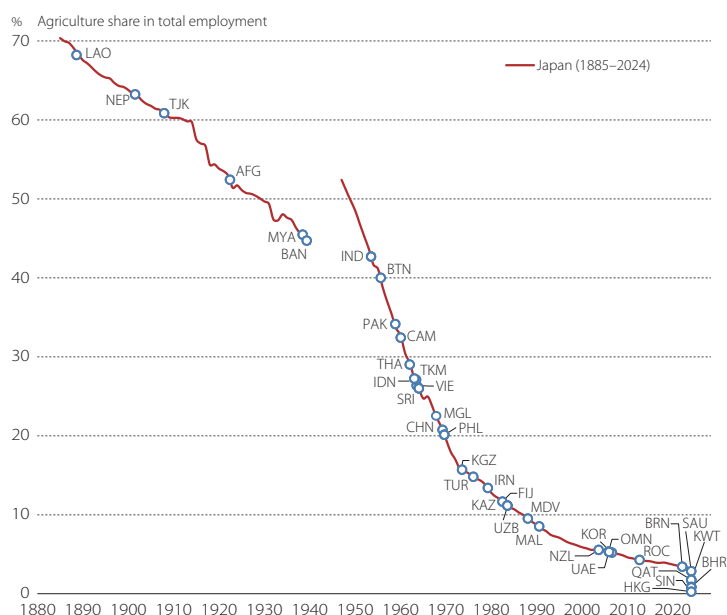
Unit: Percentage. Source: APO Productivity Database 2026; underlying employment data are compiled from population censuses and labor force surveys. Notes: The left panel displays per-worker labor productivity using the 2021 PPP and the reference year 2024 (thousand USD). The countries covered are the Asia38 economies, along with the US, Australia, and New Zealand as reference countries.

share than justified by its share in value added across all economies in Asia, except Fiji and Uzbekistan. This suggests that agriculture remains highly labor-intensive and/or that there is a high level of underemployment in the sector, implying low labor productivity relative to other industries.⁵⁵ Thus, countries with a sizeable agriculture sector often have low per capita GDP. In these cases, shifting out of agriculture will help boost economy-wide labor productivity.

Figure 6.6 Evolution of Japan's Agricultural Employment Share and Asia's 2024 Level

—Share of the number of employment in agriculture, forestry, and fishing for Japan from 1885 to 2024, and for Asian countries in 2024

Unit: Percentage. Sources: APO Productivity Database 2026. The historical data sources of Japan are Ohkawa, Takamatsu, and Yamamoto (1974) during 1885–1954 and population censuses since 1920.



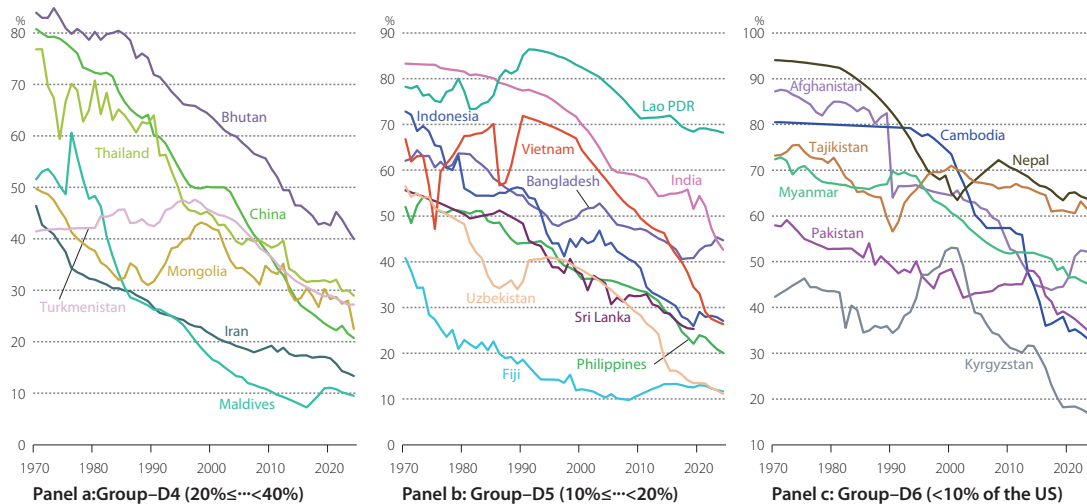


Figure 6.7 Employment Share in Agriculture, Forestry, and Fishing, 1970–2024

—Share of the number of employment in agriculture, forestry, and fishing

Unit: Percentage. Source: APO Productivity Database 2026; underlying employment data are compiled from population censuses and labor force surveys. Note: Countries are grouped by per capita income relative to the US, as defined in Table 6.1.

The US is an exception, where the agricultural value-added and employment shares are similar at 1%, as shown in Figure 6.8, suggesting that labor productivity in this sector is higher than that achieved in Asian countries.⁵⁶ The reverse is true for the finance, real estate, and business activities industry, which often generates a much greater value-added share than its employment share suggests. In 2024, the sector accounted for 34% of total value added generated by 19% of US employment versus 18% and 3% in Asia38, respectively (Figure 6.1 and Figure 6.5).

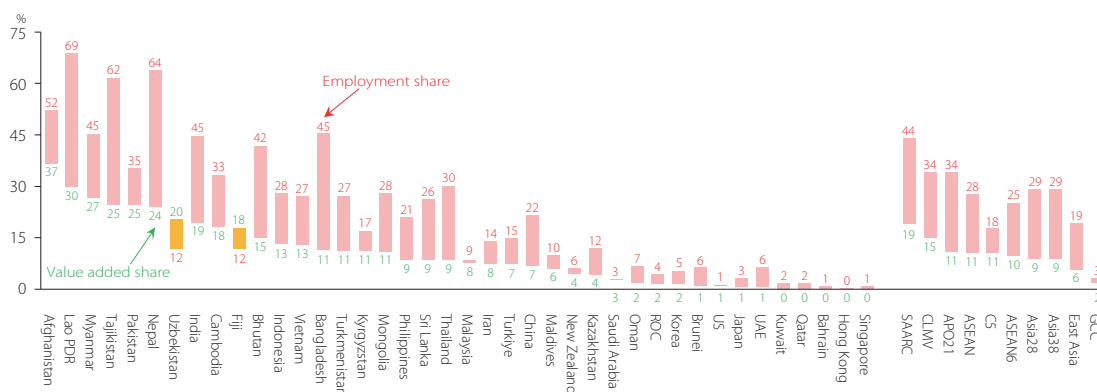


Figure 6.8 Value Added and Employment Share of Agriculture, Forestry, and Fishing, 2024

—Industry share of GDP at current prices and the number of employment

Unit: Percentage. Source: APO Productivity Database 2026.

55: Gollin, Parente, and Rogerson (2004) and Caselli (2005) demonstrate a negative correlation between the agricultural employment share and GDP per worker. They show that the agriculture sector was relatively large in less well-off countries, and agricultural labor productivity was lower than in other sectors.

56: Jorgenson, Nomura, and Samuels (2016) indicate that the agriculture, forestry, and fishing sector is one of the industries that realized a consistently high TFP growth in the US (1.0% on average per year in 1970–2012), compared to its stagnation in Japan's agriculture (–0.1%), reflecting differences in the scale of individual production units, as well as massive public investments (including R&D) in new agricultural technology in the US.

When the number of underemployed workers (known as “labor surplus”) in each country is estimated, based on the simple assumption that long-run employment share is equivalent to the value-added share of agriculture, forestry, and fishing in the status of zero labor surplus,⁵⁷ the labor surplus population in Asia38 exceeds three hundred million in 2024. Figure 6.9 presents the country contributions and regional totals (right panel) of the estimated labor surplus. It suggests a labor surplus of around 100 million in both India and China in 2024. While China’s economic slowdown is notable, its large labor surplus suggests the country may follow a different growth trajectory from those of Japan and South Korea.

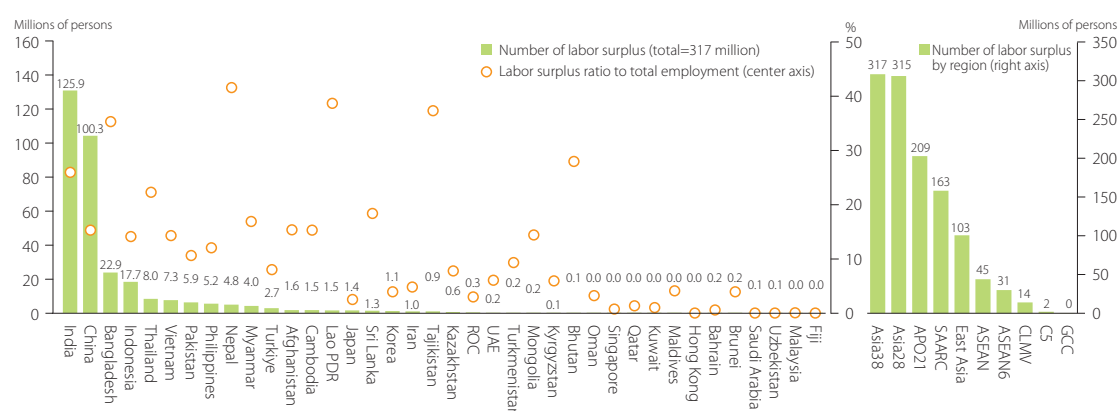


Figure 6.9 Labor Surplus, 2024

—Number and ratio of labor surplus

Unit: Millions of persons on the left and right axes and percentage on the center axis. Source: APO Productivity Database 2026.

It is the manufacturing sector that largely absorbs workers displaced from the agricultural sector, especially in the initial stages of economic development. Figure 6.10 traces the relationship between manufacturing GDP growth and manufacturing employment growth for Asian countries over the past five decades. Each point represents the average annual growth rate for each decade, and the arrowhead indicates the growth rate for the most recent subperiod, 2010–2024. If manufacturing GDP and employment grow at the same rate, a dot will lie on the 45-degree line through the origin, running from the lower-left to the upper-right quadrants. Despite positive gains in Japan’s manufacturing GDP, overall growth in manufacturing employment was negative or only slightly positive.

In Korea and the ROC, manufacturing output expansion led to increased employment in the 1970s and 1980s (Figure 6.10, panel a). However, since the 1990s, manufacturing has not been an employment-absorbing sector, despite robust production growth. Thailand and Singapore once absorbed labor into manufacturing, but the arrows show a rapid shift toward lower employment growth, moving away from the 45-degree line. The job-creation role of manufacturing in these countries has weakened markedly in recent years (Figure 6.10, panel c).

57: In this calculation, the mining sector is excluded from employment and value-added totals.

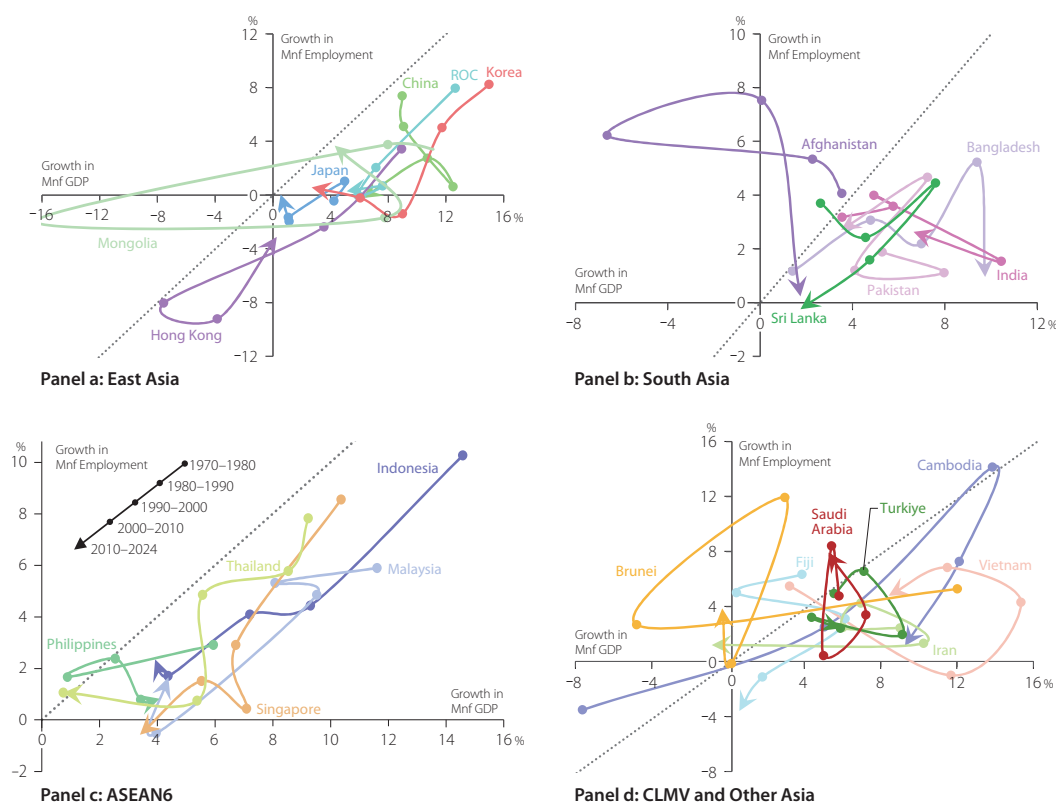


Figure 6.10 Job Creation in Manufacturing, 1970–2024

—Growth in manufacturing GDP at constant prices and manufacturing employment

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026; underlying employment data are compiled from population censuses and labor force surveys. Notes: Each dot represents the average annual growth rate in manufacturing (Mnf) in the 1970s, 1980s, 1990s, 2000s, and 2010s (2010–2024). The arrows indicate the rate in the 2010s.

6.3 Industry Origins of Economic Growth

The industry origins of recent economic growth by country and region (2010–2024) are shown in Figure 6.11. Over the most recent five years (2019–2024), China and India have been the two main drivers of growth among Asian economies, together accounting for 1.8 and 0.8 percentage points of Asia38's average growth rate of 3.8% per year (Figure 3.7). However, the origins of economic growth in China and India differ significantly in their industry composition. China's economic growth has been driven by expansion in the manufacturing sector, whereas India's has been led by expansion in the services sector. Development in India shifted toward manufacturing only in recent years.

Figure 6.12 compares industry contributions to economic growth across regional groups for 2010–2024 with the past two-decade averages for 1970–1990 and 1990–2010.⁵⁸ For half a century, manufacturing's contribution to Asian economic growth has been significant in Factory Asia, shown by the darkest color in the heat map. On average, from 1990 to 2010, 28% of Asia38 economic growth came from manufacturing expansion, well above 18% in the more mature US economy. From 2010 to 2024, the contribution from manufacturing growth declined to 24% even in Asia38, with economic growth driven by the personal

58: Asian averages are calculated using the translog index to aggregate each country's industry GDP growth rates, with the two-period average of each country's shares of industry GDP in gross regional product as weights.

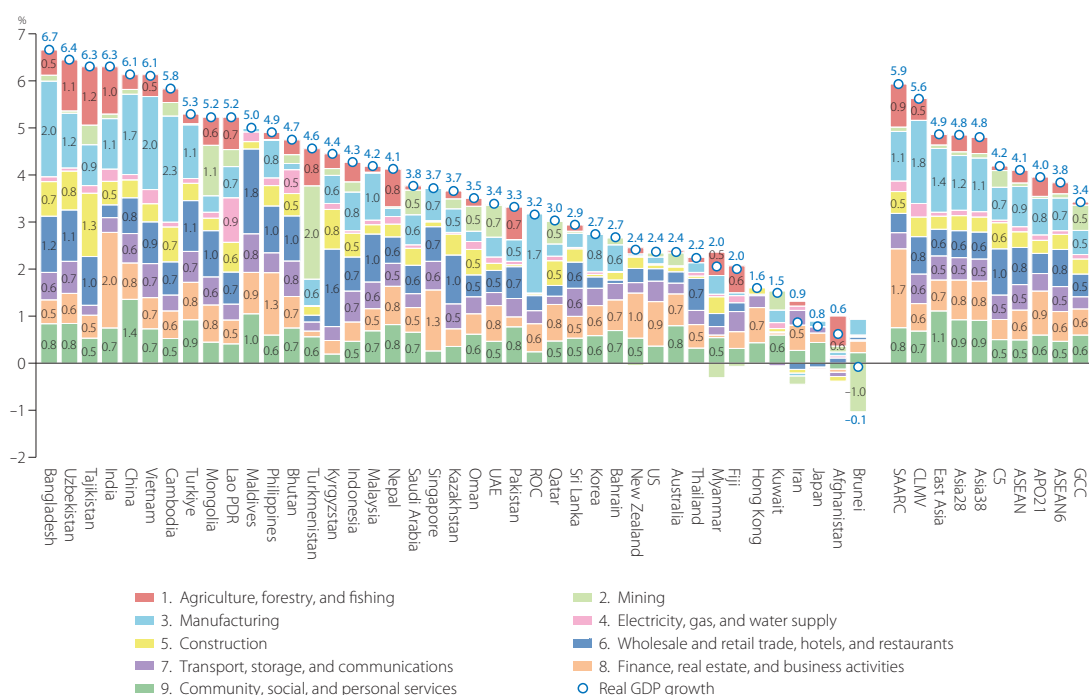


Figure 6.11 Industry Origins of Economic Growth, 2010–2024

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026. Notes: The circles give the growth rate of GDP, and the components of the vertical bars give the value-added growth contribution of each industry to this aggregate growth.

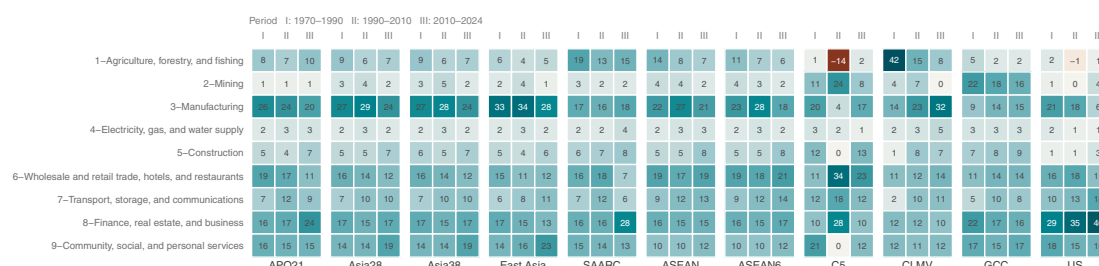


Figure 6.12 Industry Origins of Regional Economic Growth, 1970–2024

—Contribution shares of industry GDP growth by region over three subperiods: 1970–1990, 1990–2010, and 2010–2024

Unit: Percentage. Source: APO Productivity Database 2026.

services sector backed by income growth. In the US, the manufacturing sector's contribution declined significantly to 6% over the same period, while the finance, real estate, and business activities sector increased significantly. The manufacturing contribution was particularly pronounced in the CLMV during the 2010s, whereas it grew less in SAARC and declined in East Asia and ASEAN6.

Now, moving from regions to individual countries, there are considerable differences in experience across countries regarding the manufacturing sector's contribution to economic growth. Figure 6.13 illustrates the experience of each country in 2000–2010 (circles) and 2010–2024 (dark dots), sorted by the contribution of manufacturing to economic growth.⁵⁹ The left panel shows the absolute percentage-point contributions, and the right panel shows the contribution shares. Comparing the two periods, the role of manufacturing has declined in many countries, partly due to the pandemic's impact. Major exceptions are Cambodia, Bangladesh, Vietnam, Uzbekistan, and Kyrgyzstan, with rising manufacturing contributions.

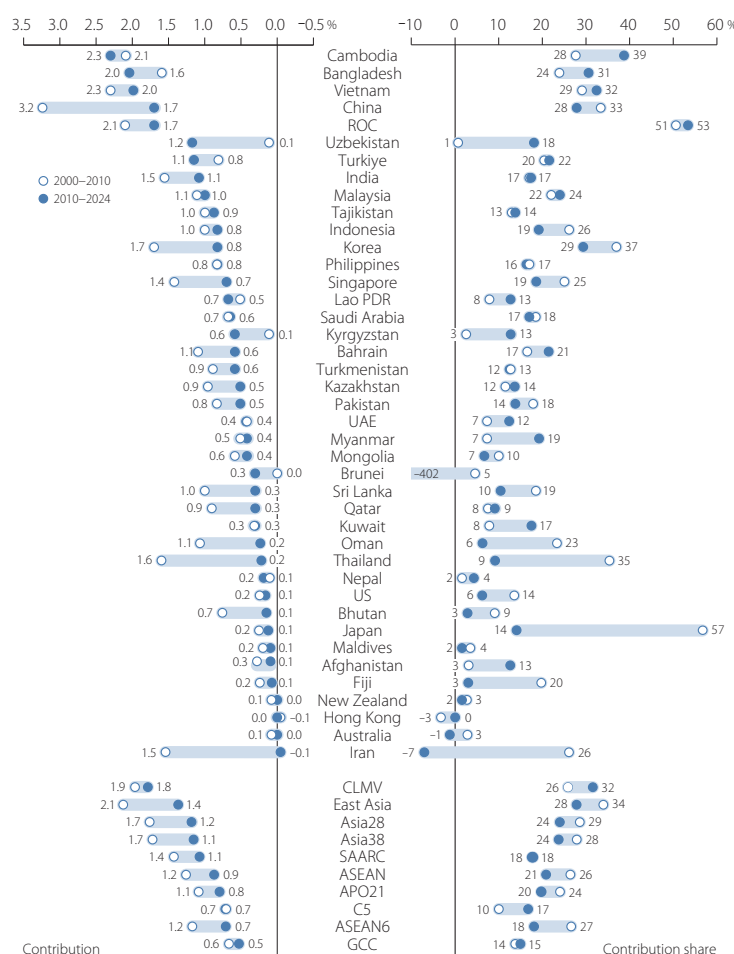


Figure 6.13 Contribution of Manufacturing to Economic Growth, 2000–2024

—Contributions in the left panel and contribution shares in the right panel in 2000–2010 and 2010–2024

Unit: Percentage point (average annual contributions) and percentage (contribution shares). Source: APO Productivity Database 2026.

The relative decline is particularly pronounced in Japan and Thailand. The ROC's contribution to economic growth from manufacturing is slightly over 50% in both periods.

Figure 6.14 illustrates the sub-industry origins of the average annual growth in manufacturing GDP for some selected Asian countries from 2010 to 2024.⁶⁰ The expansion of the ROC's manufacturing sector is characterized by a considerable concentration in sector 3.8—machinery and equipment (gold color). A similar, though less pronounced, pattern is seen in Singapore, Korea, and

Malaysia. Bangladesh, Cambodia, and Vietnam expanded their high manufacturing shares from 2000 to 2010 to 2010 to 2024, driving significant economic growth (Figure 6.13). More than half of their annual growth rate of 9–10% in this period was driven by expansion in sector 3.2—textiles, wearing apparel, and leather products.

Over the past two decades, the importance of the services sector in Asian economic growth has expanded. While some countries, such as Fiji being heavily dependent on tourism, have been severely damaged by the pandemic, many Asian countries have experienced a notable impact of the services sector on economic growth, as shown in Figure 6.15. The story behind India's growth has been one of services growth.

59: The translog quantity index is adopted for calculating the growth in real GDP. Using this index, the growth in real GDP into the products of contributions by industries can be decomposed:

$$\ln(GDP^t/GDP^{t-1}) = \sum_j (1/2) (s_j^t + s_j^{t-1}) \ln(Q_j^t/Q_j^{t-1})$$

Real GDP growth Contribution of an industry j

share of an industry j in period t .

60: The translog quantity index is adopted for calculating the growth in real GDP of manufacturing in the same manner as footnote 59.

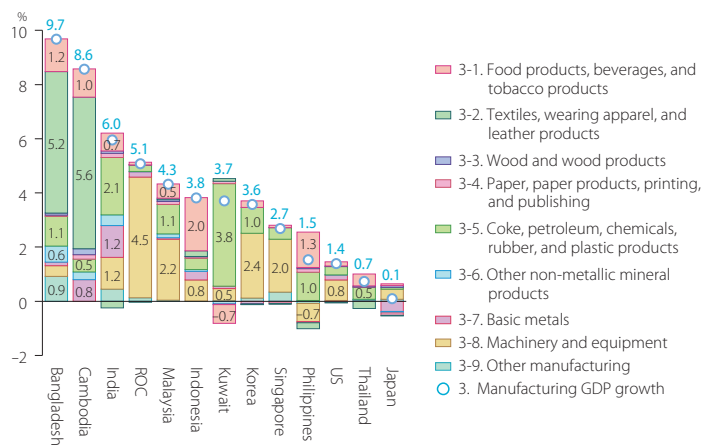


Figure 6.14 Industry Origins of Output Growth in Manufacturing, 2010–2024

—Sub-industry contributions to the manufacturing GDP growth

Unit: Percentage (average annual growth rate).
Source: APO Productivity Database 2026.

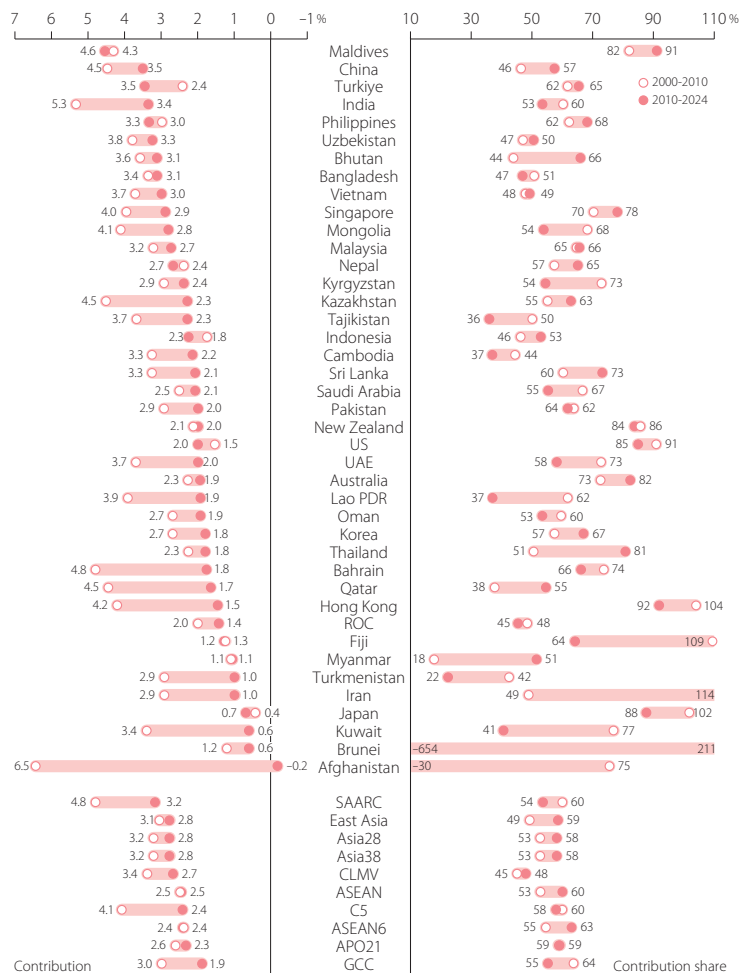
Modern ICT has enabled India to take an unconventional path in its economic development, bypassing a stage where manufacturing drives growth. Recently, however, the country has been focusing on developing the manufacturing sector

under the “Make in India” initiative launched in 2014.⁶¹ From 2010 to 2024, India’s manufacturing expansion was led by sectors 3.5—coke, refined petroleum products, chemicals, rubber, and plastic products, 3.7—basic metals, and 3.8—machinery and equipment, as shown in Figure 6.14. To further improve per capita GDP and capitalize on the demographic dividend (Box 2, Section 3.3), expanding labor-intensive manufacturing in India may be necessary to generate more jobs.

Figure 6.15 Contribution of Service Sector to Economic Growth, 2000–2024

—Contributions and contribution shares in 2000–2010 and 2010–2024

Unit: Percentage point (average annual contributions) and percentage (contribution shares). Source: APO Productivity Database 2026. Note: Services are defined as the total of industries 6–9.



61: The “Make in India” initiative launched by Prime Minister Narendra Modi in 2014 is based on four pillars (new processes, new infrastructure, new sectors, and new mindset), which have been identified to give a boost to entrepreneurship in India, not only in manufacturing but also in other sectors.

6.4 Industry Origins of Labor Productivity Growth

This section analyzes the industry sources of labor productivity growth in Asia.⁶² Figure 6.16 illustrates the industry origins of average annual labor productivity growth for the most recent period, 2010 to 2024.⁶³ The sector contribution is the growth rate of productivity for that sector multiplied by its value-added weight (footnote 63). Positive labor productivity growth was achieved across all sectors for Asia38 as a whole (Table 9.17). The industry contributions in Figure 6.16 highlight how service industries no longer hamper labor productivity performance but are as capable as manufacturing in achieving productivity growth. There are no significant differences in the contributions between manufacturing and non-manufacturing sectors in Asia38, i.e., manufacturing (at 1.0% on average per year), agriculture, forestry, and fishing (1.0%), finance, real estate, and business activities (0.7%), community, social and personal services (0.4%), and transport, storage, and communications (0.3%), wholesale and retail (0.2%). Agriculture is a major contributor in countries with high labor productivity improvement, as underused labor leaves the sector.

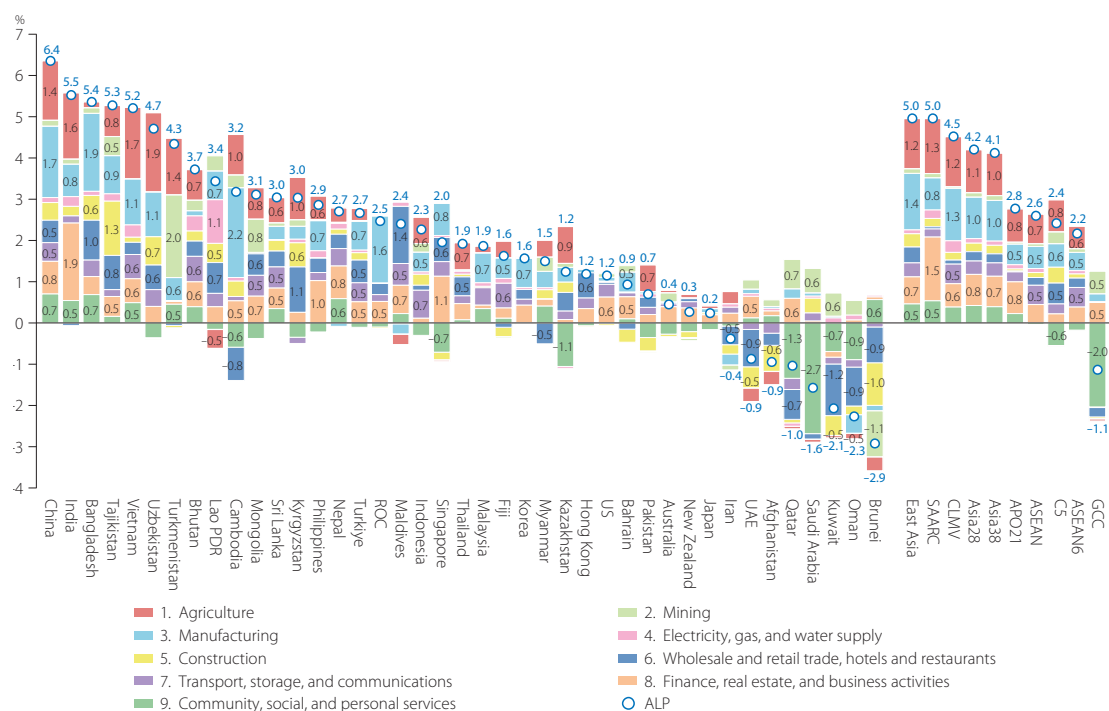


Figure 6.16 Industry Origins of Labor Productivity Growth, 2010–2024

—Growth in per-worker GDP at constant prices and industry contributions

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026. Note: See Table 9.17 for the numbers.

62: The data presented in this chapter are subject to greater uncertainty than those in previous chapters, and the quality across countries is also more varied. Employment data in less-developed countries often needs higher frequency and industry details. The industry classification of employment data does not necessarily align with that of industrial output data. Consequently, the quality of labor productivity estimates at the industry level must be improved. Furthermore, estimates of the manufacturing sector should be of better quality than those of the service sector, as many countries have occasional manufacturing censuses but do not have a similar census covering the service sector.

63: Not all Asian countries are included, as employment by industry is unavailable for some countries. Labor productivity growth in Table 9.17 is defined simply as per-worker GDP at constant prices by industry (v_i). The industry decomposition of labor productivity growth for the whole economy (v) in Figure 6.16 (industry contribution in Table 9.17) is based on the equation $v = \sum_i \bar{w}_i v_i^*$ where the weight is value-added shares. In this decomposition, the number of workers, as the denominator of labor productivity (v_i^*), is adjusted by weighting the reciprocal of the ratio of real per-worker GDP by industry to its industry average. Thus, the industry contribution ($\bar{w}_i v_i^*$) is emphasized more in sectors in which the per-worker GDP is higher than the industry average, in comparison with the impact ($\bar{w}_i v_i$) of using the non-adjusted measure of labor productivity.

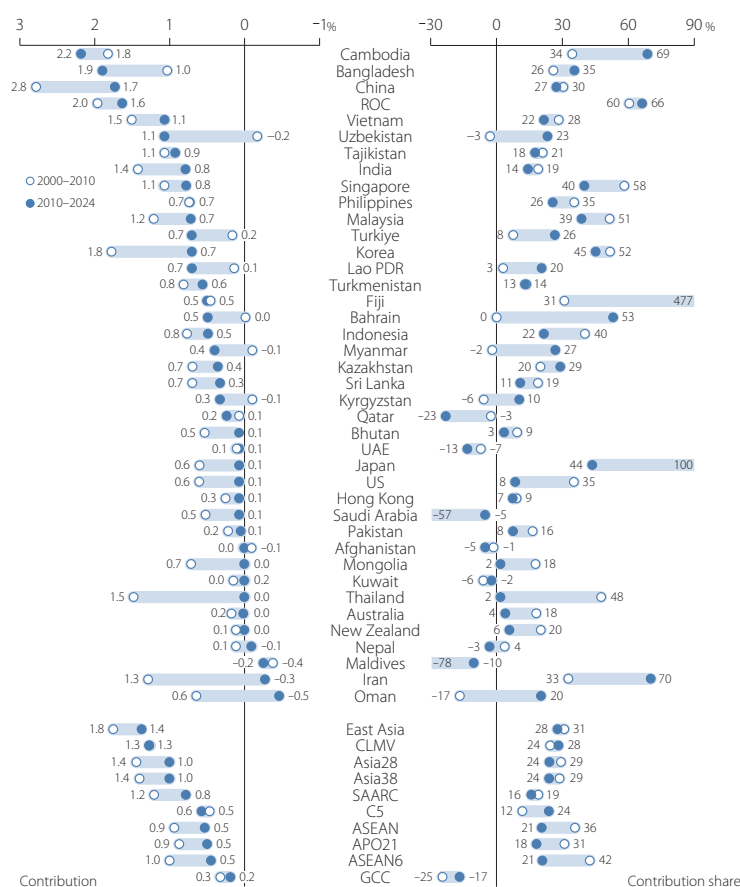


Figure 6.17 Contribution of Manufacturing to Labor Productivity Growth, 2000–2024

—Contributions of the Manufacturing to per-worker labor productivity growth over two subperiods: 2000–2010 and 2010–2024

Unit: Percentage point (average annual contributions) and percentage (contribution shares). Source: APO Productivity Database 2026.

Figure 6.17 shows the contribution of manufacturing to aggregate labor productivity growth in each country for the 2000–2010 and 2010–2024 subperiods. The manufacturing sector had been the driving force behind labor productivity growth in the past, but the left panel shows that, in many Asian countries, its contribution has declined between these two periods. Its contribution to aggregate labor productivity growth fell from 58% in 2000–2010 to 40% in 2010–2024 in Singapore, from 40% to 22% in Indonesia, and from 52% to 45% in Korea. There are some exceptions in which the manufacturing contribution rose, including Türkiye, Cambodia, Lao PDR, Bangladesh, Iran, and the ROC. The ROC, a high-income economy, is unusual with its dominance of the semiconductor industry, and its manufacturing sector accounted for 66% of the improvement in labor productivity. In the CLMV and SAARC, manufacturing contributed moderately to regional labor productivity growth, at 28% and 16%, respectively, between 2010 and 2024.

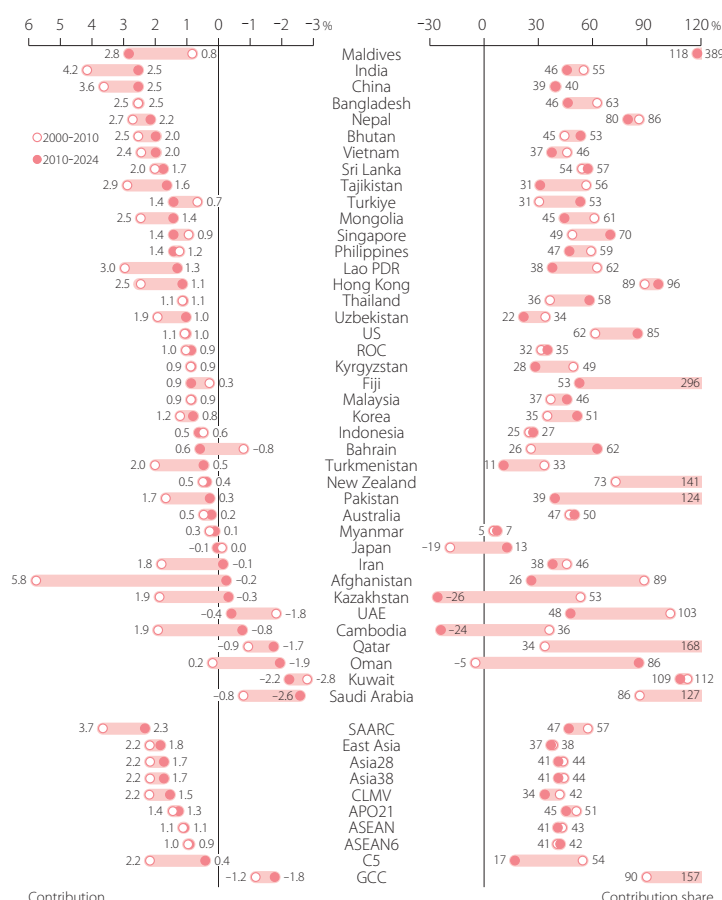
2024 in Singapore, from 40% to 22% in Indonesia, and from 52% to 45% in Korea. There are some exceptions in which the manufacturing contribution rose, including Türkiye, Cambodia, Lao PDR, Bangladesh, Iran, and the ROC. The ROC, a high-income economy, is unusual with its dominance of the semiconductor industry, and its manufacturing sector accounted for 66% of the improvement in labor productivity. In the CLMV and SAARC, manufacturing contributed moderately to regional labor productivity growth, at 28% and 16%, respectively, between 2010 and 2024.

The service sector has traditionally struggled to raise productivity, but recent advances in ICT are changing this. This sector has many ICT-intensive users and can capture the productivity gains from ICT (Box 7). The growing importance of these services in explaining productivity growth is evident in recent decades. In Asia, the contribution from services to productivity growth matches that of manufacturing (Figure 6.16). Among the four industries in the service sector, three are potentially ICT-employing: wholesale and retail trade; hotels and restaurants; transport, storage, and communications; and finance, real estate, and business activities.

Figure 6.18 presents the contribution of services to labor productivity growth by country in 2000–2010 and 2010–2024 (left panel for absolute contributions, right panel for contribution shares). Services contributed at least one-third of aggregate labor productivity growth in most Asian countries. By region, the contribution of services to labor productivity growth remains significant in the SAARC region, at 47%, down from 57% in the 2000s. It differs significantly from the 34% share in CLMV and 37% in East Asia.

Figure 6.18 Contribution of Service Sector to Labor Productivity Growth, 2000–2024
—Contributions of the service sector to per-worker labor productivity growth in 2000–2010 and 2010–2024

Unit: Percentage point (average annual contributions) and percentage (contribution shares). Source: APO Productivity Database 2026.



Box 10 Premature Deindustrialization in Asia

Deindustrialization, or the shrinkage of the manufacturing sector, has been a major concern in advanced economies for reasons discussed in Rodrik (2016), which identifies premature deindustrialization. Rodrik argues that many developing economies in recent years are beginning to lose their share of the manufacturing sector without having fully industrialized. Premature deindustrialization may harm economic development because manufacturing is a dynamic sector, typically central to sustained economic growth and technological progress. In the earlier stages of industrialization, the sector also created many jobs for low-income populations (Figure 6.10). Additionally, it generates labor flows from rural to urban areas, from informal to formal sectors, and nurtures human capital. Early servicification of the economy without a mature manufacturing sector may jeopardize a smooth transition from developing to developed status.

Rodrik points out that premature deindustrialization is a serious problem, particularly in Latin America and Sub-Saharan Africa. What about Asia? Figure 6.19 plots GDP shares of the manufacturing sector over time in Asian economies, placing the peak of each country's inverse U shape at the center. The US and Japan graphs are typical images of the rise and fall, with peaks above 30% in 1946 and 1970, respectively. Malaysia, Singapore, and Thailand show a similar pattern, with peaks in 2000, 2004, and 2010, respectively. China has a lower income than this group but, surprisingly, peaked earlier, in 1997. The ROC and Korea share an atypical, twin-peaked pattern: the manufacturing share peaks, declines, and then rises again. The ROC peaked at 39% in 1986, fell back, and rose again to 37% by 2024, a second peak it has yet to reach. Korea reached 31% in the late 1980s, eased, and then climbed to a second peak of 32% in 2011.

The Philippines' manufacturing share peaked at 30% in 1973 and has since declined steadily, reaching 16% by 2024. Indonesia is just above 20%. Although these are respectable figures, there may still be room for industrialization. India and Pakistan are struggling below 20%.

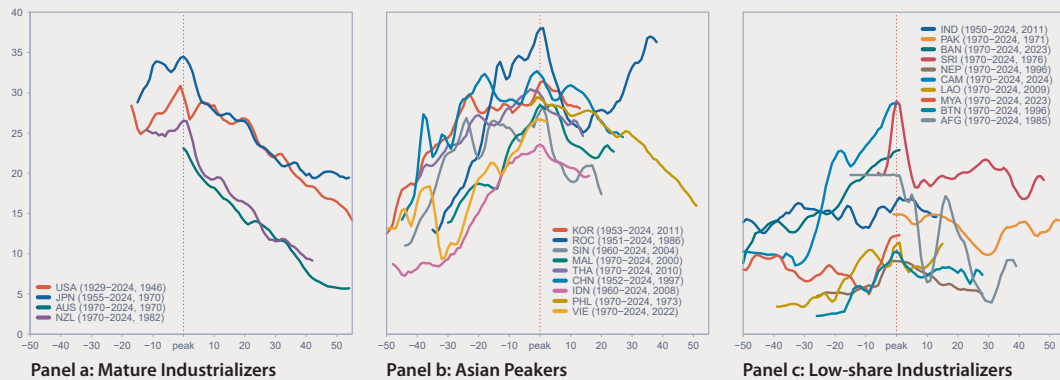


Figure 6.19 Country Peaks in Manufacturing GDP Share, 1970–2024

Unit: Percentage (manufacturing GDP share) for the vertical axis and years relative to the peak year for the horizontal axis. Source: APO Productivity Database 2026. Notes: The years in parentheses indicate the observation period and the peak year, respectively. The lines present trends based on the three-year moving averages.

The IMF (2018, Chapter 3) suggests that service sectors can drive economy-wide productivity growth and that the decline in manufacturing jobs has contributed little to the rise in labor income inequality in advanced economies. Figure 6.20 graphs the manufacturing share of GDP (five-year moving average) versus per capita GDP over time. The pattern of the rich economies (US, Japan, Australia, Singapore, Hong Kong) is a high share of manufacturing (20–30%) that declines as income rises. Korea and the ROC are unusual in having a non-declining manufacturing share. Some low- and middle-income SAARC countries do not follow this pattern, with their low and stagnant shares of manufacturing GDP even as incomes rise. However, it is uncertain whether these countries will continue to grow fast by skipping the intermediate stage of mature industrialization.

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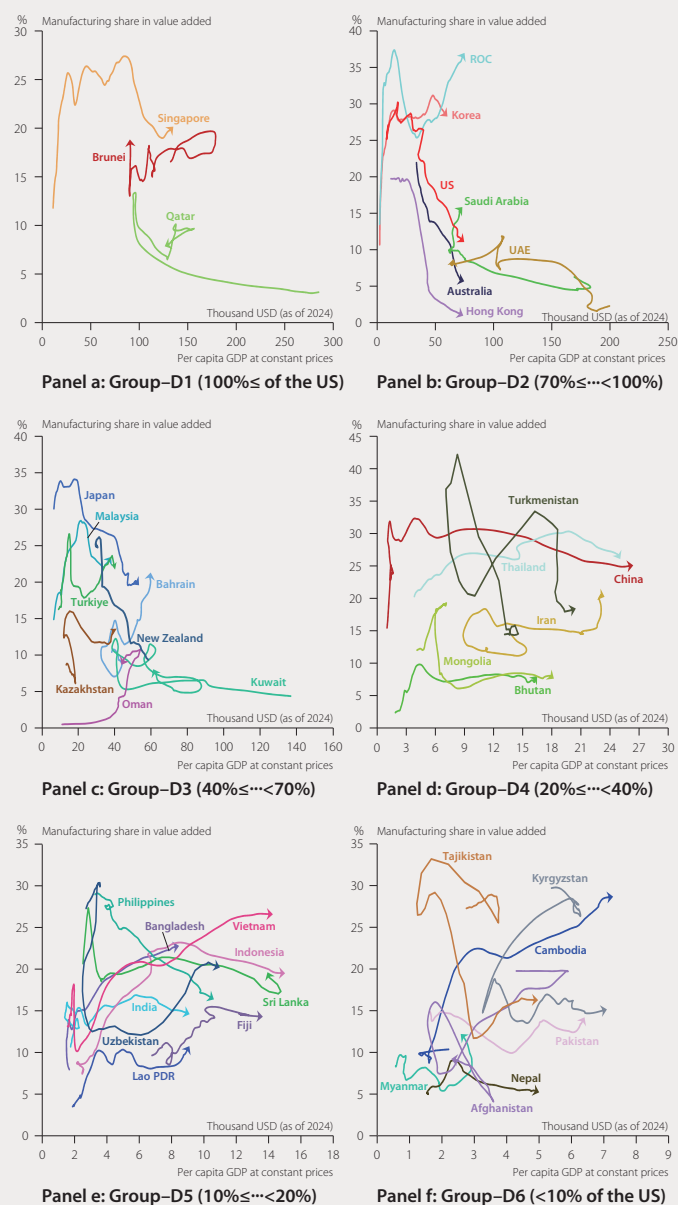


Figure 6.20 Manufacturing GDP Share and Per Capita GDP, 1970–2024
 —Five-year moving averages of the share of manufacturing GDP and per capita GDP

Unit: Percentage. Source: APO Productivity Database 2026.

7 Real Income Growth

Highlights

- Constant-price GDP captures production volume, not real income: when the terms of trade improve, a trading gain can sustain rising purchasing power with little real GDP growth. The positive trade benefits enjoyed by oil-rich economies in the 2000s turned negative in the 2010s, but price spikes after the pandemic and the Russia–Ukraine war shifted some GCC countries back to positive over 2010–2024. Over 2000–2024, Brunei and Oman stand out as outliers, with real income growth more than 25% above GDP growth.
- Net primary income from abroad as a share of GDP has risen strongly in the Philippines, from 0.8% in 1990 to a peak of 13.0% in 2024, largely driven by remittances; in Bangladesh, it rose from 1.9% to a peak of 7.5% in 2012. Eight resource-rich Asian economies enjoyed a trading gain of over 1.0% per annum from 2000 to 2024, and among them, Mongolia, Myanmar, Vietnam, and the C5 countries (except Tajikistan) realized gains in both trade and labor productivity.
- Export-oriented, high-productivity economies such as the ROC, Korea, Hong Kong, and Japan have faced a deteriorating trade-gain position as the prices of their manufactured exports declined while energy import prices rose—a negative trading gain that is, in part, a side-effect of their productivity success.
- The Databook’s mid-term projections see growth in the APO21 easing only slightly, from 4.2% per annum in 2015–2024 to 4.0% in 2024–2030, with CLMV (6.1%) and SAARC (5.9%) leading the region and smaller economies such as the Maldives among the faster growers. Per-hour labor productivity growth in the APO21 is projected to recover to 4.6% in 2024–2030, even as nine of the Asia28 economies are projected to see total employment decline by 2035.

Economic growth ultimately matters because it expands purchasing power, not because it raises production. Yet constant-price GDP captures only the latter—the volume of production, not real income. An improvement in the “terms of trade,” defined as the relative price of a country’s exports to imports, explicitly raises real income and, in turn, welfare. Producing the same volume of oil allows for higher food imports when oil prices rise. In many ways, a favorable change in terms of trade is analogous to technological progress, making it possible to get more for less. For a given trade balance position, a country can either import more in exchange for what it exports or export less to get what it imports.

7.1 Real Income and Terms of Trade

By focusing on production, the real GDP concept does not capture the beneficial effect of the improvement in the terms of trade. In contrast, real income focuses on an economy’s consumption possibilities; it captures the impact of a change in the relative price of exports to imports. Real income growth attributable to changes in the terms of trade can be significant when import and export prices fluctuate widely, and the economy is highly exposed to international trade, as is the case in many Asian economies (Figure 4.12).

The distinction between real income and real GDP lies in the differences between the corresponding deflators. Real GDP is calculated using a GDP deflator that aggregates the prices of household consumption, government consumption, investment, exports, and imports. In contrast, real income is calculated using the prices of domestic expenditure, which consists of household consumption, government

consumption, and investment. Therefore, real income can be understood as the domestic expenditure that can be purchased with current income.⁶⁴ As such, real income captures the purchasing power of income flow. Furthermore, the Databook uses gross national income (GNI) rather than GDP to calculate real income, accounting for net income transfers from abroad.⁶⁵ Applying the method proposed by Diewert and Morrison (1986), the annual growth rate of real income can be fully attributed to three components: the yearly growth rate of real GDP, real income growth attributed to a change in prices of exports and imports (referred to as the trading gain), and the effect of net income transfer.⁶⁶

Figure 7.1 plots the time series of net primary income from abroad, expressed as a percentage of GDP, for selected countries. The role of net primary income from abroad in Hong Kong shifted from negative to positive in the mid-1990s, leading up to the handover of Hong Kong from British rule to China in 1997. Since then, net primary income from abroad has been positive. Net primary income from abroad has risen sharply in the Philippines, increasing from 0.8% in 1990 to a peak of 13.0% in 2024, providing a significant long-term contribution to Filipinos' purchasing power, largely driven by remittances from overseas workers.⁶⁷ A similar, but moderate, trend can be observed in Bangladesh. Singapore's net primary income from abroad showed greater fluctuations in the 1980s and 2000s, and the negative range has

been increasing rapidly since the beginning of the 2010s, with a rising number of foreign workers.

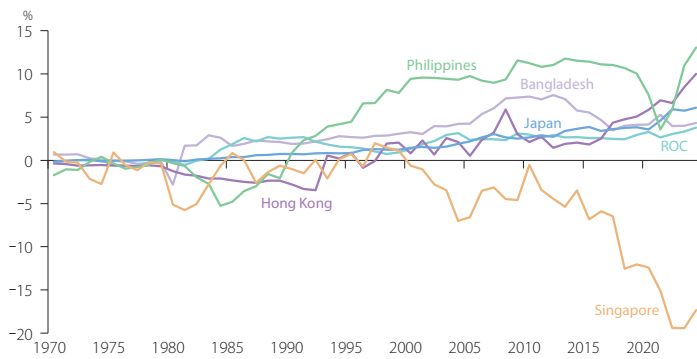


Figure 7.1 Effect of Net Income Transfer on GDP, 1970–2024
—Share of net income transfer in GDP at current market prices

Unit: Percentage. Source: Official national accounts in each country, including adjustments by APO-PDB.

Changes in crude oil and gas prices over the past decade have significantly affected trading gains in Asian countries. Figure 7.2 compares the effects of trading gains between 2000–2010 and 2010–2024. The positive terms-of-trade gains enjoyed by resource-rich oil-exporting countries during the 2000s turned negative in the 2010s. However, the surge in energy prices following the pandemic and the Russia–Ukraine war helped offset these losses in many of those countries, resulting in gains for Qatar and the

64: This definition of real income is the same as in Kohli (2004, 2006). An alternative definition is nominal GDP deflated by the price index for household consumption.

65: Net income transfers from abroad, in the context of GNI, refer to net primary income received from the rest of the world. This includes cross-border compensation of employees, investment income (such as interest, dividends, and reinvested earnings), and rents. It excludes secondary income such as remittances and foreign aid, which are part of gross national disposable income (GNDI) rather than GNI under the SNA framework.

66: Real income growth can be decomposed into two components as follows:

$$\underbrace{\ln\left(\frac{GNI^t}{GNI^{t-1}}\right) - \ln\left(\frac{P_D^t}{P_D^{t-1}}\right)}_{\text{Real income growth}} = \underbrace{\ln\left(\frac{GNI^t/GDP^t}{GNI^{t-1}/GDP^{t-1}}\right)}_{\text{Income transfer effect}} + \underbrace{\ln\left(\frac{GDP^t/GDP^{t-1}}{(1/2)\sum_i(s_i^t + s_i^{t-1})\ln(P_i^t/P_i^{t-1})}\right)}_{\text{Real GDP growth}} + \underbrace{(1/2)(s_X^t + s_X^{t-1})\left(\ln(P_X^t/P_X^{t-1}) - \ln(P_D^t/P_D^{t-1})\right)}_{\text{Real income growth attributed to changes in the terms of trade (=trading gain)}$$

where P_i^t is price of final demand i in period t and s_i^t is expenditure share of final demand i in period t . D is domestic expenditure, X is export, and M is import. Note that the real GDP growth based on this formulation may differ from that used in other chapters, since the implicit Translog quantity index is adopted for calculating it.

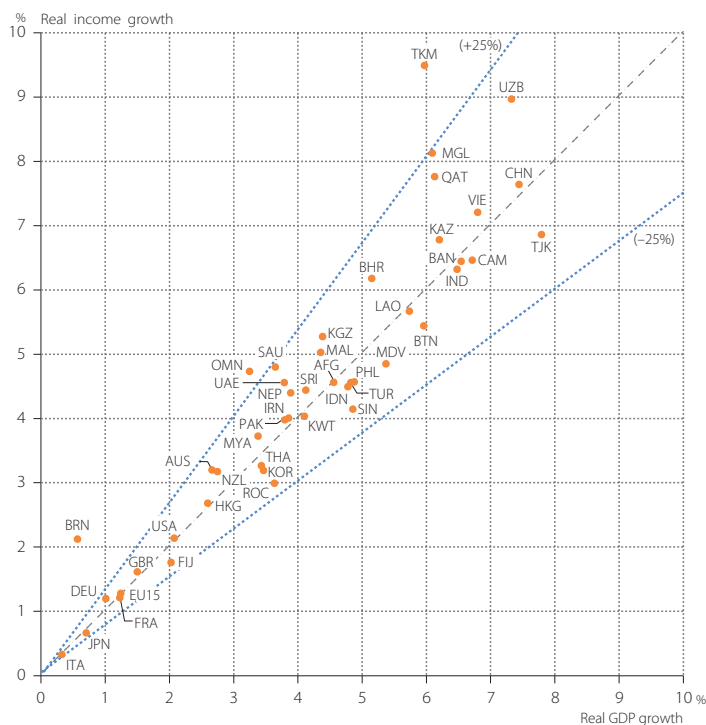
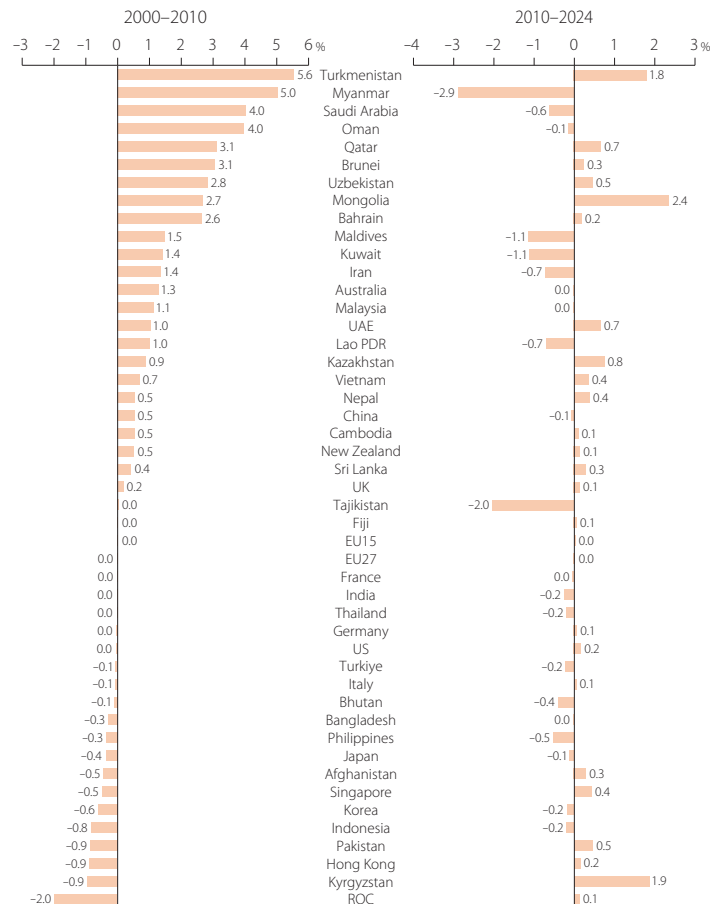
67: See footnote 14 for details. In the 2018 benchmark revision of the Philippines System of National Accounts (PSNA) published as of April 2020, the net primary income from abroad was revised downward considerably. The pre-revision ratio in PSNA, incorporated for the first time in the *APO Productivity Databook 2020* (October 2020), was three times larger than the revised estimate in this edition.

UAE during 2010–2024. In contrast, resource-importing countries experienced a deterioration in their terms of trade during the 2000–2010 period.

Figure 7.2 Trading Gain Effect, 2000–2024

—Contributions to real income growth in 2000–2010 and 2010–2024

Unit: Percentage point (average annual contributions). Source: Official national accounts in each country, including adjustments by APO-PDB.



Over a long period, the trading gain effect averages out to a small change. But over a shorter period, it could be very significant. Figure 7.3 plots real income growth against real GDP growth over 2000–2024 to show this effect (numbers are provided in Table 9.18). Combining the trading-gain effect and net primary income from abroad, real income growth for most countries fell within the margin of $\pm 25\%$ of real GDP growth in the long

Figure 7.3 Real Income and GDP Growth, 2000–2024

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

run. In larger economies, such as the US, the EU15, China, and India, real income growth was almost equivalent to GDP growth from 2000 to 2024. Brunei and Oman were outliers in this period, with real income growth more than 25% higher than GDP growth. On the other hand, Singapore and the ROC, with significant migrant workers, had income growth lower than GDP growth. For most economies, however, real income growth and GDP growth remained broadly similar over the long run.

7.2 Trading Gain and Productivity Growth

When the trading gain is highly favorable, it can breed complacency, leading to declines in productivity. Resource-rich economies are susceptible to this pitfall because they can reap substantial trading gains when commodity prices turn in their favor over a sustained period. However, just as commodity prices can rise, so can they fall. This is when real income growth could suffer if fundamentals for real GDP growth are weak.

Figure 7.4 plots the trading gain effect against labor productivity growth from 2000 to 2024. For most countries with few natural resources, the trading gain effect is less than 0.5% per year, plus or minus, over this period. In general, a resource-rich country can suffer from “Dutch disease,” a phenomenon where a country’s currency is inflated by a commodity boom, making other parts of its economy less competitive and potentially increasing its dependence on mineral and energy resources.⁶⁸ This is how resource abundance can lead to resource dependence. Eight resource-rich Asian countries enjoyed trade gains of over 1.0% per year from 2000 to 2024. Some countries, such as Mongolia, Myanmar, Vietnam, and C5 countries (except Tajikistan), realized gains in both trade and labor productivity. In contrast, export-oriented and highly productive Asian countries such as the ROC, Korea, Hong Kong, and Japan have been facing

a deteriorating trade-gain position as the prices of their manufactured exports fall with the rise of China’s manufacturing and the prices of energy imports rise. China itself, however, recorded a small positive trading gain over the period—an outcome that may seem at odds with this export-price deflation, but one concentrated in the early 2000s and largely exhausted thereafter.⁶⁹

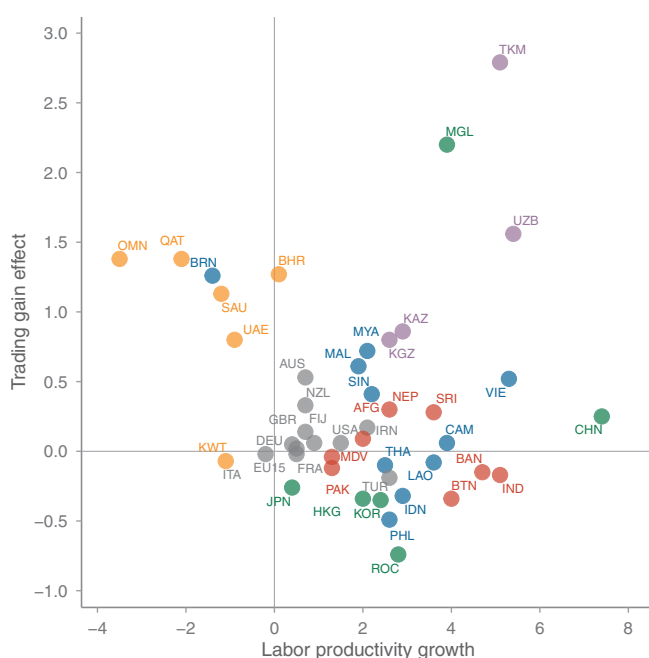


Figure 7.4 Trading Gain Effect and Labor Productivity Growth, 2000–2024

Unit: Percentage (average annual growth rate). Sources: Official national accounts in each country (including adjustments by APO-PDB) and APO Productivity Database 2026. Note: Labor productivity is defined on an hourly basis.

68: The term originated from *The Economist* (1977) to describe the overall decline of manufacturing and the subsequent economic crisis in the 1960s in the Netherlands after the discovery of the large natural gas field in the North Sea in 1959.

69: China’s trading gain averaged +0.5 percentage points per year in 2000–2010 before turning slightly negative, at –0.1 percentage points per year, in 2010–2024 (Figure 7.2). The early gain appears to reflect a favorable movement in its terms of trade, coinciding with a sharp rise in its net-export share of GDP, while the subsequent reversal coincides with rising energy and commodity import prices.

Figure 7.5 illustrates trading gain effects and changes in the value-added share of the mining sector from 2000 to 2024 in some selected countries. It indicates that large trade-gainers typically have dominant mining sectors, such as petroleum and natural gas (countries in the top-right of Figure 7.5). These countries benefit from positive terms-of-trade effects if resource prices continue to rise. However, this can make traditional manufacturing uncompetitive, the mechanism behind Dutch disease. Resource-rich economies may find that abundant mineral and energy resources become a liability if they lack competitive industries other than mining.

One way to counteract Dutch disease is to pursue broad-based, robust productivity growth and industry diversification strategies. Figure 7.5 shows that the GCC countries (except Kuwait and the UAE) actively reduced their mining sector share over time, which could reflect an intention to develop industries other than mining. However, Figure 7.4 shows that labor productivity growth rates in these countries remained low or even negative. Even if they wanted to industrialize, their high incomes and strong local currency would not easily allow them to develop a manufacturing sector or an internationally competitive

service industry. Another concern is their heavy dependence on skilled and unskilled foreign workers.

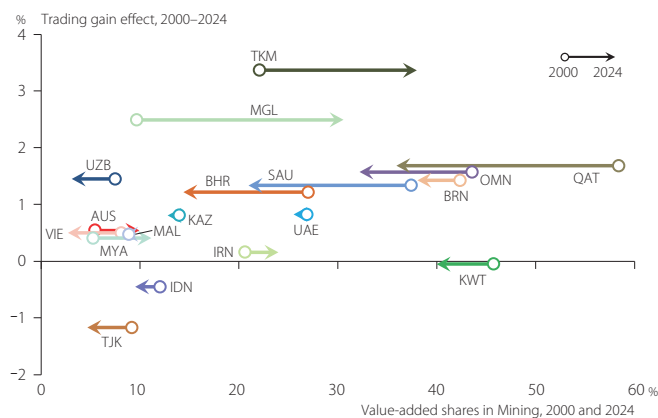


Figure 7.5 Trading Gain Effect and Value-added Share in Mining Sector, 2000–2024

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026. Note: The arrows give the change in VA share between 2000 and 2024, and the vertical axis gives the trading gain.

On the other side of the coin are the resource-importing economies. Most of these experienced negative trading gains, losing part of their economic growth due to resource price hikes, particularly in the 2000s (Table 9.18). However, this has strengthened their competitiveness in manufacturing and other productive activities for the future. Figure 7.4 also shows that many Asian countries have achieved high labor productivity growth while accepting a deteriorating trading gain over the long run (bottom-right corner). These countries are typically resource importers whose voracious demand for commodities drives up import prices. Meanwhile, export prices tend to fall due to productivity improvements, resulting in unfavorable movements in terms of trade. This is particularly true in countries where economic growth depends on export promotion. In such instances, a negative trading gain is a partial side-effect of productivity success. Although the trading gains partly offset their real GDP growth, they are better positioned than before their development took off, without productivity improvements.

Box 11 Mid-term Projections to 2035

The growth accounting in the Databook assesses the quality of economic growth across countries and regions in Asia. A similar framework can be applied to forecast economic growth based on future population structure and technology scenarios. This Box presents the mid-term projections of economic growth and labor productivity for the Asia28 economies through 2035. The projection reflects the actual economic growth in 2025 and the first quarter of 2026, where available (Section 8.5.4).

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The Databook's population projection relies on United Nations (2024), which provides annual projections by gender and age (Section 8.5.1). This is divided into estimates across different educational attainment categories based on projections developed in the Wittgenstein Centre Human Capital Data version 3.0 (K.C. et al. 2024) for each gender and age class. The employment rates for each population class by gender, age, and education are presented in AQALI 2026 (Section 8.3.2). Employment rates in 2024 are assumed to remain constant in each population class over the projection period. Using these populations and the employment rates, employment is estimated by gender, age, and education for 2024–2035.

The employment rate in each class is divided into different categories of employment status, i.e., own-account workers, contributing family workers, and employees, based on the current composition from 2022 to 2024, provided in the AQALI. Based on past trends in each country, the projected employee share is assumed to change gradually by 0–3% per year until 2035. Based on these scenarios, employment rate projections, cross-classified by gender, age, education, and employment status, are developed for each country through 2035. The projected average annual growth rates of total employment are presented in Figure 7.6 for the subperiods 2024–2030 and 2030–2035, with the historical rate for 2015–2024 indicated by the black mark. Nine of the Asia28 countries are projected to experience negative employment growth by 2035.



Figure 7.6 Projection of Change in Total Employment, 2024–2035

Unit: Percentage (average annual growth rates). Sources: The estimates are based on the United Nations (2024), K.C. et al. (2024), and AQALI 2026.

In response to this future employment scenario, hours worked and labor quality are projected through 2035. For each country, the average hours worked per worker are benchmarked at the elementary level of employment, as estimated in AQALI 2026 for 2022–2024. Based on past trends, average hours worked are assumed to decrease slightly until 2035. The relative wage structure cross-classified by gender, age, education, and status is also provided for 2022–2024 in AQALI 2026. Using these projections, changes in labor quality are estimated through 2035.

Figure 7.7 presents the average annual growth rates of labor quality for each country. In some countries, such as Bhutan, Indonesia, Mongolia, and Thailand, labor quality growth is expected to decelerate considerably in the late 2020s and early 2030s compared with 2015–2024, when labor quality growth was exceptionally high, mainly reflecting changes in employment status and educational attainment. In Asia28, labor quality changes are projected to increase in the late 2020s and early 2030s compared with 2015–2024. This indicates that the deterioration in CLMV is expected to be offset by improvements in SAARC and East Asia.

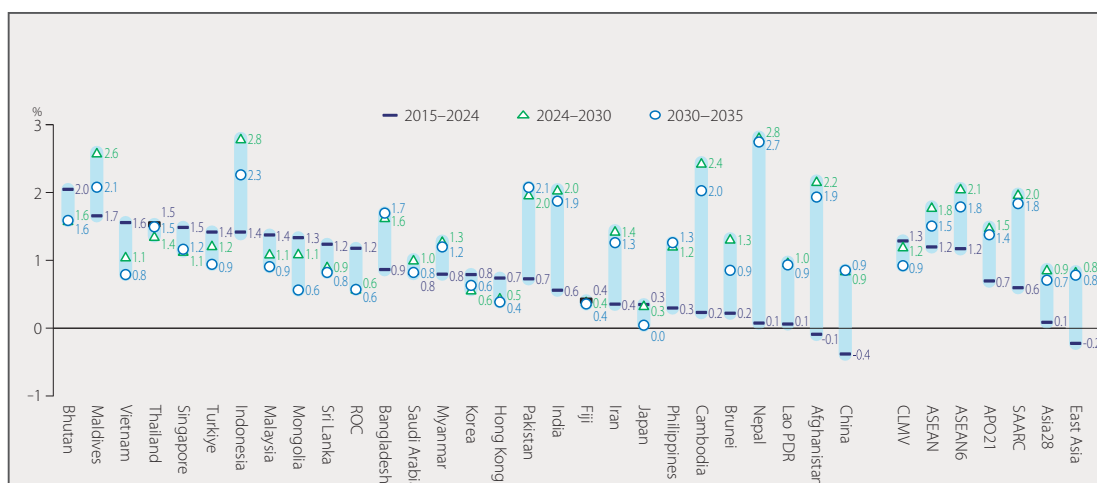


Figure 7.7 Projection of Labor Quality Change, 2024–2035

Unit: Percentage (average annual growth rates). Source: The estimates are based on AQALI 2026.

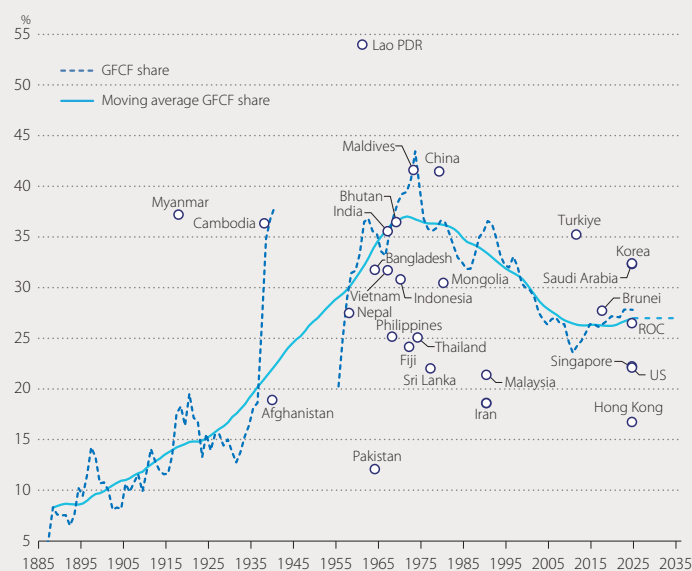
There is significant uncertainty in future capital accumulation. As a baseline scenario in the projection, GFCF shares in Asian countries are assumed to follow Japan's long-term trend. The dotted line in Figure 7.8 shows the past GFCF share since 1885, with the ten-year moving average. The current GFCF share for each Asian country is plotted at the year in which its per-hour labor productivity equals the historical Japanese level (see Figure 5.7). Based on these historical trends, the future GFCF share is assumed for each country. Each year's investment is estimated using GDP and determines the beginning-of-period capital stock level for the next year, which provides capital services for next year's production.

Figure 7.8 Historical GFCF Share of Japan and Current Level of Asia in 2024

—Share of GFCF in GDP at market prices for Japan from 1885 to 2024 and for Asian countries in 2024

Unit: Percentage (current-price share). Source: APO Productivity Database 2026.

Another uncertain source of economic growth is TFP. As a baseline scenario, the TFP growth in 2015–2024, as estimated in APO-PDB 2026, is used to provide benchmark estimates. In some countries, however, past achievements reflect events that will not be repeated. In these cases, benchmark projections for TFP growth are set as follows. In each Asian country, the future change in TFP is assumed to follow the long-term trend of a leading country in each region. The TFP growth rates for the period covered by the QNA (i.e., 2024–2025/2026) are adjusted so that the economic growth projection is equivalent to the GDP estimates in the QNA (footnote 9, Section 3.1). The benchmark estimate of labor share is provided in APO-PDB 2026 (see Section 8.3.3 and Box 13). The recent estimates are assumed to hold for the 2024–2035 projection period.



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Combining the labor, capital, and TFP projections yields the baseline estimates of economic growth presented in Figure 7.9. In Asia28, the recent economic growth in 2015–2024 (4.2% per year on average) is projected to decrease slightly to 4.0% during 2024–2030. The projected regional growth of SAARC (5.9%) in the late 2020s, led by Bangladesh and India, is significantly higher than that for East Asia (3.3%), driven largely by differences in population growth. In addition, CLMV is expected to be a strong driver of the Asian economy in the late 2020s, with a projected growth rate of 6.1%, the highest in the region. At this stage, there is a strong sense of uncertainty about Myanmar's recovery. However, the driving force behind CLMV remains the Vietnamese economy, which is expected to grow at a high rate of 6.7% in the late 2020s and 6.3% in the early 2030s.



Figure 7.9 Projection of Economic Growth, 2024–2035

Unit: Percentage (average annual growth rates). Sources: The estimates are based on the APO Productivity Database 2026 and AQUALI 2026.

Regarding per-hour labor productivity growth, the current rate of improvement in Asia28 (3.8% per year in 2015–2024) is projected to recover to 4.6% during 2024–2030, as shown in Figure 7.10. Thereafter, the improvement is projected to be maintained at 4.0% during 2030–2035. The driving forces in labor productivity improvement in Asia in the late 2020s will be East Asia and SAARC, but the regional gap in productivity growth rates is expected to be smaller than that of economic growth rates (Figure 7.9). Labor productivity growth is likely to accelerate in the late 2020s and early 2030s, not only in low-income countries such as Cambodia, Nepal, the Philippines, and India but also in high-income economies such as Hong Kong and Japan, compared to 2015–2024.

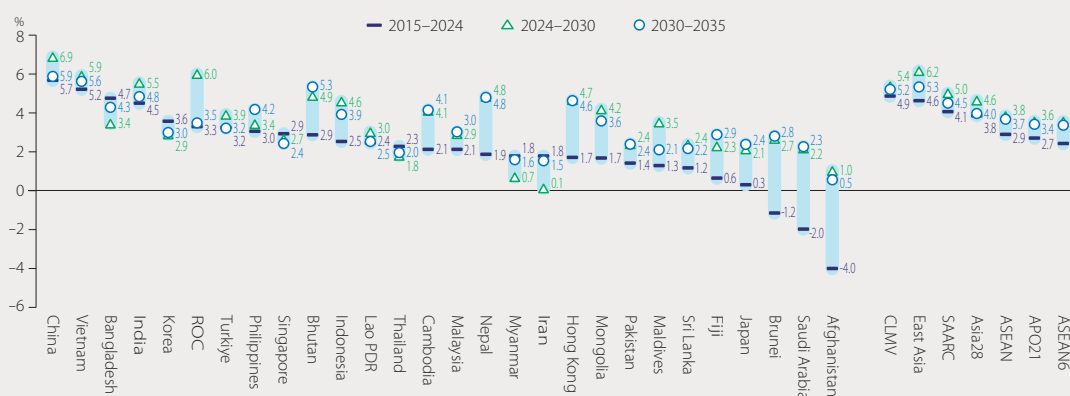


Figure 7.10 Projection of Labor Productivity Growth, 2024–2035

Unit: Percentage (average annual growth rates of per-hour labor productivity). Sources: The estimates are based on the APO Productivity Database 2026 and AQUALI 2026.

8 Methodology and Data Framework

This chapter provides technical documentation on the construction of the APO Productivity Database 2026. Section 8.1 describes the measurement of GDP and its components, while Sections 8.2 and 8.3 outline the estimation methods for capital and labor inputs, respectively. Section 8.4 documents the data sources and methods for non-member economies, while Section 8.5 describes other supporting data, including population, PPPs, exchange rates, and energy.

The development of productivity accounts across Asian economies varies in data availability, definitional consistency, and institutional capacity. In particular, for earlier years and lower-income countries, limitations in coverage and comparability remain significant. The estimates presented here are therefore best interpreted as harmonized time series constructed for international comparison, with an emphasis on internal coherence and relative trends rather than on precise measurement in an absolute sense. Moreover, discrepancies and anomalies that emerge from cross-country comparisons are viewed not merely as deficiencies but as potential sources of insight, prompting reconsideration of estimation assumptions and data structures. The APO-PDB is thus designed as a framework that can evolve iteratively, incorporating such findings to gradually enhance the consistency, replicability, and analytical value of productivity estimates.

8.1 Measurement of Output

8.1.1 SNA Compilation

Understanding data comparability is essential for constructing international databases and demands continuous effort and specialized expertise. Inconsistencies across countries can stem from differences in one or more of the three key statistical dimensions: definitions, coverage, and methodology. While international definitions and guidelines aim to harmonize national measurement practices, actual implementations often diverge from best practices, with variations in what is omitted or included. Moreover, countries may revise their estimation methods and assumptions in benchmark updates or annual revisions. These factors can contribute to discrepancies in the data and hinder meaningful comparisons of underlying economic performance.

Between February and May 2026, the APO-PDB Metadata Survey 2026 was conducted, focusing on national accounts and other statistical data necessary for international productivity comparisons among APO member economies.⁷⁰ Given that most economic performance indicators in this report are linked to GDP, the survey was designed to identify differences in GDP compilation practices across countries. The 2008 SNA serves as the international standard. Since it differs in several conceptual and coverage aspects from earlier versions—namely the 1993 SNA and 1968 SNA—it is important to determine when each country began transitioning to the updated definitions and classifications. This enables the identification of structural breaks in the time series.

Table 8.1 presents the current situation regarding the compilation and data availability of backward estimates based on the 1968, 1993, and 2008 SNAs (including plans to introduce the 2008 SNA), as reported in the APO-PDB Metadata Survey 2026 and in the further investigations conducted by KEO. For example, this table indicates that Japan started to publish national accounts based on the 1968 SNA in 1978 (at present, backward estimates based on the 1968 SNA are available from 1955), national accounts based on the 1993 SNA in 2000 (backward estimates based on the 1993 SNA are available from 1980 to 2014), and national accounts based on the 2008 SNA in 2016 (backward estimates based on the 2008 SNA are available from 1994 to 2024).

70: The list of national experts in metadata surveys is provided in Section 1.4.

As shown in Table 8.1, countries differ in the year of SNA adoption, the extent of implementation, and the availability of backward estimates. Among the Asia38, 33 economies—excluding Kazakhstan, Lao PDR, Myanmar, Tajikistan, and Turkmenistan—are currently partially or fully compliant with the 2008 SNA. This edition of the Databook reflects recent major revisions to national accounts (Section 1.2). However, the starting year of official SNA-compliant series varies across countries, primarily due to differing approaches to retrospective estimation. Although many countries have adopted the 2008 SNA, compliance remains uneven in scope and detail, particularly in the treatment of FISIM, military weapons systems, R&D, and software.⁷¹

The APO-PDB reconciles these variations to construct harmonized long-term estimates. In doing so, earlier data based on the 1968 or 1993 SNA continue to be used, except in economies such as the ROC, Korea, and Singapore, which already provide backward estimates under the 2008 SNA dating back to the 1950s or 1960s. Additional adjustments are also made to ensure the long-term consistency of GDP estimates at current prices, as described in the procedures below.

8.1.2 FISIM Consumption

FISIM is an indirect measure of the value of financial intermediation services provided. It represents a significant portion of finance sector output. The 1993 SNA (United Nations 1993) recommended that

Table 8.1 Implementation of the 1968, 1993, and 2008 SNA

	1968 SNA		1993 SNA		2008 SNA	
	Introduction year	Measurement period	Introduction year	Measurement period	Introduction year	Measurement period
Afghanistan		1973–1990 2002–2003		2002–2018	2020	2016–2024
Bahrain						
Bangladesh	1973	1972–1999	2000	1980–2013	2014	1996–2024
Bhutan	2004	1980–2003	2015	2000–2021	2022	2010–2024
Brunei	1979	1974–1998	2006	1985–2013	2014	2010–2024
Cambodia	1993	1993–2009	2009	1993–2019	2024	2000–2022
China		n.a. (MPS was used)	2002	1978–2012	2016	1970–2024
ROC	1988	1951–2005	2005	1951–2012	2014	1951–2024
Fiji	1974	1968–2002	2003	1997–2010	2014	2005–2024
Hong Kong	1973	1961–1999	1999	1961–2012	2012	1961–2024
India	1978	1950–2007	2007	1991–2012	2015	2004–2024
Indonesia	1970	1960–2013	2008	2000–2013	2015	2010–2024
Iran	1981	1959–2012	2006	1991–2016	2017	2011–2024
Japan	1978	1955–1998	2000	1980–2014	2016	1994–2024
Kazakhstan		n.a. (MPS was used)		1990–2024		n.a.
Korea	1986	1953–1997	2004	1970–2012	2014	1953–2024
Kuwait						n.a.
Kyrgyzstan		1970–1989	2000	1990–2022	2019	2019–2024
Lao PDR	1990	1990–2005	2005	2002–2024		n.a.
Malaysia	1975	1960–2006	2007	2000–2011	2012	2005–2024
Maldives	1980?	1976–2000	2001	1984–2015	2017	1995–2024
Mongolia		n.a. (MPS was used)	1995	1980–2012	2015	2010–2024
Myanmar	1967?	1952–2023		n.a.		n.a.
Nepal	1975	1974–2004	2006	2000–2019	2021	2010–2024
Oman	1980	1980–2007	1993	1998–2019	2021	2010–2024
Pakistan	1988	1981–2000	2004	2000–2012	2013	2000–2024
Philippines	1972	1946–2010	2002	1998–2013	2011	1998–2024
Qatar			2006	1980–2023		n.a.
Saudi Arabia	1970	1970–2001	1999	2002–2014	2010	1970–2024
Singapore		1970–2005	2003	1960–2013	2014	1960–2024
Sri Lanka	1975	1975–2001	2001	1998–2014	2016	2010–2024
Tajikistan		n.a. (MPS was used)		1990–2017		n.a.
Thailand	1975	1972–2012	2012	1990–2019	2016	1990–2024
Türkiye	1987	1987–2006	2008	1998–2015	2016	1998–2024
Turkmenistan		n.a. (MPS was used)	1995	1987–2004		n.a.
UAE					2018	2010–2024
Uzbekistan		n.a. (MPS was used)	1994	1987–2016	2010	2010–2024
Vietnam	1989	1986–1992	2000	1986–2020	2022	1995–2024

Sources: APO-PDB Metadata Survey 2026 and KEO's own investigation. Note: The measurement period includes backward estimates that were produced retrospectively following the release of the new SNA statistics.

71: The introduction of the 2008 SNA is typically undertaken as part of a benchmark revision. In many cases, major changes in the data result from newly available surveys (e.g., a new services survey) or the development of new benchmark data (e.g., a supply and use table), while the adjustments directly attributable to the shift from the 1993 SNA tend to be smaller. The information required to reconcile series across benchmark years is collected at KEO.

FISIM be allocated to users (to individual industries and final demands). This contrasts with the 1968 SNA, where the imputed banking services were assigned exclusively to the business sector. The common practice in the 1968 SNA was to create a notional industry that buys the entire service as an intermediate expense and generates an equivalent negative value added. As such, the imputed banking services have no impact on GDP. Therefore, if fully implemented, the 1993/2008 SNA recommendation will affect industry GDP and the economy's overall GDP (through the share of FISIM allocated to final demand).

Among the 21 APO member economies, the Lao PDR does not allocate FISIM to final demand in its official national accounts because it does not follow the 1993/2008 SNA recommendation. Thus, the country's official GDP estimate is lower than that of other countries. In addition, in some countries whose national accounts follow the 1993/2008 SNA's recommendation on FISIM, the available data do not cover the entire observation period.

To harmonize the GDP concept across countries and over periods, final demands of FISIM are estimated for countries with missing data in the APO-PDB, using available estimates of value added from the Imputed Bank Service Charge

(IBSC) or financial intermediation (where IBSC data is unavailable). The ratios of value added from IBSC or financial intermediation on FISIM allocated to final demand are assumed to be identical to the average ratios observed in countries with available data. Figure 8.1 describes the countries, years, and methods to adjust FISIM in the official national accounts. As illustrated, when both value-added data are unavailable, the trend in the FISIM share of GDP is used to extrapolate past estimates (the impacts on GDP are minor).



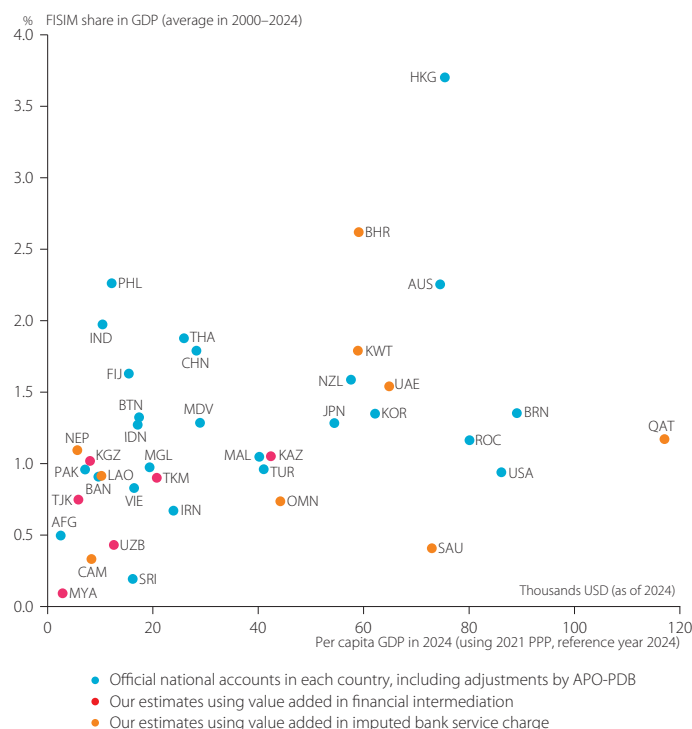
Figure 8.1 Adjustment of FISIM, 1945–2024

Sources: APO-PDB Metadata Survey 2026 and KEO's own investigation.

Figure 8.2 plots per capita GDP levels in 2024 and the FISIM share in GDP as an average in 2000–2024 (different colors are used to distinguish the original estimates in the official national accounts from the APO-PDB estimates). In countries where GDP at current prices is adjusted, FISIM adjustments increase GDP by less than 1.2%.

Figure 8.2 FISIM Share in GDP, 2000–2024
—Average share of FISIM production in GDP

Unit: Percentage (current-price share). Source: Official national accounts in each country and APO Productivity Database 2026.



8.1.3 Government Consumption

Definitions of government output can differ among countries and over time within a given country. For example, as of February 2012, Thailand officially switched to the 1993 SNA, and its national accounts became compatible with the 1993 framework for the first time. In this series, government consumption includes the consumption of fixed capital (CFC) owned by the government since 1990, as described in Table 8.1. To construct the long time series in the Databook, historical data from the 1968 SNA have been adjusted to align with the new series. In APO-PDB, government capital stock and its CFC for 1970–1989 are estimated, and the past government consumption and GDP at current prices are adjusted accordingly. A similar adjustment to the CFC of government-owned assets was conducted for Bangladesh (1970–1995), Malaysia (1970–1999), Mongolia (1970–2004), and Vietnam (1970–2009).

Another harmonization is conducted for the prices of government consumption, which consists primarily of non-market products. In APO-PDB, the quality of the official price index for government consumption has been examined in each country, compared with the cost-index estimate for government consumption, based on the quality-adjusted price indices for capital and labor inputs, with zero TFP growth. Retrospective estimates dating back to 1970 found that government consumption price indices exhibited unrealistic trends in the official national accounts in many Asian countries. The official estimates for these periods are adjusted using the cost index estimates. This revision may yield modest impacts on the real GDP growth rates, as one of the differences between the official estimates and the APO-PDB.

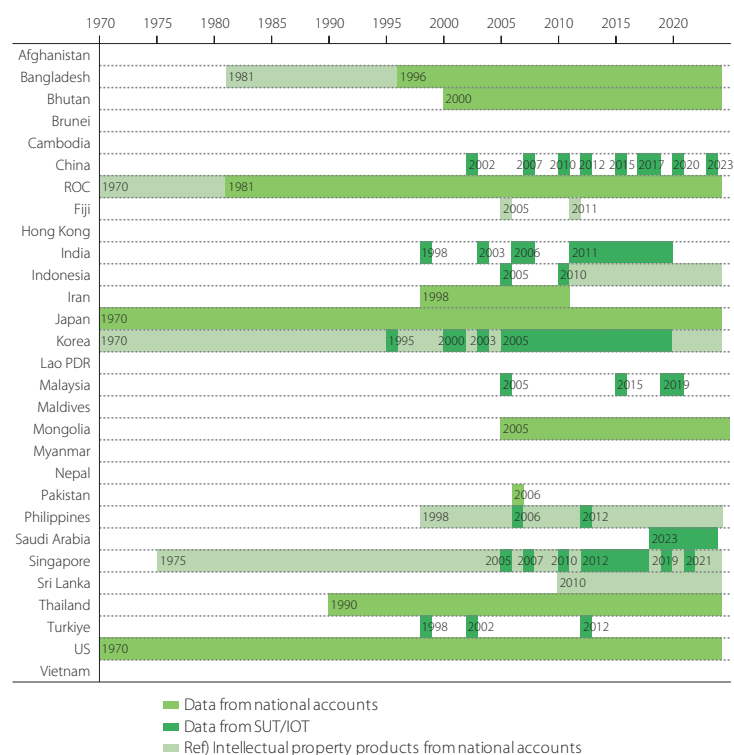
8.1.4 Software Investment

The 2008 SNA recommends capitalizing intellectual property products (IPP), which changes not only GDP but also capital inputs. One IPP capitalized in the Databook is computer software, including pre-packaged, custom, and own-account software. Among the Asia28 economies, 16 have capitalized all three types of software in the most recent national accounts. Another three countries exclude own-account

software in their capitalization, and in two countries (Indonesia and Sri Lanka), only custom software is capitalized (others still do not capitalize software in their national accounts). In addition, the official estimates of software investment availability vary considerably among countries and over periods. Figure 8.3 presents the availability of the official estimates in the national accounts and the benchmark Supply and Use Tables (SUT) and Input-Output Tables (IOT) based on the APO-PDB Metadata Survey 2026 and KEO's own investigation.

Figure 8.3 Availability of Software Investment Estimates, 1970–2024

Sources: APO-PDB Metadata Survey 2026 and KEO's own investigation.



The Databook seeks to include all software as assets to improve harmonization, even in countries and periods where official estimates were unavailable. The new estimates for software investment were developed at KEO and have been incorporated since APO-PDB 2021. In the revised data set, the labor cost of domestically produced software is estimated based on the number of workers in software development, which is defined as the sum of occupation codes 25 (Information and communications technology professionals) and 35 (Information and communications technicians) based on the International Standard Classification of Occupations 2008 (ISCO-08), and the corresponding average wages in the ILO Modelled Estimates (ILOEST database, ILO 2026). Based on this gross measure of labor cost, the portion of hours worked that is not used for software development is deducted. The excluded share is assumed to equal the share in countries where such data is available. The total domestic output is then estimated by applying non-labor cost shares from other countries whose SUT/IOT reports include cost compositions for the software industry. Second, the value of imported software is assumed to be the same as the import of “computer services” recorded in the Balance of Payments in WTO Stats (accessed May 13, 2026). The sum of domestically produced and imported software values is used to extrapolate official estimates of software investment (Figure 8.13) or to estimate software investment in countries without official estimates.

8.1.5 R&D Investment

For the countries that still do not follow the 2008 SNA, R&D expenditure is not allocated to GFCF (they are assigned to intermediate uses). In some cases, even when R&D investments are included in the GFCF, the R&D expenditure is not disclosed separately, hindering the proper measurement of capital stock and service volumes. To harmonize the GDP and capital input concepts across countries, R&D investment is estimated for the countries in the APO-PDB.

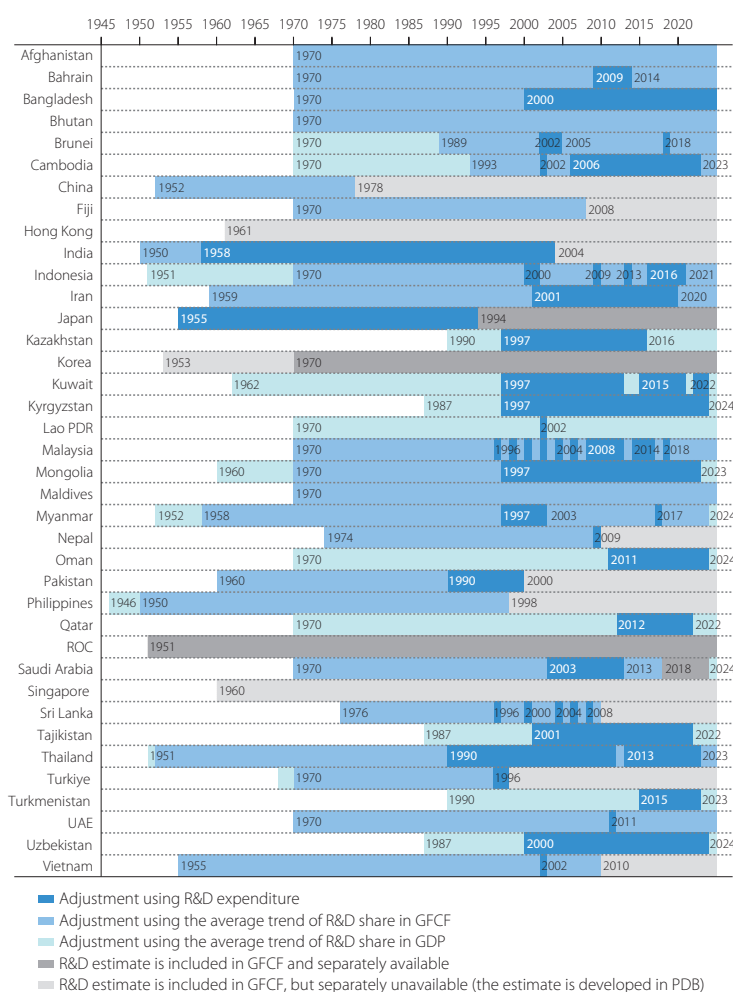


Figure 8.4 Methods for Estimating R&D Investment, 1945–2024

Source: APO Productivity Database 2026.

The preferred approach is to collect data on R&D expenditure from official surveys in each country and then estimate R&D investment. Figure 8.4 describes the countries, years, and methods to estimate R&D investment and add it to GFCF in the official national accounts. For periods when R&D expenditure data are unavailable (either in national statistics or in the World Bank's World Development Indicators), crude estimates are extrapolated from trends in the share of R&D investment relative to GFCF or GDP, using the experience from other countries. These extrapolated values may reflect upward biases, especially when benchmarked against economies with structurally higher R&D shares. This potential overestimation should be taken into account when conducting time-series comparisons.

8.1.6 Valuables

Valuables are incorporated as the third type of produced non-financial assets, after fixed assets and inventories, in the 1993 SNA. They are defined as “goods of considerable value that are not used primarily for purposes of production or consumption but are held as stores of value over time” in para. 10.7 (United Nations 1993).⁷² Based on the APO-PDB Metadata Survey 2026 and investigations at KEO, net acquisitions (acquisitions less disposals) of valuables are recorded as final demand in nine countries: Bhutan, India, Korea, Malaysia, Mongolia, Pakistan, Philippines, Sri Lanka, and Vietnam. For example, the SNA in India has included this since 1999. However, estimates of net acquisitions of valuables are not published separately (they are included with changes in inventories) in Korea, Malaysia, Mongolia, and Vietnam. Japan's current system of national accounts does not have them in final demand.

Until the APO-PDB 2025, net acquisitions of valuables were harmonized by excluding them from final demand. In the APO-PDB 2026, however, they are instead included in household consumption in these nine countries to maintain consistency with the official GDP. For the four countries in which valuables

72: They are held under the expectation that their prices will not deteriorate and will rise in the long run. Valuables consist of precious stones and metals, artwork (e.g., paintings and sculptures), and other valuables (e.g., jewelry) made from stones and metals.

are not recorded separately (Korea, Malaysia, Mongolia, and Vietnam), the corresponding amounts are first separated from changes in inventories before being reassigned to household consumption. This treatment reflects that valuables are not capitalized but are nonetheless included in production, and that excluding them entirely, while intended to improve international comparability, would likely have understated household consumption. To preserve time-series consistency, retrospective estimates are made for periods when such acquisitions were not recorded in the 1968-SNA-based national accounts.

8.1.7 Basic-Price GDP

GDP can be valued using different price concepts: factor cost, basic prices, and market prices. If the price concept is not standardized across countries, it will interfere with international comparisons. All the countries covered in this Databook officially report GDP at market prices (or at purchasers' prices), but not all countries report GDP at factor cost or GDP at basic prices. The international comparisons in Chapters 3 and 4 are based on GDP at market prices. However, by valuing output and input at the prices producers receive and pay, basic-price GDP is a more appropriate measure of output for international comparisons of TFP and industry performance, as it reflects the producers' perspective. Hence, Chapter 5 on productivity performance is based on basic-price GDP, including APO-PDB estimates when official data are unavailable.

Table 8.2 Classification of Indirect Taxes and Subsidies

Indirect taxes (T)		Subsidies (S)	
T1	Indirect taxes on production and imports	S1	Subsidies
T2	Indirect taxes on products	S2	Subsidies on products
T2a	Taxes and duties on imports	S2a	Subsidies on imports
T2b	Other taxes on products	S2b	Other subsidies on products
T3	Other indirect taxes on production	S3	Other subsidies on production
T3a	Taxes on payroll or workforce	S3a	Subsidies on payroll or workforce
T3b	Recurrent taxes on land, buildings or other structures	S3b	Subsidies to reduce pollution
T3c	Taxes on the use of fixed assets		
T3d	Other taxes on production		

Source: APO Productivity Database 2026. Notes: As details of these classifications are rarely published in the official SNA, the APO-PDB has approximated them as estimates based on available data and information. The types of T3 and S3 are defined based on para. 7.94 and 7.106, respectively, in the 2008 SNA. T3b and T3c are further subdivided, corresponding to the APO-PDB asset classification (Table 8.5), and the asset-specific effective property tax rates are used to measure the user cost of capital in Section 8.2.7.

These concepts of GDP differ in their treatment of indirect taxes and subsidies (and import duties). Table 8.2 presents the classification of indirect taxes and subsidies, divided as far as possible in accordance with APO-PDB 2026 (notwithstanding significant challenges to the accuracy of the estimates).⁷³ The difference between basic-price and market-price GDP is “T2. Taxes on products” minus “S2. Subsidies on products.” Since the basic-price GDP is available for some Asian economies, such as Hong Kong, India, Korea, Mongolia, Nepal, Singapore, and Sri Lanka, a basic-price GDP calculation must be constructed for all other countries. To obtain the basic-price GDP, T2 is subtracted from the market-price GDP, available for all the countries studied, and S2 is added. The main data sources for estimating T2 and T3 are tax data in national accounts, the IMF's Government Finance Statistics, the SUT/IOT in each country, and other national data. Table 8.3 lists the SUT/IOT used in APO-PDB 2026.

Readers should bear in mind these caveats when interpreting the results in Chapter 6, as the industry-level definition of GDP varies across countries due to differences in data availability. Table 8.4 presents

73: The split estimates of indirect taxes and subsidies have been incorporated since the APO-PDB 2023 to calculate property tax rates in the user cost of capital formula (Section 8.2.7).

Table 8.3 SUT/IOTs in Asia

	SUT / IOT
Bangladesh	1976/77, 1981/82, 1986/87, 1992/93, 1993/94, 2000, 2005/06, 2010/11, 2010–2017*
Cambodia	Estimate(2003**), Benchmark (2005*), Annual (2010–2017*)
ROC	Benchmark (1981, 1986, 1991, 1996, 2001, 2004, 2006, 2011, 2016, 2021), Extended (1984, 1989, 1994, 1999, 2004), Annual (2006–2024)
Fiji	1972, 1981, 2002, 2005, 2008, 2011
India	Benchmark (1993/94, 1998/99, 2003/04, 2011/12), Annual (2006/07, 2007/08, 2012/13, 2013/14, 2014/15, 2015/16, 2016/17, 2017/18, 2018/19, 2019/20, 2020/21, 2021/22)
Indonesia	1971, 1975, 1980, 1985, 1990, 1995, 2000, 2005, 2010, 2016, 2020
Iran	1962, 1973, 1974, 1986, 1988, 1991, 1999, 2001, 2004, 2011
Japan	1960, 1965, 1970, 1975, 1980, 1985, 1990, 1995, 2000, 2005, 2011, 2015, 2020
Korea	Benchmark (1960, 1963, 1966, 1970, 1975, 1980, 1985, 1990, 1995, 2000, 2005, 2010, 2015, 2020), Updated (1973, 1978, 1983, 1986–1988, 1993, 1998, 2003, 2006–2019, 2021–2023)
Lao PDR	Benchmark (2012), Annual (2010–2017*)
Malaysia	1978, 1983, 1987, 1991, 2000, 2005, 2010, 2015, 2019, 2020, 2021
Mongolia	Benchmark (1963, 1966, 1970, 1977, 1983, 1987, 1997, 2000, 2005, 2010), Annual (2010–2019)
Nepal	2004, 2010
Pakistan	1975/76, 1984/85, 1989/90, 1999/2000, 2015/16
Philippines	1961, 1965, 1969, 1974, 1979, 1985, 1988, 1994, 2000, 2006, 2012
Singapore	Benchmark (1973, 1978, 1983, 1988, 2000, 2005, 2007, 2010, 2015), Annual (2012–2014, 2016–2017, 2019, 2021, 2022)
Sri Lanka	2006, 2010, 2015
Thailand	1975, 1980, 1985, 1990, 1995, 1998, 2000, 2005, 2010, 2015, 2021
Turkiye	1973, 1979, 1985, 1990, 1996, 1998, 2002, 2012, 2023
Vietnam	1989, 1996, 2000, 2007, 2012
China	Benchmark (1987, 1992, 1997, 2002, 2007, 2012, 2017), Updated (2000, 2005, 2010, 2015, 2018, 2020, 2023)
Bhutan	2007, 2014, 2017
Brunei	Benchmark (2005, 2010), Annual (2010–2017*)
Maldives	1997, 2003, 2014
Saudi Arabia	Benchmark (2023), Annual (2018–2022)

Sources: Estimates by the national statistics office in each country. *ADB (2018) *Economic Indicators for Southeastern Asia and the Pacific: Input-Output Tables*, Manila: Asian Development Bank. ** Kobayashi, S., H. Tanji, K. Saito, W. Huang, and M. Tada (2012) "Industrial Structure of Cambodia and the Role of Agriculture and Fishery in its Development," *Japan Agricultural Research Quarterly*, 43(4). Note: These SUT/IOT are collected and used in the development of APO Productivity Database 2026, which newly reflects the SUT/IOT of the ROC for 2023 and 2024, China for 2023, India for 2020/2021 and 2021/2022, Indonesia for 2020, Korea for 2023, Pakistan for 2015/2016, Thailand for 2021, Singapore for 2022, Saudi Arabia for 2018, 2019, 2020, 2021, 2022, and 2023, and Turkiye for 2023.

the definition of GDP in each country. GDP is valued at basic prices for 27 economies; at producers' prices for seven; and at market prices for four. (GDP at basic prices is GDP at factor cost plus T3. other indirect taxes on production minus S3. other subsidies on production.) In this sense, the industry data in Chapter 6 should be viewed as a work in progress, as it is challenging to assign a range of uncertainties to it. These issues will be examined in greater detail in future issues of the Databook.

Table 8.4 Price Valuation of Industry-Level GDP in National Accounts

Price valuation	Country
Basic price (27)	BAN, BHR, BRN, BTN, CAM, FIJ, HKG, IND, IRN, KAZ, KGZ, KOR, KWT, LAO, MDV, MGL, NEP, OMN, QAT, SAU, SIN, SRI, TJK, TKM, TUR, VIE, UZB
Producers' price (7)	AFG, CHN, JPN, MYA, PAK, PHL, ROC
Market price (4)	IDN, MAL, THA, UAE

Source: KEO's own investigation.

8.2 Measurement of Capital Input

8.2.1 GFCF by Type of Assets

Quality changes in the aggregate measure of capital input originate from two sources: composition changes in the capital stock by asset type and quality improvements within each asset type. To account for asset composition, APO-PDB 2026 classifies 23 types of assets as shown in Table 8.5: 11 produced assets, seven types of land, one type of inventory, and four types of mineral and energy resources (MER). The produced assets consist of three types of building and construction (B&C), five types of machinery, equipment, and other produced assets (M&E), and three types of intellectual property products (IPP).

Table 8.5 Asset Classification

asset code	group	asset code	group
1. ICT hardware	M&E	13. Industrial use land	Land
2. Communications equipment	M&E	14. Commercial use land	Land
3. Transportation equipment	M&E	15. Residential use land	Land
4. Other machinery and equipment and weapon systems	M&E	16. Other economic use land	Land
5. Dwellings	B&C	17. Forest use land	Land
6. Non-residential buildings	B&C	18. Inland water use land	Land
7. Other structures	B&C	19. Inventories	Inventory
8. Cultivated biological resources	M&E	20. Oil	MER
9. Research and development (R&D)	IPP	21. Coal	MER
10. Computer software	IPP	22. Gas	MER
11. Other intellectual property products	IPP	23. Mineral	MER
12. Agricultural use land	Land		

Sources: APO Productivity Database 2026 and ANRD 2026.

Detailed investment data is not always available in the official national accounts.⁷⁴ For countries where detailed investment data are unavailable from national accounts, the 11 types of produced investment are estimated based on the benchmark and annual SUT/IOT, as well as APO-PDB estimates of production data for B&C and the product flows of domestic production and of exports/imports of assets for M&E. For IPP, see Sections 8.1.4 and 8.1.5. In particular, where the division into three types of B&C (asset codes 5–7 in Table 8.5) is difficult for countries lacking detailed construction data, these estimates remain crude and rely on other countries' experience. Readers are cautioned about data uncertainty and should expect that the decomposition of capital services contributions into ICT and non-ICT capital may be revised for some countries when more reliable data become available.

8.2.2 Produced Assets

About half of APO member economies publish capital stock estimates in their national accounts systems.⁷⁵ Even where official estimates are available, users must be mindful of the differences in methodologies and assumptions used to estimate capital stock and its consumption, as well as the large diversity in the treatment of quality adjustment in price statistics among countries. In APO-PDB 2026, a harmonized framework is applied to estimate capital stock and capital services, covering the Asia28 economies and using Japan as the reference country. The asset-specific geometric approach is used to measure net capital stock. The standard parameters for geometric depreciation rates are assumed for the country groups (D1–D6) defined in Table 6.1, as shown in Table 8.6.

Table 8.6 Depreciation Rates of Produced Assets

asset code	δ					
	D1	D2	D3	D4	D5	D6
1. ICT hardware	0.294	0.294	0.294	0.294	0.294	0.294
2. Communications equipment	0.246	0.246	0.246	0.246	0.246	0.246
3. Transportation equipment	0.219	0.219	0.162	0.138	0.138	0.138
4. Other machinery and equipment and weapon systems	0.178	0.178	0.138	0.117	0.117	0.117
5. Dwellings	0.049	0.049	0.041	0.037	0.033	0.033
6. Non-residential buildings	0.084	0.084	0.062	0.056	0.050	0.045
7. Other structures	0.026	0.026	0.019	0.018	0.017	0.016
8. Cultivated biological resources	0.215	0.215	0.202	0.161	0.145	0.131
9. Research and development (R&D)	0.190	0.190	0.180	0.162	0.162	0.162
10. Computer software	0.330	0.330	0.330	0.330	0.330	0.330
11. Other intellectual property products	0.270	0.270	0.270	0.270	0.270	0.270

Source: APO Productivity Database 2026. Note: For the country groups (D1–D6), see Table 6.1.

It is well known that prices of constant-quality ICT capital have been falling rapidly. For cross-country comparisons, there is a substantial disparity in the treatment of quality adjustment in price statistics across countries (see Byrne 2019 and Shimizu 2023). Cross-country comparisons will be significantly biased if some countries adjust their deflators for quality change while others do not. Price harmonization is sometimes used to control methodological differences in the compilation of price indexes, assuming that individual country price data fails to capture quality improvements. If the relative price of ICT to non-ICT capital in the countries compared is set equal to the relative price in the reference country, the harmonized price is formulated as $\Delta \ln \tilde{P}_{IT}^X = \Delta \ln P_{nIT}^X + (\Delta \ln P_{IT}^{ref} - \Delta \ln P_{nIT}^{ref})$, where the superscript X denotes the country included in the comparisons, P_{IT} is the price of ICT capital, and P_{nIT} is the price of non-ICT capital. The price of ICT capital in the country X , $\tilde{P}_{IT}^X$, is computed by the observed prices P_{IT}^{ref} and P_{nIT}^{ref} in the reference country and P_{nIT}^X in X . OECD (2025) applies price harmonization to capital services, with the US as the reference country, since the potential error from using a harmonized price index would be smaller than the bias from comparing capital services using individual national deflators.

In APO-PDB, the same price harmonization method is applied to adjust quality improvements for ICT hardware and communications equipment in countries where appropriate quality-adjusted price data is not available, using Japan prices, which the Bank of Japan has developed since the 1980s, as the reference price.

8.2.3 Inventory

Inventory stock has been incorporated as a capital input in the productivity account beginning with the APO-PDB 2021. The official estimates of the inventory changes recorded in the national accounts are used to estimate the inventory stock. When the official estimates of the price index for inventory changes fluctuate unrealistically, they are replaced by KEO's estimates of the aggregate price index for products comprising domestically produced goods (from the agriculture, mining, and manufacturing sectors) and imported goods.

The recorded inventory changes are not fully comparable across economies. Even where they are published, they include net acquisitions of valuables in some economies (as discussed in Section 8.1.6) and statistical discrepancies in others (Afghanistan, Iran, Malaysia, the Maldives, Saudi Arabia, and Türkiye), whereas in Bangladesh and Lao PDR they are not published separately. Official estimates of inventory stock are available only in Japan, Korea, the ROC (only from 2019 onward), and the US. Where official inventory-stock estimates are available, the accumulated stock derived from inventory changes is broadly consistent with the published stock series, supporting the accumulation approach adopted in APO-PDB.

In economies without official inventory-stock estimates, the accumulated stock must be derived solely from recorded changes in inventory. In some cases, particularly where inventory changes serve as a balancing item in the national accounts, this procedure results in implausibly large inventory stocks relative to GDP. For China, Nepal, and Sri Lanka, a discard rate is applied to the accumulated stock to keep it within a range that is reasonable in international comparison. Because net inventory acquisitions can take either positive or negative values, independent estimation is difficult when the recorded series are problematic. Where the recorded inventory series are judged to be insufficiently reliable, inventory stock is not capitalized in APO-PDB 2026. This applies to Afghanistan, Bangladesh, Bhutan, Iran, Lao PDR, the Maldives, Mongolia, and Singapore, pending future revisions to the official statistics.

74: The availability of GFCF data in the national accounts or benchmark SUT/IOT by country is provided in Figure 8.7 in *APO Productivity Databook 2023*. The SUT/IOT used in APO-PDB 2026 is listed in Table 8.3.

75: Based on the metadata survey, eight APO member economies do not develop balance sheet accounts within the official national accounts; these countries are Bangladesh, the ROC, Indonesia, the Lao PDR, Mongolia, Nepal, Sri Lanka, and Vietnam (but the National Wealth Survey is available in the ROC for some selected years).

8.2.4 Stock Loss from Disasters

Natural disasters can significantly impact economic growth, especially in developing economies. Capital stock losses from natural disasters have been accounted for in the net capital stock estimates since APO-PDB 2021. This improves the underestimated TFP derived from accounts that ignore these losses.⁷⁶

The stock losses in APO-PDB are estimated based on the total estimated damages developed in the Emergency Events Database (EM-DAT) by the Centre for Research on the Epidemiology of Disasters (CRED), Université Catholique de Louvain, Belgium. The data on total damages estimated in EM-DAT are incorporated through two adjustment processes. First, the total value of damage is divided into damage to gross capital stock and to GDP, based on the assumptions at the most detailed level of disaster types. Second, the gross capital stock is converted to net capital stock based on capital stock estimates. Table 8.7 presents the estimated value of damages on the net capital stock of produced assets at constant 2024 prices (in parentheses) and the damage ratios to total stock at current prices (in percentages) in the year the disaster occurred from 1970 to 2024. The magnitude of damage to capital stock sorts the top 60 disasters in Asia.

Table 8.7 Capital Stock Damages by Natural Disasters, 1970–2024

—Damage ratios on net capital stock at current prices and damages of capital stock at constant prices

	Year	Type	Damage to NCS		Year	Type	Damage to NCS		Year	Type	Damage to NCS
1 Maldives	2004	E	11.06 (0.90)	21 Nepal	2024	F	1.52 (2.14)	41 Bangladesh	2007	S	0.86 (2.09)
2 Myanmar	2008	S	5.59 (2.22)	22 Sri Lanka	2004	E	1.51 (1.26)	42 Cambodia	2013	F	0.85 (0.35)
3 Nepal	2015	E	3.92 (3.08)	23 Bangladesh	1987	F	1.51 (1.10)	43 Myanmar	2023	S	0.81 (1.22)
4 Lao PDR	1993	S	3.57 (0.33)	24 Fiji	1985	S	1.41 (0.11)	44 Iran	1990	E	0.78 (7.28)
5 Afghanistan	1988	F	3.44 (0.32)	25 Pakistan	2022	F	1.41 (8.99)	45 Myanmar	2024	S	0.75 (1.16)
6 Fiji	2016	S	2.94 (0.41)	26 Thailand	2024	S	1.40 (18.81)	46 Bangladesh	1995	S	0.73 (0.78)
7 Pakistan	1973	F	2.88 (1.96)	27 Myanmar	2004	E	1.40 (0.41)	47 China	1998	F	0.73 (47.40)
8 Bangladesh	1988	F	2.82 (2.13)	28 Afghanistan	1978	F	1.32 (0.07)	48 Nepal	1987	F	0.71 (0.12)
9 Nepal	1980	E	2.78 (0.30)	29 Bangladesh	2004	F	1.18 (2.31)	49 Myanmar	1991	F	0.67 (0.07)
10 Bangladesh	1998	F	2.77 (3.51)	30 Maldives	1987	F	1.16 (0.02)	50 Fiji	1986	S	0.65 (0.05)
11 Fiji	1972	S	2.23 (0.09)	31 Philippines	2013	S	1.15 (6.57)	51 Afghanistan	2023	E	0.65 (0.22)
12 Thailand	2011	F	2.20 (21.94)	32 Pakistan	2005	E	1.13 (3.98)	52 China	1976	E	0.64 (13.05)
13 Türkiye	1999	E	2.01 (16.83)	33 Cambodia	2011	F	1.12 (0.39)	53 Myanmar	1984	O	0.64 (0.06)
14 Cambodia	1991	F	1.96 (0.17)	34 Sri Lanka	1978	S	1.08 (0.30)	54 Türkiye	2023	E	0.61 (21.09)
15 Bangladesh	1991	S	1.95 (1.69)	35 Nepal	1993	F	1.06 (0.25)	55 Afghanistan	1991	F	0.61 (0.05)
16 Bangladesh	1974	F	1.80 (0.78)	36 Pakistan	1976	F	1.00 (0.70)	56 China	1996	F	0.58 (32.56)
17 Fiji	1993	S	1.59 (0.16)	37 Philippines	1972	F	0.97 (0.82)	57 Myanmar	1988	O	0.54 (0.05)
18 Pakistan	2010	F	1.56 (6.92)	38 Fiji	1983	S	0.92 (0.07)	58 India	1993	F	0.52 (11.03)
19 ROC	1999	E	1.56 (12.28)	39 Myanmar	1989	O	0.88 (0.09)	59 Japan	2011	E	0.52 (84.11)
20 Cambodia	2000	F	1.52 (0.18)	40 Vietnam	1996	S	0.88 (0.85)	60 Pakistan	1992	F	0.51 (0.96)

Unit: Percentage (ratio at the beginning-of-period net capital stock: NCS) and billion USD (as of 2024 in parentheses). Sources: EM-DAT, CRED, Université Catholique de Louvain, Belgium and APO Productivity Database 2026. Note: S, E, F, and O represent the types of disasters as storms, earthquakes, floods, and others, respectively.

Although the Great East Japan Earthquake in 2011 resulted in the largest damage to the capital stock (about USD 80 billion), the damage ratio to the total stock is limited to 0.52% due to the large size of the aggregate capital stock, and it ranked 59th in Table 8.7. Five disasters have caused damage exceeding 3% of capital stock, primarily in the poorest countries. In particular, the 2004 disaster, which resulted in an 11% loss of the Maldives' capital stock, was caused by the tsunami triggered by the Sumatra earthquake.

76: The revision of TFP growth from the year before the disaster to the disaster year is provided in Figure 84 in *APO Productivity Databook 2022* (October 2022). In the case of Myanmar's Cyclone Nargis in 2008, the TFP estimate was revised from a negative 9.3% to 5.2%. In other cases, negative TFPs are modified to be close to zero or slightly positive.

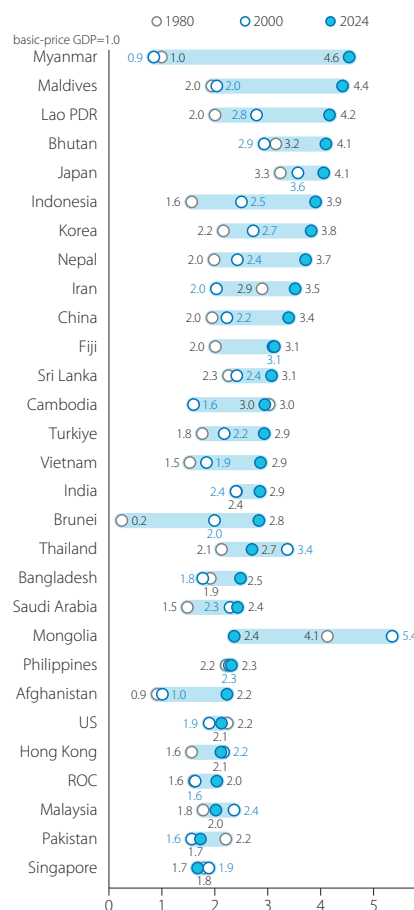
Cyclone Nargis in early May 2008 was the worst natural disaster in Myanmar's recorded history, causing devastating damage equivalent to 6% of its capital stock.

Figure 8.5 presents the estimated capital-output ratio (capital stock coefficient), defined as the ratio of the beginning-of-period net capital stock (all types of produced assets owned by private and public institutions) to the basic-price GDP at current prices. Note that this measure excludes land and MER. The exceptionally high capital-output ratio observed for the Maldives (4.4 in 2024) likely reflects a surge in externally financed infrastructure and resort-related investment during the late 2010s. Bhutan also has a high capital-output ratio of 4.1, reflecting an industry structure heavily skewed toward hydropower generation (Nomura 2025). Lao PDR shows a comparably high ratio, reflecting heavy investment in hydropower and transport infrastructure. In these economies, large infrastructure projects have often been supported by external financing, enabling investment in indivisible facilities—such as ports, airports, power generation, and tourism infrastructure—that are exceptionally large relative to the size of the domestic economy and can therefore result in high capital-output ratios. Subnational economies of comparable size, such as a single prefecture, can display similarly high ratios. Compared to the 2000 level in each country, all Asian economies—except Hong Kong, Mongolia, Malaysia, Singapore, and Thailand—have shown an upward trend in their capital-output ratios.

Figure 8.5 Capital-Output Ratio (Produced Assets), 1980–2024

—Ratio of the beginning-of-period net capital stock to basic-price GDP at current prices in 1980, 2000, and 2024

Unit: Percentage. Source: APO Productivity Database 2026. Note: Capital stock consists of produced assets and inventory here (excluding land and MER).



Box 12 Evolution of the Productivity Measurement Framework

Since its first publication in 2008, the APO Productivity Database (APO-PDB) has been continuously updated through annual revisions and retrospective updates following the release of new benchmark national accounts. In addition to these regular updates, several important improvements have been introduced to the measurement framework underlying the productivity accounts.

Table 8.8 summarizes the evolution of the APO-PDB measurement framework, particularly the extensions to capital input and the improvements in labor input measurement. These developments have gradually enhanced the accuracy and analytical usefulness of TFP estimates.

The first major improvement was the introduction of quality-adjusted labor input estimates. The project to construct the Asia QALI Database (AQALI) began in 2013 at KEO (Section 8.3.2). The construction of the database required extensive data collection and the reconstruction of missing information on labor composition

across economies. After five years of intensive work, the first AQALI estimates were produced for 23 Asian economies, with the US as the reference country, and were incorporated into the APO-PDB 2018. The AQALI has since been expanded to include Bhutan in 2019, Türkiye in 2020, Afghanistan and the Maldives in 2025, and Saudi Arabia in 2026, now covering 28 economies.

The second major development involved improvements in measuring capital. The construction of a land database began at KEO in 2016 and has been incorporated into the APO-PDB since the 2019 edition (Section 8.2.5). Inventory stock estimates were also integrated during this period (Section 8.2.3). These extensions improved the measurement of capital services and contributed to revisions in estimated TFP growth. Further work expanded the treatment of natural resources. The development of mineral and energy resource (MER) stock estimates began in 2020 and has been incorporated since APO-PDB 2023 (Section 8.2.6). Together with the land database, these estimates form part of the Asian Natural Resource Database (ANRD), which provides a consistent treatment of natural assets in productivity accounting. In addition, the impact of major disasters on produced assets—particularly relevant for developing economies—has been incorporated into capital stock estimates since the APO-PDB 2021 (Section 8.2.4).

Table 8.8 Capital and Labor Extensions in the APO-PDB, 2008–2026

APO-PDB	Capital Input							Labor Input	
	B&C	M&E	IPP	INV	Land	MER	Disaster	H	QALI
2008	3	5	3		(ANRD)			○	(AQALI)
:									
2013									Under development
:									
2016					Under development				
2017									
2018				Under development					
2019				1	4	Under development	Under development		○
2020									
2021							○		
:									
2023					7	4			
:									
2026									

Sources: APO-PDB 2008–2026. Note: A downward arrow indicates the period during which data development took place. A circle indicates that the estimates are incorporated into the APO-PDB and may still be under revision or improvement. Table 1.1 provides the historical record of the country coverage.

8.2.5 Land

Land is an important factor of production not only in the agriculture sector but also in the manufacturing and service sectors. It accounts for a large share of the nominal capital stock in densely populated countries. Despite its importance, land was not considered a capital input until APO-PDB 2018 due to data availability constraints. In Asia, only Japan and Korea publish estimates of land stocks in their national balance sheets as part of their systems of national accounts.

Land stock data has been developed at KEO since 2016, and these estimates were incorporated beginning with APO-PDB 2019. Land stock is defined as a natural resource in the ANRD, together with MER (Section 8.2.6). The ANRD 2026 used in this edition covers the Asia28 economies. Table 8.9 defines the types of land use. In APO-PDB 2026, all seven land-use types (APO-PDB asset code: 12–18) are treated as non-produced assets.⁷⁷

Table 8.9 Land Use Classification

Land classification in ANRD		APO-PDB asset code
L0	Total land	
L1	Agricultural use land	12
L2	Forest use land	17
L21	Timberland	
L22	Reserved forest land	
L23	Other forest land	
L3	Industrial use land	13
L4	Commercial use land	14
L5	Residential use land	15
L51	Urban residential use land	
L52	Rural residential use land	
L6	Other economic use land	16
L7	Inland water use land	18

Source: ANRD 2026. Note: Table 8.5 provides the whole list of the APO-PDB asset codes.

The land stock data consists of current- and constant-price estimates for seven land-use types. Data on land area (m²) are available from FAOSTAT for agricultural use (asset code: 12), forest use (17), inland water use (18), and total economic use (sum of 13–16). Land areas for industrial (13), commercial (14), and residential (15) use are compiled from national data sources, while other economic use (16) is defined as the residual. For countries in which data on the national land area for residential use (15) is unavailable, it is estimated from available information, including household statistics, dwelling stock estimates (Section 8.2.2), per capita GDP, and so on. When national data are unavailable, land areas for industrial (13) and commercial (14) use are derived from APO-PDB estimates of land productivity together with manufacturing and service-sector GDP, respectively.

For countries where land stock data at current prices are unavailable, samples of land price data are collected to estimate current-price land stocks. The land price data are available mainly in urban areas.⁷⁸ Based on the assumptions about price gaps between urban and rural areas in each country, survey prices for urban land are discounted to estimate national-level averages. For certain productive land, particularly agricultural land, the price level is estimated as the present value of the future stream of returns attributable to land—that is, operating surplus and mixed income net of the imputed labor income of the self-employed and contributing family workers and the user cost of structures, all derived from APO-PDB estimates.

The APO-PDB 2026 has comprehensively revised the current price estimates of land stocks. The revisions reflect both the incorporation of new data sources, including housing statistics from population censuses, and a comprehensive reassessment of land price estimates. At the micro level, observed but fragmented real estate transaction data are used to establish relative land price levels across economies. At the macro level, the resulting growth rates are checked against property price indices covering land and real estate—which have recently become available in some economies—and against international comparisons of the ratio of nominal land stock value to sectoral value added, such as residential land relative to value added in real estate (including imputed rents).

Although further efforts are required to improve the estimates, Figure 8.6 presents the current estimates of the ratios of total capital stock to basic-price GDP and the land shares of total capital stocks (right axis) as of the beginning of 2024. When land stocks are included, the country order of capital-output ratios is considerably revised relative to Figure 8.5, which is based only on produced assets. In the ROC, Singapore, and Hong Kong, the estimated land shares exceed 70% of total capital stock, almost twice the 36% in Japan and 40% in the US. In general, the growth rate of land stock is close to zero or much smaller than that of productive assets. Considering land stock in the measurement of capital inputs would reduce the estimated growth of capital and thus help reduce the bias toward underestimating TFP growth rates in many Asian countries.

77: The APO-PDB 2022 covered four land types (asset code: 12–15), and the APO-PDB 2023 and later were revised to cover all seven land-use types (asset code: 12–18), as shown in Table 8.8. However, this revision has a limited impact on the productivity account, since the unit values of the newly added land types are much lower.

78: They are collected from market data and survey results such as *The World Land Value Survey* (Japan Association of Real Estate Appraisers: JAREA), *Report on Survey of Urban Land Prices in the Developing World* (International Housing Coalition: IHC), and *Survey on Business Conditions of Japanese Companies in Asia and Oceania* (Japan External Trade Organization).

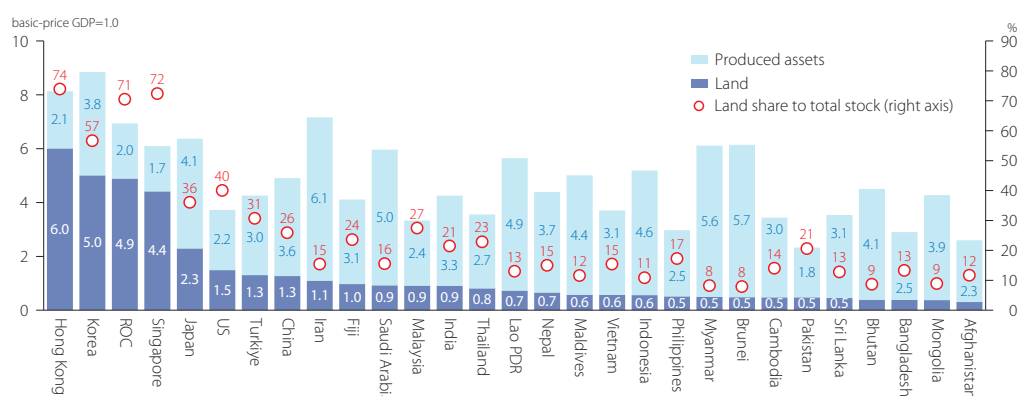


Figure 8.6 Capital-Output Ratio (Produced Assets and Land), 2024

—Ratio of the beginning-of-period net capital stock to basic-price GDP at current prices

Unit: Percentage. Sources: ANRD 2026 and APO Productivity Database 2026.

8.2.6 Mineral and Energy Resources

For resource-rich countries, the mining industry accounts for a large share of GDP (Figure 3.12). However, earlier versions of the APO-PDB did not consider the depletion of mineral and energy resources (MER) assets. In 2020, KEO began developing data on MER stocks for the Asia28 economies, spanning more than 50 years, starting in 1970.⁷⁹ The MER data from the ANRD were first incorporated into the APO-PDB in the 2023 edition. APO-PDB 2026 includes the latest available data from ANRD 2026.

Table 8.10 Classification of MER

MER classification in ANRD		APO-PDB asset code
ME100	Energy resources	
ME101	Oil	20
ME102	Coal	21
ME103	Gas	22
ME200	Mineral resources	23
ME201	Bauxite	
ME202	Copper	
ME203	Gold	
ME204	Iron ore	
ME205	Lead	
ME206	Nickel	
ME207	Phosphate rock	
ME208	Silver	
ME209	Tin	
ME210	Zinc	

Source: ANRD 2026.

Note: Table 8.5 provides the APO-PDB asset code.

Table 8.10 defines the classification of MER. In this edition, three types of energy resources (ANRD code: ME101, ME102, and ME103) and one mineral resource (ME200), defined as an aggregate of 10 types of mineral resources (ME201–ME210), are treated as non-produced assets (APO-PDB asset codes: 20–23).

Reserves data sometimes fluctuates widely. The ANRD adjusts reserves to match production and sets an upper limit on the number of years of availability.⁸⁰ Figure 8.7 compares the ratio of MER stock to nominal GDP in the Asia28 economies and shows that five countries have MER stocks equal to or exceeding GDP in 2024, with a further four countries exceeding 40%, as indicated in the left panel.⁸¹ As shown in the right panel, in 12 economies, the share of GDP is less than 0.1%, resulting in a negligible impact on net income and growth accounting. The effect on TFP estimates in countries with large MER stocks is discussed in Box 9 (Section 5.7).

79: The MER consists of “mineral and energy reserves located on or below the earth’s surface that are economically exploitable, given current technology and relative prices” in para 10.179 in the 2008 SNA (United Nations 2009).

80: The main data on reserves and production rely on *International Energy Statistics* by the US Energy Information Administration for energy resources, *Mineral Commodity Summaries 2025* by the US Geological Survey, and *World Mineral Statistics 1995–99* by British Geological Survey for mineral resources, as well as national data sources. Resource rents are from the World Bank (2025).

81: In Myanmar, jade stocks (discussed in Section 8.4) are not covered in the ANRD 2026.

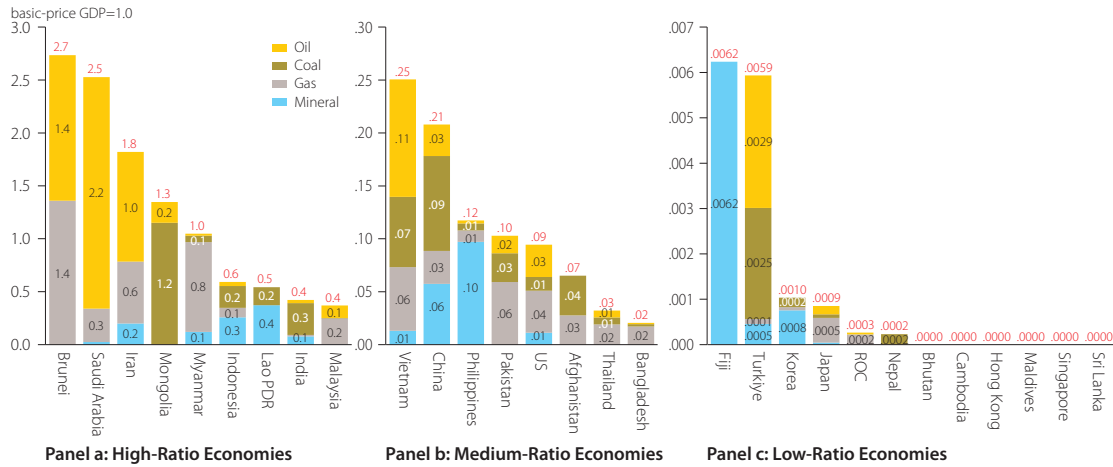


Figure 8.7 MER Capital-Output Ratio, 2024

—Ratio of the beginning-of-period net capital stock of MER to basic-price GDP at current prices

Unit: Percentage. Sources: ANRD 2026 and APO Productivity Database 2026.

8.2.7 Capital Services

In production analysis, capital services provide an appropriate concept of capital input as recommended in the 2008 SNA. The fundamental assumption in measuring capital services is the constant proportionality between the (productive) capital stock and capital services for each type of asset. Thus, capital service growth rates differ from capital stock growth rates only at the aggregate level. To aggregate different kinds of capital, the user cost of capital by asset type is required. This section outlines the methodology for estimating the user cost of capital and presents the estimated endogenous rate of return for Asian countries in APO-PDB.

The user cost of capital of a new type k asset (Table 8.5) in period t , u_t^k , is defined as $q_{t-1}^k \{r_t + \tau_t^k + (1 + \pi_t^k) \delta_t^k - \pi_t^k\}$, where r_t , τ_t^k , δ_t^k , and q_t^k are the expected nominal rate of return, effective property tax rate, cross-section depreciation rate, and asset price, respectively. The asset-specific inflation rate π_t^k is defined as $(q_t^k / q_{t-1}^k - 1)$.⁸² Effective property tax rates by asset type have been considered since APO-PDB 2024. The estimates for “T3b. Recurrent taxes on land, buildings or other structures” and “T3c. Taxes on the use of fixed assets” in Table 8.2 are further subdivided, corresponding to the asset classification in Table 8.5.

The APO-PDB follows the *ex-post* approach, originating with Jorgenson and Griliches (1967), which uses realized capital income to calculate the rate of return, in contrast to the *ex-ante* approach, which uses market interest rates. Assuming constant returns to scale and competitive markets, capital compensation (V_t) can be derived from the summation of capital service cost V_t^k over all k asset types. V_t^k is defined as the product of the user cost of capital and the productive capital stock, S_t^k (i.e., $V_t = \sum_k V_t^k = \sum_k u_t^k S_t^k$). Based on this identity and the n -equations of user cost of capital, the $n+1$ variables of u_t^k and r_t are simultaneously determined, using the observed capital compensation V_t as the total sum of V_t^k that is not observable for each asset.

82: The user cost defined here follows the SNA production-based income concept, in which asset revaluation enters the price of capital services through the term π_t^k . The implications of alternative income concepts that separate asset revaluation from production—for the interpretation of TFP—are discussed in PRN2605.

The estimated results of the ex-post real rate of return for the Asia28 economies and the US are presented in Table 8.11 as the five-year averages over the entire observation period 1970–2024. After considering the capital input of MER (Section 8.2.6) and the effective rate of property tax, the nominal rates of return have been significantly revised downward compared to the previous estimates in the APO-PDB 2022, bringing them closer to more reasonable estimates. Between 2020 and 2024, the real rate of return ranged from very low levels (1.1–1.8%) in Hong Kong, Japan, and Korea to over 10% in Bangladesh, Afghanistan, Cambodia, Malaysia, the Philippines, Thailand, and Vietnam, reflecting the differences in country risk and marginal product of capital. Aggregate capital services measured in APO-PDB are based on these ex-post estimates of rates of return. The ex-ante and ex-post approaches may yield a modest difference in the growth measure of capital services, despite substantial differences in the rates of return and capital compensation.

Table 8.11 Average Ex-Post Real Rate of Return in Asia, 1970–2024

	1970–1974	1975–1979	1980–1984	1985–1989	1990–1994	1995–1999	2000–2004	2005–2009	2010–2014	2015–2019	2020–2024
Afghanistan	38.2	42.2	38.7	31.1	–14.6	–58.9	–11.1	7.1	18.5	18.5	10.0
Bangladesh	9.4	8.4	10.7	18.1	21.0	18.0	18.4	18.3	18.4	20.6	17.4
Bhutan	7.9	11.9	2.9	5.2	1.2	6.1	11.1	8.0	4.0	5.1	2.4
Brunei	3.0	11.3	7.4	2.5	4.0	5.6	14.9	13.1	7.1	4.4	6.6
Cambodia	18.5	18.5	7.6	–22.5	–15.6	21.0	23.1	18.6	20.9	15.9	11.1
China	9.3	8.1	5.6	–0.1	3.5	9.7	14.0	9.7	6.8	6.9	7.8
ROC	1.8	1.7	0.6	6.5	1.8	2.0	3.4	4.0	5.6	4.3	3.6
Fiji	10.9	11.1	6.5	7.6	13.7	8.7	7.5	7.7	6.9	9.7	7.5
Hong Kong	9.4	10.2	0.0	7.9	0.9	3.1	7.4	7.2	3.7	4.4	1.7
India	1.7	5.8	–0.5	0.4	0.2	2.2	7.2	4.6	1.3	4.0	2.7
Indonesia	12.1	8.5	8.8	9.6	9.7	3.0	8.0	8.2	7.8	6.8	8.2
Iran	10.5	0.8	–6.6	–8.0	–6.8	–6.6	4.2	1.8	–3.2	0.8	–15.8
Japan	–2.4	–3.3	1.0	3.6	0.5	0.8	1.8	2.3	1.8	3.1	1.8
Korea	9.1	4.9	2.6	9.1	2.0	0.2	3.9	4.4	2.8	5.2	1.1
Lao PDR	1.5	–12.8	–24.0	–18.9	2.3	–15.6	–0.6	9.9	8.6	12.7	–3.9
Malaysia	17.9	16.8	7.4	8.4	11.0	12.1	13.5	14.1	14.2	12.9	13.8
Maldives	13.6	3.4	6.3	16.6	10.4	18.1	15.6	10.6	8.8	11.5	2.8
Mongolia	10.4	9.8	8.2	12.4	–46.0	–7.1	7.8	6.5	3.1	6.4	7.6
Myanmar	26.9	29.2	24.8	9.8	2.9	1.9	3.2	5.1	20.5	4.4	–13.1
Nepal	10.2	10.6	6.4	5.3	2.9	3.2	6.5	6.0	1.7	4.3	4.4
Pakistan	9.9	7.0	7.4	12.4	11.0	17.2	25.2	17.2	18.2	17.2	9.1
Philippines	5.8	8.7	4.1	5.5	5.5	9.4	16.1	13.6	17.3	19.0	13.6
Saudi Arabia	16.3	8.1	3.5	2.4	1.6	2.6	11.2	8.0	6.3	4.0	8.4
Singapore	4.7	7.1	4.7	5.6	4.6	3.3	4.5	6.9	3.0	4.2	4.3
Sri Lanka	21.8	21.3	4.9	5.1	2.5	4.8	7.0	8.6	19.6	17.6	3.3
Thailand	14.9	12.1	9.5	14.6	12.3	7.4	10.3	10.8	11.0	13.0	10.8
Türkiye	33.4	12.5	1.3	–3.2	–18.4	–22.1	–0.4	17.2	15.0	10.3	–6.5
Vietnam	13.3	10.5	–16.3	–60.2	–3.5	20.3	19.6	8.0	6.8	9.5	10.7
US	3.7	1.4	–0.2	3.7	3.2	6.4	6.1	4.6	6.1	7.0	4.9

Unit: Percentage. Source: APO Productivity Database 2026.

8.3 Measurement of Labor Input

8.3.1 Hours Worked

The volume of labor can be measured in three ways: number of persons in employment, number of filled jobs, and hours worked. Given the variations in working patterns and employment legislation over time and across countries, hours worked, if accurately measured, offer the most time-consistent and internationally comparable unit measuring the volume of each type of labor. This is the primary underlying reason for choosing hours actually worked in productivity analysis. It is challenging to accurately estimate average hours worked because this information is not always available or comparable across countries. The variety of data sources, definitions, and methodologies used to estimate these labor market variables often leads to fragmentation of labor market statistics within a single country, questionable data quality, and cross-country incomparability. Some of these intricate measurement issues are outlined below.

Data on labor volume are derived from two main statistical surveys of establishments and households, each with its respective strengths and weaknesses. Establishment surveys are surveys of firms with stratified sampling frames by establishment size. The concentration of total employment in a relatively small number of establishments makes this sampling strategy cost-effective for delivering high-precision labor market estimates with low sampling errors. Questionnaires are designed to align closely with the concepts used in company administration. This has both strengths and weaknesses.

On the other hand, changes in legislation and regulation could be a source of instability to the definitions and the data collected. Furthermore, data companies do not collect data for administrative purposes, and data such as unpaid hours and worker characteristics are unavailable. This greatly limits the variety of labor market data collected through establishments.⁸³ Information on hours is based on paid hours rather than actual hours worked. Certain categories of employment, most notably the self-employed, are not covered. Sometimes, small firms, informal employment (which can account for more than 50% of employment in developing countries), or the public sector are also excluded. Due to these limitations, labor market data from establishment surveys often require adjustments for omissions and modifications to definitions during the compilation process.

In contrast, household-based labor force surveys (LFS) fully cover the economy. However, they sometimes exclude certain age or geographic categories and may have imperfect coverage of the armed forces and other institutional households. Nonetheless, they provide valuable data on specific employment groups, such as the self-employed and unpaid family workers, as well as on the number of multiple-job workers. Employment status in LFS is independently determined and is not subject to the criteria used in company records. Most countries follow the definitions of the International Labour Organization (ILO). As LFSs are surveyed from a socio-economic perspective, they also provide rich data on worker characteristics relevant to productivity analysis.⁸⁴

The common practice of statistical offices has been to combine information from establishment and household surveys in national accounts, to utilize the most reliable aspects of each study. This appears to be the most promising avenue for improving the quality and consistency of data on labor input. However, statistical offices may still differ significantly in their methodologies, particularly in estimating the annual average hours worked per job or person, depending on their starting points, namely, LFS data or enterprise data. All these must be considered in international comparisons of productivity.

Figure 8.8 presents a cross-country comparison of average annual hours worked per worker for 2010–2024, as a percentage difference from the US level, based on the AQALI 2026. It indicates that workers in Asian countries work much longer than those in the US and the EU. In many countries sampled, the difference in annual hours worked per person relative to the US is more than 10% of the US level.⁸⁵ Prolonged working hours are observed across all stages of development, from low-income countries such as Bangladesh and Cambodia to high-income countries like Singapore and Korea. Workers in Japan are likely to work much shorter hours than those in other Asian countries. However, compared with the EU15, hours worked per worker in Japan remain about 14 percentage points higher.

83: Employment is measured by jobs rather than by persons employed, because persons holding multiple jobs across different establishments cannot be identified and would otherwise be counted more than once.

84: The major weakness of the LFS, however, is data precision. When relying on respondents' recollection, their responses also depend on perception. Response errors could therefore arise from conceptual confusion and imprecise recall among respondents regarding work patterns and pay during the reference week. Another source of error originates from the proxy response, which relies on the proxy's perception and knowledge of another household member. A high level of proxy responses could therefore reduce the reliability of the collected data.

85: Shorter hours worked in Nepal are due to frequent general strikes called "Banda," mainly by some political parties. According to the Nepal Human Rights Commission, Banda was called 821 times in various regions in 2009, and economic activities were closed during Banda.

Figure 8.9 presents the annual growth rate of total hours worked for the Asia28 economies during 2019–2024, compared with those in 2015–2019 and 2010–2015. Hong Kong experienced a continuous significant slowdown in hours-worked growth over these sub-periods. Growth rates vary widely across economies and over time due to differences in the growth rates of the working-age population, migration, and changes in annual hours.

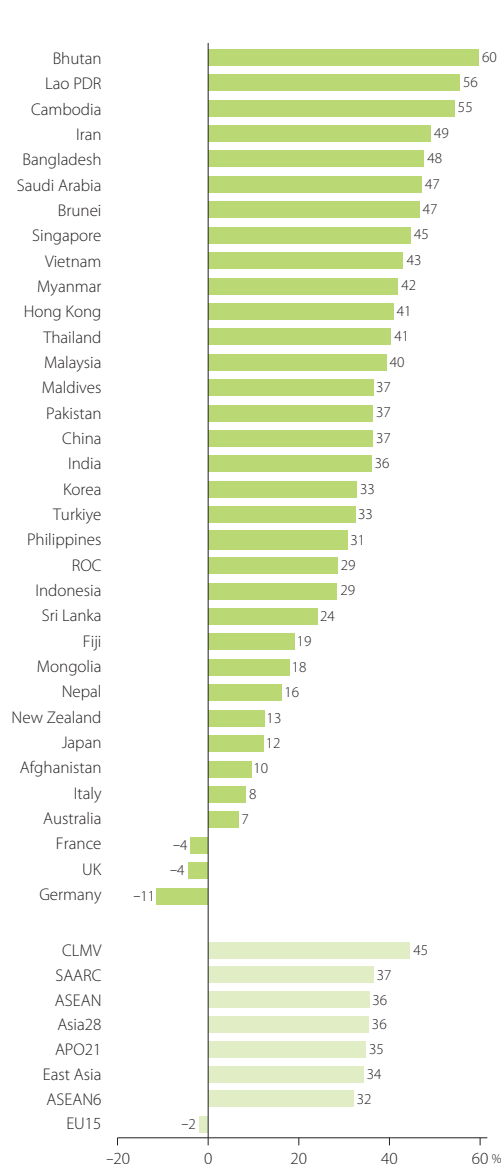


Figure 8.8 Annual Hours Worked Per Worker relative to the US, 2010–2024

—Average annual hours worked per worker, on average, percent difference from the US

Unit: Percentage (relative to the US). Sources: Official national accounts and labor force survey in each country (including adjustments by APO-PDB) for Asian countries and the US, and OECD Stat for the EU15, France, Germany, Italy, New Zealand, and the UK.

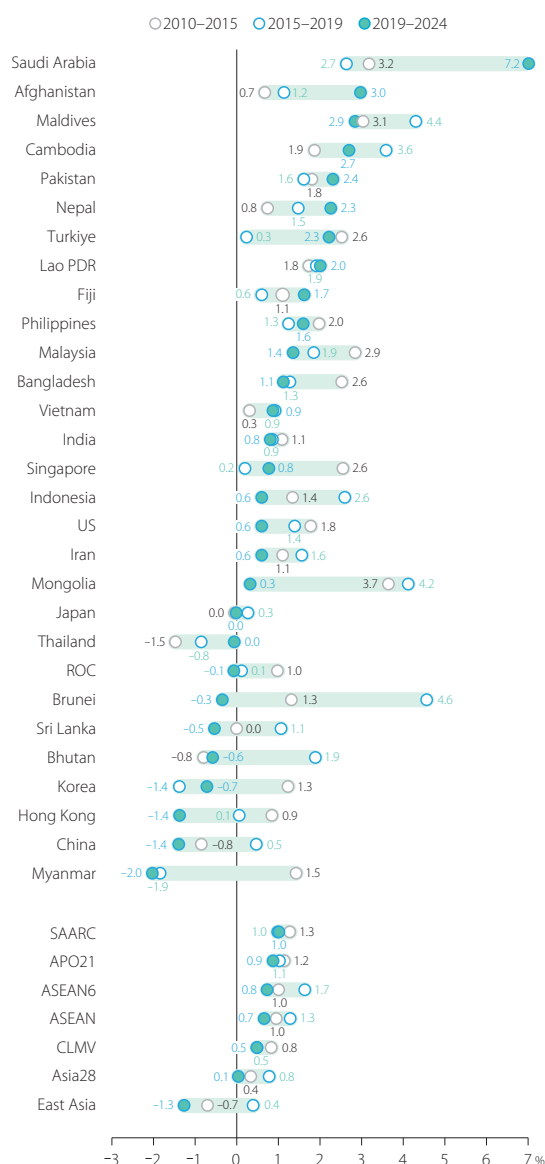


Figure 8.9 Hours Worked Growth in the Recent Periods, 2010–2024

—Growth in total hours worked over three subperiods: 2010–2015, 2015–2019, and 2019–2024

Unit: Percentage (average annual growth rate). Source: AQALI 2026.

8.3.2 Quality-adjusted Labor Input

In productivity analysis, aggregate labor inputs are expected to be quality-adjusted to reflect workforce heterogeneity, as recommended in the 2008 SNA (United Nations 2009).⁸⁶ Adjusting total hours worked for quality would require information on worker characteristics to differentiate the workforce into different types. Hours for each type of worker are weighted by their marginal productivity, approximated using data on total compensation. In the stage of high economic growth, labor quality growth can be a significant factor, as well as the increase in hours worked, improvement in the educational attainment of workers, and a shift from the self-employed (e.g., in agriculture or informal service sectors) to employees (in manufacturing or formal service sectors).

Deriving a quality-adjusted labor input (QALI) measure is a data-demanding exercise. Even if LFS provides the required information, researchers often encounter consistency issues, discussed in Section 8.3.1, and sample size problems as they break down the workforce into fine categories. For the Asia28 economies, data on employment and wages/incomes have been collected by labor category type since 2013 at KEO, primarily based on the LFS and Population Census. The developed database is referred to as the Asia QALI Database (AQALI), which includes the number of workers, hours worked per worker, and hourly wages, cross-classified by gender, educational attainment, age, and employment status.

The AQALI 2026 incorporates several data updates. For Hong Kong, it incorporates newly available unpublished estimates of hours worked and wages based on microdata from the 1981, 1991, 2001, and 2011 Population Censuses, provided by the Census and Statistics Department of the Government of the Hong Kong Special Administrative Region. It also fully incorporates estimates on the number of workers, hours worked, and wages based on the 2021 Population Census (PC2021). For the ROC, it newly incorporates the 2020 Population and Housing Census. For the Maldives, it newly incorporates the Maldives Population and Housing Census 2022 and additional historical census information, and comprehensively revises the historical estimates, mainly for hourly wages prior to the late 1990s, using information on incomes and wages for occupations such as fishers and tourism workers. The AQALI 2026 estimates total hours worked, labor quality, and QALI, which are incorporated in APO-PDB 2026.⁸⁷

Figure 8.10 compares the average schooling years observed among workers from 1970 to 2024 as the

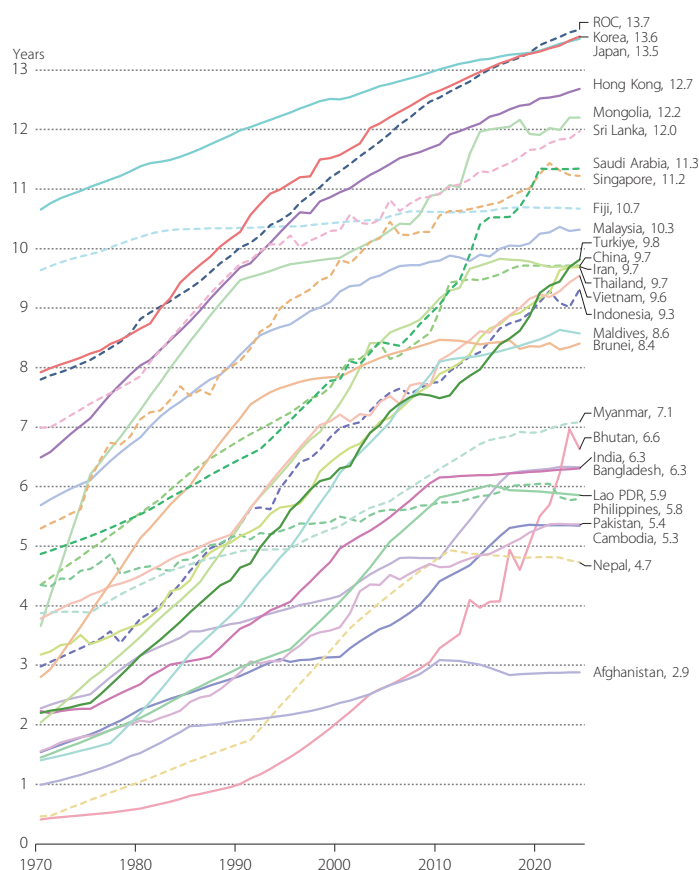


Figure 8.10 Average Schooling Years of Workers, 1970–2024

Unit: Years. Source: AQALI 2026.

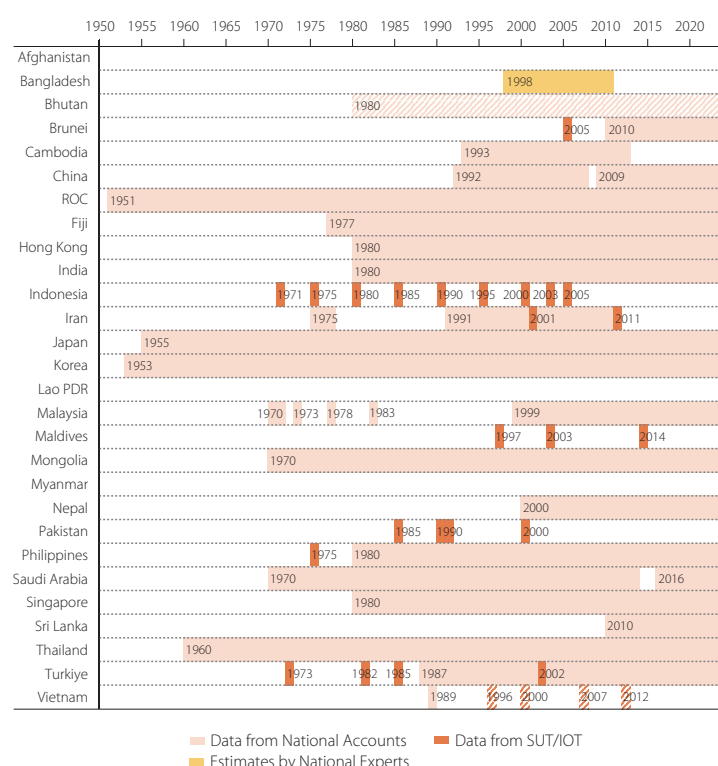
most important component of labor quality, based on the AQALI 2026. Although there is a significant range in 2024, the average number of years has increased since 1970 in all economies. In this measure, three country groups are observed: i) countries with over 11 schooling years on average, ii) countries with 8–11 years, and iii) countries with less than eight years in 2024. The first group mainly consists of East Asian countries; the ROC, Korea, and Japan are the leading countries (over 13.5 years), followed by Hong Kong, Mongolia, Sri Lanka, Saudi Arabia, and Singapore. The second group is ASEAN6, China, Fiji, Iran, Turkiye, and Vietnam. The third group comprises SAARC and the CLMV countries, except for Vietnam. This chart indicates that improving its average educational background is a lengthy process.

8.3.3 Labor Share

The labor share, defined as the ratio of total labor compensation to GDP at basic prices, is a key factor in determining TFP growth. Estimates of COE (compensation of employees) are not fully available in the official national accounts for all Asian countries. Figure 8.11 summarizes the availability of COE estimates in the official national accounts and input-output tables for each country (see Table 8.3). The national accounts in Bangladesh, Bhutan, Indonesia, Lao PDR, Myanmar, Pakistan, and Vietnam do not fully publish the COE estimates. In addition, in some countries, such as Cambodia and Iran, estimates are not available for the entire observation period (1970–2024). In such cases, the COE is estimated or extrapolated from AQA-LI-based estimates (see PRN2604 for the bottom-up construction in Vietnam).

Figure 8.11 Availability of Compensation of Employees Estimates, 1950–2024

Sources: Official national accounts and SUT/IOT in each country. Note: Hatched areas indicate periods during which data mingled with operating surplus or mixed income are available.



86: The SNA 2008 (United Nations 2009, Chapter 19) discusses three standardized measures of labor inputs, evaluating “examples in increasing order of being difficult to measure are full-time equivalents, total actual hours worked, and quality-adjusted labor inputs based on models” (para. 19.42).

87: Data on hours worked by self-employed and contributing family workers by type of labor category in AQALI is also used to estimate labor income within mixed income in APO-PDB (Section 8.3.3). The detailed data sources and methodological framework for QALI are documented in Nomura and Amano (2012) for Singapore; Nomura and Akashi (2017) for six South Asian countries; Nomura (2023) for Vietnam; and Nomura (2025, Chapter 4) for Bhutan. The main labor statistics used in AQALI 2023 are presented in Table 8.9 in the 2023 edition of the Databook (APO 2023). An updated list used in AQALI 2026 is available upon request.

The compensation for the self-employed and contributing family workers is not separately estimated in the national accounts but is combined with returns to capital in the mixed income category. This edition of the Databook follows the revised estimates in AQALI 2026 (Section 8.3.2), which apply different methodologies to agriculture and non-agriculture industries. In the agricultural industry, capital income is measured using the estimates of the returns to capital for agricultural land (asset code 12 in Table 8.9) and other fixed assets.⁸⁸ Labor income in agriculture is measured as the residual of basic-price GDP after subtracting the estimates of the returns to capital. In non-agricultural industries, the wage differential ratio (WDR) in hourly wages between non-employees and employees in each elementary labor category is assumed in each country. Time-invariant WDR is taken with a range of 0.2–0.5 by country.⁸⁹

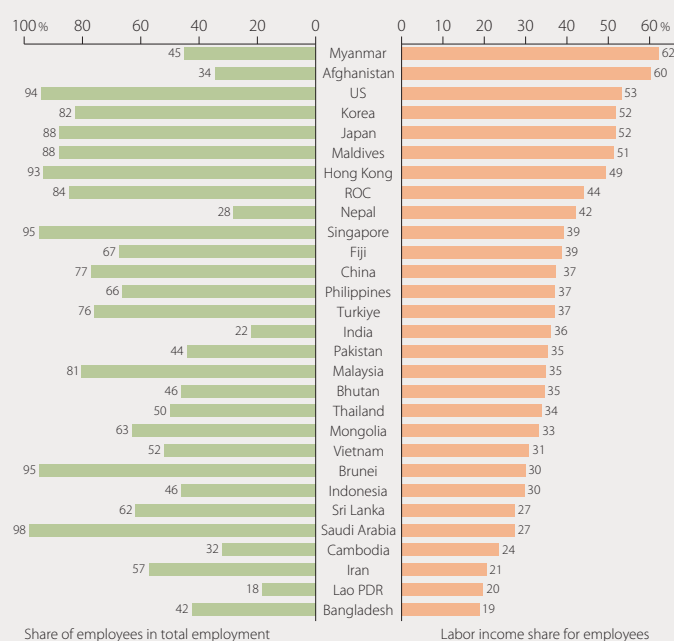
Box 13 Labor Share and Its Effect on TFP Estimates

TFP computations based on the growth accounting framework rely on data that is often difficult to observe. One challenge arises from calculating compensation for self-employed individuals and unpaid family workers. Moreover, certain Asian countries do not include estimates for the Compensation of Employees (COE) in their official national accounts. In the Asia QALI Database (AQALI), labor income for total employment is estimated to be consistent with finely classified labor inputs and wages based on the assumptions described in Section 8.3.3. A reassessment of this assumption in the future would directly impact TFP estimates by revising labor shares. It would indirectly affect estimates of the ex-post rate of return, consequently influencing the aggregate measure of capital services.

The right panel of Figure 8.12 presents the employee income share (the ratio of COE to basic-price GDP at current prices) for 2024, based on the official national accounts and AQALI 2026 for the Asia28 economies and the US. Among Asian countries, COE shares range from 19% to 62%. As illustrated in the left panel, these differences do not necessarily correlate with gaps in the share of employees in total employment. For instance, while Saudi Arabia and Brunei exhibit high employee shares of 98% and 95%, respectively, their corresponding COE shares in 2024 are only 27% and 30%. The COE share depends on various factors, such as industry structure and the size of the informal sector, and their estimates are not always precise.

Figure 8.12 Employee Labor Income Share, 2024

Unit: Percentage. Sources: Official national accounts in each country (including adjustments by APO-PDB) and AQALI 2026.



88: Since capital stock is not measured at the industry level in APO-PDB, the capital stock shares are estimated based on the agricultural industry's value-added share if the industry's official estimates are unavailable.

89: The WDR is set at 0.5 for Japan, 0.3 for the Asian Tigers, 0.5 for CLMV (except Myanmar), Iran, and Türkiye, and 0.2 for other countries.

Figure 8.13 illustrates the sensitivity of TFP growth (2010–2024) estimates to labor income shares. It shows three estimates of TFP growth using the baseline estimate of labor share, baseline+10% and baseline–10%. In general, the growth rate of capital input is higher than that of labor input; therefore, higher income shares of labor lead to higher estimates of TFP growth. In other words, labor productivity (Figure 5.5) improves much faster over a given period than capital productivity (Figure 5.22), the growth of which frequently tends to be negative. The TFP estimate reflects a greater improvement in labor productivity when the labor share increases. In the case of India, one of the countries with the strongest performance in this period, the average TFP growth rate for 2010–2024 is 1.8%. However, if the labor share in its current estimates were overestimated by 10%, the true TFP growth rate would be revised to 1.3%. Given the larger informal economy in Asian countries and the difficulty of capturing income from such sectors, it is appropriate to understand TFP growth rates with an error margin of approximately that shown in Figure 8.13.

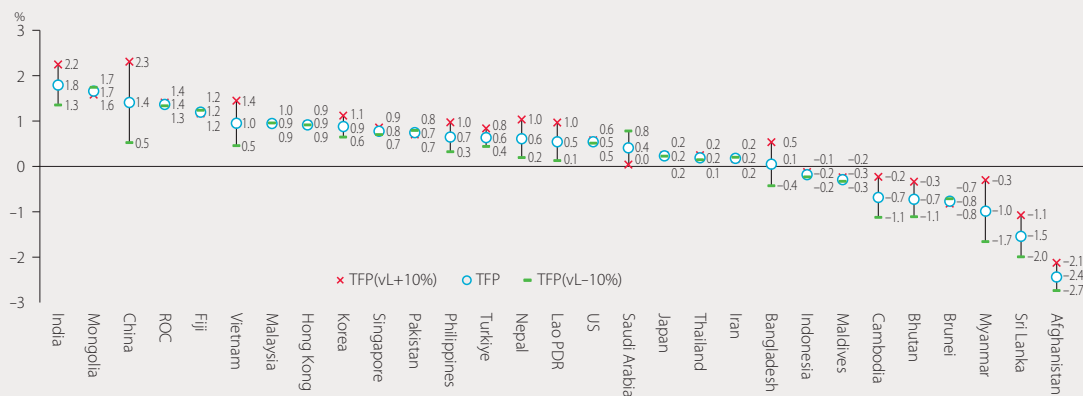


Figure 8.13 Sensitivity of TFP Estimates to Changes in Labor Share, 2010–2024

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

8.4 Data on Non-APO Member Economies

For China, multiple data sources have been used; GDP for the whole economy, industry GDP, final demands, employment, and income data are taken from *China Statistical Yearbook* (and *China National Income 1952–1995* for the backward estimates before 1969); time-series data of GFCF by type of asset during 1952–2024 at current and constant prices are estimated at KEO based on *Statistics on Investment in Fixed Assets of China 1950–2000*, *China Statistical Yearbook*, 1987, 1992, 1997, 2002, 2007, 2012, 2015, 2017–2018, 2020, and 2023 *Input–Output Tables of China*, *Manufacturing Census in China*, and the import data from *China Customs Statistics*.

The productivity account for China was substantially revised in the APO-PDB 2022, based on an intensive study conducted with Professor W. Erwin Diewert (University of British Columbia). The revision work on the Chinese growth accounting focused mainly on imputed rent, the labor share, quality-adjusted labor input, the price index on government consumption, and land stock prices. Imputed rents for free and owner-occupied housing (including land) were added to household consumption and GDP in the official Chinese national accounts. As a result, China's average TFP growth was revised downward from 1.4% to 0.9% for 1970–1990, and from 4.0% to 2.9% for 1990–2010, compared to the pre-revision estimates in the 2020 edition of Databook.

For Bhutan, the industry-level productivity account was developed through a collaborative effort between the Department of Macro-Fiscal and Development Finance (DMDF) of the Ministry of Finance (MoF), Royal Government of Bhutan (RGoB), and the KEO at Keio University, with support from the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), as documented in Nomura (2025). While that study covers the period 1990–2022, the APO-PDB 2026 extends the estimates, updated with DMDF, to 2024. The aggregate productivity account in the APO-PDB has been retrospectively estimated back to 1970.

For Myanmar, the industry-level productivity account was developed for 1990–2014 by Nomura and Shirane (2016) to correct the significant overestimation of GDP in Myanmar’s official national accounts from the late 1990s to the late 2000s, and to incorporate jade production, which is underrepresented in the official accounts. The APO-PDB includes those estimates. Although productivity estimates for Myanmar are extended through 2023 in the APO-PDB, these values are highly uncertain. Following the military coup in February 2021 and the resulting institutional disruption, the reliability and availability of official data have declined substantially. The recent estimates rely on auxiliary sources and continuity assumptions and should be interpreted with caution.⁹⁰

For the Maldives, although the official national accounts are relatively well developed and aligned with international standards, the economy’s small size, heavy reliance on fishing and tourism, and vulnerability to external shocks necessitate a cautious interpretation of the estimates. The APO-PDB is primarily constructed from the national accounts published by the Maldives Bureau of Statistics (MBS) and the Government of the Maldives, supplemented with sector-specific indicators to enhance accuracy and consistency. The economic structure of the Maldives has undergone a significant transition: in the 1970s, the economy was predominantly based on fisheries—especially tuna fishing—while the tourism sector began to expand rapidly from the 1980s onward. Accordingly, fishing activity is incorporated using production data from the Ministry of Fisheries and Agriculture, particularly for the earlier period. In contrast, the number of tourists from the Ministry of Tourism, Arts and Culture is used to reflect the growing importance of the tourism sector since the 1980s. In addition to production-side estimates, expenditure-side information, such as private consumption and CPI trends, is used to check the consistency of annual estimates. The estimates draw on available data sources but remain subject to uncertainty due to structural vulnerability and data volatility; the results should be interpreted with appropriate caution.

For Afghanistan, the APO-PDB is constructed under considerable data limitations. Given the prolonged conflict, institutional fragility, and the dominance of informal and subsistence-based economic activities, the availability and reliability of official national accounts are extremely limited, particularly for the period from the 1990s through the early 2000s, and for detailed sectoral or expenditure breakdowns. The estimates presented are based on international sources, including the UN, World Bank, and IMF. The time series is constructed through international benchmarking and structural assumptions, and users should exercise caution when interpreting the results. The absence of consistent industry-level data, incomplete price statistics, and the discontinuity of institutional data collection limit the robustness of both level and growth estimates. While the inclusion of Afghanistan enhances regional coverage within the SAARC group, the figures should be viewed as indicative rather than definitive and used with caution in comparative analysis or policy assessment.

90: The estimates for 2021 are constructed based on quarterly national accounts and employment data from the ILO Modelled Estimates (2026). In the ICP 2021 round, Myanmar’s PPP was revised sharply downward compared with the ICP 2017 round. This revision resulted in a nearly 50% reduction in Myanmar’s PPP-based real GDP. While such a revision may reflect methodological improvements or corrections to prior overestimations, the magnitude of the change raises concerns about the robustness of cross-country-level comparisons for Myanmar. Users should interpret the absolute levels of Myanmar’s real GDP and productivity indicators with caution, focusing more on relative trends rather than absolute levels.

The data sources for the EU15, the EU27, France, Germany, Italy, and the UK are the OECD.Stat (accessed February 1, 2026), OECD (2025), Eurostat (accessed February 1, 2026), and the Office for National Statistics (2025). The data sources for the US, Australia, and New Zealand are the US Bureau of Economic Analysis (accessed April 8, 2026), the Australian Bureau of Statistics (accessed March 30, 2026), and the Stats NZ (accessed February 13, 2026), respectively.

8.5 Other Data

8.5.1 Population

The Databook follows the population projections published by the United Nations (2024). The world's population was estimated at 8.1 billion in 2024, with Asian countries accounting for 59%. India and China accounted for 17.8% and 17.5% of the global population, respectively. It has been observed that falling fertility rates and rising living standards go hand in hand, although the direction of causality is less certain. The evolution of the demographic structure reveals important societal dynamics that are not fully captured by the overall population size or growth. As economic behavior, aspirations, and needs vary at different stages of life, changes in a country's age structure can significantly impact its economic development through both supply-side and demand-side effects.

The growth rate of the global population has slowed from its peak of around 2.0% in the 1960s to the current rate of 0.9% per year. With falling fertility rates, the UN projects that the world's population growth rate will decelerate to 0.44% per year by 2050 and turn negative, reaching -0.12% by 2100. Even so, the world population is expected to increase by one-fifth from today's 8.1 billion to 9.6 billion by 2050, and by an additional 5.5% to 10.2 billion by 2100. These estimates are based on the medium-fertility variant. However, with only a slight variation in fertility, particularly in the more populous countries, the total could be higher (10.4 billion by 2050 and 14.4 billion by 2100) or lower (8.9 billion by 2050 and 7.0 billion by 2100). The bottom block of Table 8.12 presents this shift in the world population distribution, with the share from the more developed regions gradually declining from 16% in 2024 to 13% in 2050 and 12% in 2100, compared with 33% in 1950. Conversely, the share of the least developed countries is projected to rise from today's 14% to 20% in 2050 and 30% in 2100, up from 8% in 1950.

According to the UN projection, Asia's share will decline from 59% today to 55% in 2050 and 45% in 2100, while Africa's share will rise from 18% to 25% and 37%, respectively. Table 8.12 also shows the 2024 population size of individual Asian countries compared with the 1970 level and the 2050 projection. This table shows that China's population is expected to decline gradually through 2050 and then fall more rapidly thereafter. China's one-child policy may have contributed to this trajectory, and some estimates suggest the current population is some 300–400 million lower than it might otherwise have been.

Table 8.12 Distribution of the World Population, 1970–2100

	1970	2024	2050	2100	2024–2050	(%)	2050–2100	(%)
India	540	1,444	1,678	1,509	233	15	–169	–31
China	813	1,421	1,265	639	–155	–10	–627	–116
EU27	383	451	422	348	–29	–1.9	–73	–14
US	206	344	380	421	36	2.4	41	7.5
Indonesia	114	282	320	296	38	2.5	–24	–4.5
Pakistan	59	249	370	511	120	7.9	141	26
Bangladesh	68	173	214	209	42	2.7	–5.1	–0.9
Japan	106	124	105	77	–19	–1.2	–28	–5.2
Philippines	37	115	134	115	19	1.2	–20	–3.6
Vietnam	41	101	110	92	9	0.6	–18	–3.3
Iran	29	91	102	80	11	0.7	–21	–4.0
Türkiye	36	87	91	66	3.9	0.3	–26	–4.7
Germany	78	85	78	71	–6.3	–0.4	–7.5	–1.4
Thailand	35	72	67	46	–5.1	–0.3	–21	–3.8
UK	56	69	75	74	6.5	0.4	–1.1	–0.2
France	51	66	68	68	1.7	0.1	0.3	0.0
Italy	53	59	52	35	–7.3	–0.5	–17	–3.1
Myanmar	27	54	59	50	4.3	0.3	–8.8	–1.6
Korea	32	52	45	22	–6.4	–0.4	–23	–4.3
Afghanistan	11	42	76	130	34	2.3	54	9.9
Uzbekistan	12	36	52	74	16	1.0	22.3	4.1
Malaysia	10	35	44	44	9	0.6	0	0.0
Saudi Arabia	3.5	34	47	71	13.8	0.9	23.3	4.3
Nepal	12	30	35	32	4.9	0.3	–3	–0.5
Australia	12	27	32	43	5.8	0.4	10.6	2.0
ROC	15	23	20	10	–3.7	–0.2	–9.5	–1.7
Sri Lanka	12	23	25	21	1.8	0.1	–3.5	–0.6
Kazakhstan	12	20	26	34	6.0	0.4	7	1.3
Cambodia	6.7	17.5	21.9	22.8	4.3	0.3	0.9	0.2
UAE	0.3	10.8	15	26.0	4.4	0.3	10.7	2.0
Tajikistan	2.9	10.5	15.5	20.2	5.0	0.3	4.7	0.9
Lao PDR	2.6	7.7	9.7	9.3	2.0	0.1	–0.5	–0.1
Hong Kong	3.6	7.4	6.1	2.1	–1.3	–0.1	–4.0	–0.7
Turkmenistan	2.2	7.4	9.6	10	2.2	0.1	0.4	0.1
Kyrgyzstan	3.0	7.1	9.6	11.7	2.5	0.2	2.1	0.4
Singapore	2.1	5.8	6.1	4.2	0.3	0.0	–1.9	–0.4
New Zealand	2.8	5.2	5.7	5.8	0.6	0.0	0.1	0.0
Oman	0.7	5.2	7.8	12.1	2.6	0.2	4.3	0.8
Kuwait	0.8	4.9	6.3	9.6	1.5	0.1	3.2	0.6
Mongolia	1.3	3.5	4.5	5.5	1.0	0.1	1.0	0.2
Qatar	0.1	3.0	4.1	7.2	1.1	0.1	3.1	0.6
Bahrain	0.2	1.6	2.1	3.1	0.5	0.0	1.0	0.2
Fiji	0.5	0.9	1.0	0.9	0.1	0.0	–0.1	0.0
Bhutan	0.3	0.8	0.9	0.7	0.1	0.0	–0.2	0.0
Maldives	0.1	0.5	0.6	0.5	0.1	0.0	–0.1	0.0
Brunei	0.1	0.5	0.5	0.5	0.1	0.0	–0.1	0.0
(region)								
World	3,657	8,127	9,644	10,187	1,517	100	543	100
Africa	361	1,498	2,448	3,807	950	63	1,359	250
Asia	2,111	4,792	5,278	4,624	486	32	–654	–121
APO21	1,164	2,945	3,409	3,174	464	31	–235	–43
Asia28	2,019	4,498	4,859	4,065	361	24	–794	–146
Asia38	2,053	4,605	5,008	4,273	403	27	–735	–135
East Asia	970	1,631	1,446	755	–184	–12	–691	–127
SAARC	703	1,962	2,399	2,413	436	29	15	2.7
ASEAN	269	673	750	656	77	5.1	–94	–17
ASEAN6	199	511	572	505	61	4.0	–67	–12
CS	32	82	113	150	32	2.1	37	6.8
CLMV	77	180	200	174	20	1.3	–26	–4.9
GCC	5.5	59	83	129	24	1.6	46	8.4
Europe	655	745	704	593	–41	–2.7	–111	–20
Latin America and the Caribbean	282	661	730	615	69	4.5	–115	–21
Northern America	228	384	426	475	42	2.8	49	8.9
Oceania	19	46	57	73	12	0.8	15	2.8
More developed regions	1,004	1,285	1,274	1,194	–12	–0.8	–80	–15
Less developed regions	2,652	6,842	8,370	8,993	1,529	101	623	115
Least developed countries	311	1,174	1,933	3,045	759	50	1,112	205

Unit: Millions of persons. Source: Compiled by KEO based on the medium-fertility variant in the United Nations (2024). Notes: The “%” columns give the country’s share of the change in global population. See Country and Group Definitions (p. 7) for the definitions of Asia, Asia38, Asia28, and APO21.

8.5.2 PPP for Output and Inputs

Purchasing Power Parities (PPPs) are essential tools in economic research and policy analysis, particularly when comparing macroeconomic indicators across countries. They enable the conversion of national currency-denominated economic measures into internationally comparable volume measures by addressing differences in price levels. PPPs are price relatives that indicate the ratio of the prices of identical or similar goods and services across countries, expressed in national currencies. These comparisons offer a more accurate representation of actual output and living standards than market exchange rates, which are frequently influenced by financial flows and short-term volatility. PPPs are produced under the framework of the International Comparison Program (ICP), a global statistical initiative led by the World Bank. The ICP conducts comprehensive surveys to collect harmonized price and expenditure data covering the full spectrum of final goods and services that constitute GDP from the expenditure side. The most recent benchmark PPP estimates, based on the ICP 2021, were released in May 2024 (World Bank 2024). This iteration features several methodological enhancements that enhance data consistency and facilitate cross-country comparability.

The Databook mainly provides a cross-country comparison of economic volumes. To obtain comparable volume measures, the Databook uses the *constant PPP approach*, which relies not on a time series of PPPs but on a single benchmark estimate (see PRN2611). The APO-PDB 2026 incorporates the benchmark estimates from the ICP 2021. This approach creates a national series for volumes at the prices of a common reference year, i.e., 2024, and deflates these by the PPP for a fixed year, i.e., 2021. The revision impacts resulting from the adoption of the ICP 2011, 2017, and 2021 benchmarks are discussed in PRN2601.

In this Databook, the country aggregations of capital and labor inputs are based on PPP estimates for capital and labor inputs, respectively, which are updates to the estimates developed in Nomura (2018). In most Asian countries, the PPP for output underestimates the PPP for capital input, indicating that capital prices are higher than output prices, and overestimates the PPP for labor inputs, indicating that labor prices are lower than output prices. The PPP estimates for labor and capital inputs have been updated using the 2026 estimates of AQALI, ANRD, and APO-PDB.

8.5.3 Exchange Rates, Taxes, and Energy

The exchange rates used in this Databook are adjusted rates from the Analysis of Main Aggregate rates in the UN Statistics Division's (UNSD) National Accounts Main Aggregate Database. The AMA rates align with the IMF rates (which are primarily the annual average of market or official exchange rates), except during certain periods in countries with official fixed exchange rates and high inflation, when a significant disparity may exist between real GDP growth and USD-converted growth based on IMF rates. In such cases, the AMA adjusts the IMF-based rates by multiplying the growth rate of the GDP deflator relative to the US.

The IMF's Government Finance Statistics (GFS) supplements the tax data of member economies. GFS data, together with national accounts for each country, play a key role in adjusting GDP at market prices to GDP at basic prices (Section 8.1.7). From its tax revenue data, "taxes on goods & services" and "taxes on international trade & transactions" are used to calculate T2, the indirect taxes on products (Table 8.2). From its expenditure data, "subsidies" are used for S2, subsidies on products.

Energy consumption through 2023 and CO₂ emissions through 2022 are based on IEA (2024, 2025). The estimates for energy consumption in 2024 and CO₂ emissions in 2023–2024 presented in Section 5.7 are provisional, based on the latest available energy statistics and related macroeconomic indicators. CO₂

emissions are estimated by applying energy-source-specific emission factors to the corresponding energy consumption estimates.

8.5.4 Quarterly National Accounts

Quarterly national accounts (QNA) are used to extend the analysis beyond the annual observation period of APO-PDB. For the 2026 edition, QNA are used in Box 11 to project economic growth for 2025 and the first quarter of 2026. Table 8.13 summarizes the latest availability of QNA across the Asia28 economies.

Table 8.13 Latest Availability of Quarterly National Accounts in Asia28

Available through	Country
Not available (5)	AFG, CAM, FIJ, LAO, MYA
2025 Q3 (1)	IRN
2025 Q4 (4)	BAN, BRN, MDV, NEP
2026 Q1 (18)	BTN, CHN, HKG, IND, IDN, JPN, KOR, MAL, MGL, PAK, PHL, ROC, SAU, SIN, SRI, THA, TUR, VIE

Source: KEO's own investigation.

9 Supplementary Tables

Table 9.1 GDP using Exchange Rate, 1970–2024
—GDP at current market prices, using the annual average exchange rate

1970 (%)	1980 (%)	1990 (%)	2000 (%)	2010 (%)	2024 (%)
Japan 212 100.0	Japan 1,127 100.0	Japan 3,227 100.0	Japan 5,042 100.0	China 6,491 100.0	China 19,369 100.0
China 105 49.4	China 352 31.2	China 436 13.5	China 1,322 26.2	Japan 5,812 89.5	Japan 4,190 21.6
India 64 29.9	India 190 16.9	India 335 10.4	Korea 598 11.9	India 1,713 26.4	India 3,838 19.8
Türkiye 25 11.7	Saudi Arabia 165 14.6	Korea 292 9.1	India 486 9.6	Korea 1,193 18.4	Korea 1,875 9.7
Kazakhstan 15 7.2	Iran 98 8.7	Türkiye 208 6.4	ROC 331 6.6	Türkiye 783 12.1	Indonesia 1,403 7.2
Iran 11 5.3	Türkiye 94 8.3	ROC 166 5.2	Türkiye 275 5.4	Indonesia 756 11.7	Türkiye 1,359 7.0
Pakistan 10 4.8	Indonesia 80 7.1	Indonesia 127 4.0	Saudi Arabia 190 3.8	Iran 546 8.4	Saudi Arabia 1,254 6.5
Indonesia 9.9 4.7	Korea 67 5.9	Saudi Arabia 117 3.6	Hong Kong 172 3.4	Saudi Arabia 528 8.1	ROC 802 4.1
Korea 9.1 4.3	UAE 44 3.9	Iran 95 2.9	Indonesia 168 3.3	ROC 444 6.8	Singapore 573 3.0
Thailand 7.3 3.4	ROC 42 3.8	Thailand 89 2.7	Thailand 127 2.5	Thailand 342 5.3	Iran 564 2.9
Uzbekistan 7.2 3.4	Kazakhstan 36 3.2	Hong Kong 77 2.4	Iran 115 2.3	UAE 308 4.7	UAE 563 2.9
Philippines 6.8 3.2	Thailand 33 3.0	UAE 51 1.6	UAE 106 2.1	Malaysia 255 3.9	Thailand 535 2.8
Bangladesh 6.7 3.1	Philippines 33 2.9	Pakistan 49 1.5	Singapore 96 1.9	Singapore 240 3.7	Vietnam 477 2.5
ROC 5.8 2.7	Kuwait 30 2.6	Philippines 47 1.4	Pakistan 96 1.9	Hong Kong 229 3.5	Philippines 462 2.4
Saudi Arabia 5.4 2.5	Hong Kong 29 2.6	Malaysia 45 1.4	Malaysia 95 1.9	Philippines 208 3.2	Bangladesh 433 2.2
Malaysia 3.9 1.8	Malaysia 25 2.2	Singapore 39 1.2	Philippines 84 1.7	Pakistan 194 3.0	Malaysia 422 2.2
Hong Kong 3.8 1.8	Pakistan 24 2.1	Bangladesh 32 1.0	Bangladesh 52 1.0	Kazakhstan 148 2.3	Hong Kong 407 2.1
Kuwait 3.0 1.4	Uzbekistan 20 1.8	Kazakhstan 30 0.9	Kuwait 38 0.8	Vietnam 147 2.3	Pakistan 378 1.9
Sri Lanka 2.8 1.3	Bangladesh 18 1.6	Kuwait 19 0.6	Vietnam 37 0.7	Qatar 128 2.0	Kazakhstan 293 1.5
Myanmar 2.7 1.3	Singapore 12 1.1	Uzbekistan 15 0.5	Oman 22 0.4	Bangladesh 126 1.9	Qatar 226 1.2
Singapore 1.9 0.9	Qatar 7.9 0.7	Oman 13 0.4	Sri Lanka 19 0.4	Kuwait 118 1.8	Kuwait 167 0.9
Afghanistan 1.7 0.8	Oman 7.2 0.6	Sri Lanka 9.4 0.3	Kazakhstan 18 0.4	Oman 66 1.0	Uzbekistan 121 0.6
Turkmenistan 1.5 0.7	Brunei 6.2 0.5	Qatar 7.5 0.2	Qatar 18 0.4	Sri Lanka 58 0.9	Oman 110 0.6
Tajikistan 1.4 0.7	Myanmar 5.9 0.5	Vietnam 6.5 0.2	Uzbekistan 14 0.3	Uzbekistan 56 0.9	Sri Lanka 101 0.5
Kyrgyzstan 1.3 0.6	Sri Lanka 4.9 0.4	Myanmar 5.7 0.2	Bahrain 8.4 0.2	Myanmar 37 0.6	Turkmenistan 69 0.4
Nepal 1.2 0.6	Turkmenistan 3.9 0.3	Bahrain 4.5 0.1	Myanmar 7.8 0.2	Bahrain 27 0.4	Bahrain 47 0.2
Vietnam 1.2 0.6	Tajikistan 3.7 0.3	Nepal 4.3 0.1	Brunei 6.6 0.1	Turkmenistan 23 0.4	Cambodia 44 0.2
UAE 1.1 0.5	Afghanistan 3.6 0.3	Brunei 3.9 0.1	Nepal 6.5 0.1	Nepal 19 0.3	Nepal 42 0.2
Cambodia 0.8 0.4	Bahrain 3.5 0.3	Afghanistan 3.6 0.1	Turkmenistan 4.9 0.1	Afghanistan 15 0.2	Myanmar 30 0.2
Qatar 0.5 0.3	Kyrgyzstan 3.0 0.3	Turkmenistan 3.1 0.1	Cambodia 3.8 0.1	Cambodia 14 0.2	Mongolia 24 0.1
Bahrain 0.4 0.2	Nepal 2.5 0.2	Tajikistan 2.8 0.1	Afghanistan 3.5 0.1	Brunei 14 0.2	Afghanistan 18 0.1
Oman 0.3 0.1	Fiji 1.2 0.1	Kyrgyzstan 2.6 0.1	Lao PDR 1.8 0.0	Lao PDR 7.4 0.1	Kyrgyzstan 17 0.1
Brunei 0.2 0.1	Vietnam 1.0 0.1	Cambodia 1.8 0.1	Fiji 1.7 0.0	Mongolia 7.2 0.1	Lao PDR 16 0.1
Fiji 0.2 0.1	Cambodia 0.7 0.1	Mongolia 1.6 0.0	Mongolia 1.4 0.0	Tajikistan 5.9 0.1	Brunei 15 0.1
Lao PDR 0.1 0.1	Mongolia 0.5 0.0	Fiji 1.4 0.0	Kyrgyzstan 1.4 0.0	Kyrgyzstan 4.8 0.1	Tajikistan 15 0.1
Mongolia 0.1 0.1	Lao PDR 0.3 0.0	Lao PDR 0.9 0.0	Maldives 0.9 0.0	Fiji 3.1 0.0	Maldives 7.1 0.0
Bhutan 0.1 0.0	Bhutan 0.1 0.0	Bhutan 0.3 0.0	Tajikistan 0.9 0.0	Maldives 2.6 0.0	Fiji 6.0 0.0
Maldives 0.0 0.0	Maldives 0.1 0.0	Maldives 0.3 0.0	Bhutan 0.5 0.0	Bhutan 1.6 0.0	Bhutan 3.3 0.0
(region)	(region)	(region)	(region)	(region)	(region)
APO21 384 180.8	APO21 1,883 167.1	APO21 4,854 150.4	APO21 7,807 154.8	APO21 13,096 201.8	APO21 17,952 92.7
Asia28 499 235.0	Asia28 2,415 214.3	Asia28 5,421 168.0	Asia28 9,338 185.2	Asia28 20,185 311.0	Asia28 38,649 199.5
Asia38 531 250.1	Asia38 2,575 228.5	Asia38 5,570 172.6	Asia38 9,570 189.8	Asia38 21,069 324.6	Asia38 40,276 207.9
East Asia 336 158.3	East Asia 1,617 143.5	East Asia 4,199 130.1	East Asia 7,466 148.1	East Asia 14,175 218.4	East Asia 26,667 137.7
SAARC 86 40.7	SAARC 244 21.6	SAARC 435 13.5	SAARC 664 13.2	SAARC 2,129 32.8	SAARC 4,820 24.9
ASEAN 35 16.4	ASEAN 197 17.5	ASEAN 366 11.3	ASEAN 626 12.4	ASEAN 2,021 31.1	ASEAN 3,979 20.5
ASEAN6 30 14.1	ASEAN6 189 16.8	ASEAN6 351 10.9	ASEAN6 576 11.4	ASEAN6 1,815 28.0	ASEAN6 3,411 17.6
C5 27 12.6	C5 67 5.9	C5 53 1.6	C5 39 0.8	C5 238 3.7	C5 515 2.7
CLMV 4.8 2.3	CLMV 8.0 0.7	CLMV 15 0.5	CLMV 50 1.0	CLMV 206 3.2	CLMV 568 2.9
GCC 11 5.0	GCC 257 22.8	GCC 213 6.6	GCC 383 7.6	GCC 1,175 18.1	GCC 2,366 12.2
IPEF 1,441 679.5	IPEF 4,630 410.8	IPEF 10,546 326.8	IPEF 17,458 346.2	IPEF 27,184 418.8	IPEF 45,190 233.3
RCEP 413 194.6	RCEP 1,939 172.1	RCEP 4,690 145.4	RCEP 8,054 159.7	RCEP 16,968 261.4	RCEP 31,508 162.7
(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
Australia 45 21.3	Australia 174 15.4	Australia 325 10.1	Australia 411 8.1	Australia 1,305 20.1	Australia 1,833 9.5
France 190 89.6	France 528 46.9	France 1,017 31.5	France 1,583 31.4	France 2,334 36.0	France 4,198 21.7
Germany 314 147.8	Germany 810 71.9	Germany 1,539 47.7	Germany 2,253 44.7	Germany 3,239 49.9	Germany 6,055 31.3
Italy 196 92.3	Italy 554 49.2	Italy 1,058 32.8	Italy 1,544 30.6	Italy 2,090 32.2	Italy 3,598 18.6
New Zealand 6.6 3.1	New Zealand 23 2.1	New Zealand 45 1.4	New Zealand 54 1.1	New Zealand 147 2.3	New Zealand 261 1.3
UK 135 63.4	UK 604 53.6	UK 1,197 37.1	UK 1,669 33.1	UK 2,498 38.5	UK 3,678 19.0
US 1,073 506.0	US 2,857 253.6	US 5,963 184.8	US 10,251 203.3	US 15,049 231.9	US 29,298 151.3
EU15 1,252 590.1	EU15 3,339 296.3	EU15 6,426 199.2	EU15 9,949 197.3	EU15 14,676 226.1	EU15 27,364 141.3
			EU27 9,491 188.2	EU27 14,594 224.8	EU27 28,215 145.7

Unit: Billion USD.

Source: Official national accounts in each country, including adjustments by APO-PDB.

Note: See Section 8.1 for the adjustments to harmonize GDP coverage across countries.

Table 9.2 GDP using PPP, 1970–2024

—GDP at constant market prices, using the 2021 PPP, the reference year 2024

1970 (%)	1980 (%)	1990 (%)	2000 (%)	2010 (%)	2024 (%)
Japan 1,926 100.0	Japan 3,145 100.0	Japan 4,979 100.0	China 6,682 100.0	China 17,621 100.0	China 39,839 100.0
India 870 45.2	China 1,358 43.2	China 2,780 55.8	Japan 5,699 85.3	India 6,971 39.6	India 15,223 38.2
China 863 44.8	India 1,182 37.6	India 1,950 39.2	India 3,215 48.1	Japan 6,037 34.3	Japan 6,744 16.9
Saudi Arabia 490 25.4	Saudi Arabia 1,061 33.7	Indonesia 990 19.9	Indonesia 1,497 22.4	Indonesia 2,493 14.1	Indonesia 4,692 11.8
Iran 348 18.1	Indonesia 540 17.2	Saudi Arabia 814 16.3	Korea 1,399 20.9	Korea 2,253 12.8	Türkiye 3,518 8.8
Türkiye 309 16.0	Türkiye 460 14.6	Türkiye 772 15.5	Türkiye 1,106 16.6	Türkiye 1,656 9.4	Korea 3,219 8.1
Indonesia 242 12.6	Iran 414 13.2	Korea 703 14.1	Saudi Arabia 1,073 16.1	Iran 1,606 9.1	Saudi Arabia 2,576 6.5
Bangladesh 153 7.9	Korea 258 8.2	Thailand 551 11.1	Thailand 874 13.1	Saudi Arabia 1,517 8.6	Iran 2,099 5.3
Kazakhstan 147 7.7	Thailand 252 8.0	Iran 537 10.8	Iran 869 13.0	Thailand 1,380 7.8	ROC 1,875 4.7
Philippines 125 6.5	Philippines 225 7.2	ROC 403 8.1	ROC 796 11.9	ROC 1,203 6.8	Thailand 1,786 4.5
Thailand 124 6.5	Kazakhstan 225 7.2	Pakistan 337 6.8	Pakistan 630 9.4	Pakistan 967 5.5	Vietnam 1,671 4.2
Kuwait 113 5.9	UAE 191 6.1	Kazakhstan 303 6.1	Malaysia 482 7.2	Malaysia 759 4.3	Bangladesh 1,659 4.2
Pakistan 106 5.5	Pakistan 170 5.4	Philippines 292 5.9	Philippines 426 6.4	Vietnam 742 4.2	Pakistan 1,566 3.9
Korea 103 5.3	ROC 168 5.4	Malaysia 237 4.8	Bangladesh 345 5.2	Philippines 688 3.9	Philippines 1,376 3.5
Vietnam 69 3.6	Bangladesh 154 4.9	Bangladesh 229 4.6	UAE 336 5.0	Bangladesh 675 3.8	Malaysia 1,370 3.4
Malaysia 62 3.2	Malaysia 133 4.2	UAE 201 4.0	Vietnam 327 4.9	Singapore 540 3.1	Singapore 933 2.3
ROC 59 3.1	Vietnam 108 3.4	Hong Kong 196 3.9	Hong Kong 303 4.5	UAE 513 2.9	UAE 849 2.1
Afghanistan 54 2.8	Hong Kong 101 3.2	Vietnam 144 2.9	Singapore 295 4.4	Kazakhstan 512 2.9	Kazakhstan 848 2.1
UAE 50 2.6	Kuwait 90 2.9	Singapore 141 2.8	Kazakhstan 192 2.9	Hong Kong 451 2.6	Hong Kong 568 1.4
Hong Kong 41 2.1	Singapore 69 2.2	Sri Lanka 78 1.6	Sri Lanka 132 2.0	Qatar 247 1.4	Uzbekistan 456 1.1
Sri Lanka 34 1.8	Afghanistan 64 2.0	Uzbekistan 77 1.6	Oman 106 1.6	Sri Lanka 235 1.3	Sri Lanka 355 0.9
Qatar 33 1.7	Uzbekistan 60 1.9	Oman 71 1.4	Kuwait 101 1.5	Kuwait 204 1.2	Qatar 352 0.9
Uzbekistan 33 1.7	Sri Lanka 52 1.7	Kuwait 66 1.3	Qatar 80 1.2	Uzbekistan 179 1.0	Kuwait 268 0.7
Singapore 29 1.5	Qatar 42 1.3	Afghanistan 55 1.1	Uzbekistan 76 1.1	Oman 154 0.9	Oman 235 0.6
Turkmenistan 27 1.4	Turkmenistan 39 1.2	Turkmenistan 48 1.0	Myanmar 69 1.0	Myanmar 115 0.7	Nepal 163 0.4
Nepal 21 1.1	Brunei 38 1.2	Qatar 41 0.8	Nepal 64 1.0	Nepal 94 0.5	Myanmar 155 0.4
Cambodia 19 1.0	Oman 34 1.1	Nepal 41 0.8	Turkmenistan 36 0.5	Turkmenistan 88 0.5	Turkmenistan 151 0.4
Kyrgyzstan 17 0.9	Myanmar 29 0.9	Myanmar 38 0.8	Brunei 35 0.5	Afghanistan 87 0.5	Cambodia 140 0.4
Myanmar 17 0.9	Nepal 26 0.8	Kyrgyzstan 32 0.6	Afghanistan 32 0.5	Bahrain 65 0.4	Afghanistan 96 0.2
Brunei 16 0.8	Kyrgyzstan 25 0.8	Brunei 27 0.5	Bahrain 28 0.4	Cambodia 61 0.3	Bahrain 94 0.2
Tajikistan 8.3 0.4	Bahrain 16 0.5	Tajikistan 22 0.4	Cambodia 28 0.4	Brunei 37 0.2	Lao PDR 80 0.2
Bahrain 7.5 0.4	Tajikistan 15 0.5	Bahrain 17 0.3	Lao PDR 20 0.3	Lao PDR 36 0.2	Mongolia 69 0.2
Oman 6.2 0.3	Cambodia 10 0.3	Cambodia 16 0.3	Kyrgyzstan 20 0.3	Kyrgyzstan 30 0.2	Tajikistan 61 0.2
Lao PDR 5.2 0.3	Mongolia 8.7 0.3	Mongolia 15 0.3	Mongolia 16 0.2	Mongolia 30 0.2	Kyrgyzstan 57 0.1
Mongolia 4.8 0.2	Lao PDR 7.0 0.2	Lao PDR 12 0.2	Tajikistan 9.6 0.1	Tajikistan 25 0.1	Brunei 41 0.1
Fiji 3.5 0.2	Fiji 5.6 0.2	Fiji 7.0 0.1	Fiji 8.9 0.1	Fiji 10 0.1	Fiji 14 0.0
Bhutan 0.6 0.0	Bhutan 1.1 0.0	Bhutan 2.1 0.0	Maldives 3.7 0.1	Bhutan 7.4 0.0	Maldives 14 0.0
Maldives 0.6 0.0	Maldives 0.8 0.0	Maldives 1.9 0.0	Bhutan 3.2 0.0	Maldives 6.8 0.0	Bhutan 13 0.0
(region)	(region)	(region)	(region)	(region)	(region)
APO21 4,654 241.7	APO21 7,488 238.1	APO21 12,630 253.7	APO21 18,536 277.4	APO21 28,888 163.9	APO21 49,118 123.3
Asia28 6,096 316.6	Asia28 10,041 319.3	Asia28 16,348 328.3	Asia28 26,434 395.6	Asia28 48,279 274.0	Asia28 91,851 230.6
Asia38 6,538 339.6	Asia38 10,779 342.8	Asia38 17,227 346.0	Asia38 27,420 410.4	Asia38 50,296 285.4	Asia38 95,223 239.0
East Asia 2,997 155.6	East Asia 5,038 160.2	East Asia 9,077 182.3	East Asia 14,897 222.9	East Asia 27,596 156.6	East Asia 52,313 131.3
SAARC 1,239 64.3	SAARC 1,650 52.5	SAARC 2,694 54.1	SAARC 4,426 66.2	SAARC 9,044 51.3	SAARC 19,089 47.9
ASEAN 709 36.8	ASEAN 1,411 44.9	ASEAN 2,448 49.2	ASEAN 4,054 60.7	ASEAN 6,850 38.9	ASEAN 12,242 30.7
ASEAN6 599 31.1	ASEAN6 1,258 40.0	ASEAN6 2,238 45.0	ASEAN6 3,610 54.0	ASEAN6 5,896 33.5	ASEAN6 10,197 25.6
C5 232 12.1	C5 364 11.6	C5 483 9.7	C5 334 5.0	C5 835 4.7	C5 1,574 4.0
CLMV 110 5.7	CLMV 153 4.9	CLMV 210 4.2	CLMV 444 6.6	CLMV 953 5.4	CLMV 2,045 5.1
GCC 703 36.5	GCC 1,440 45.8	GCC 1,213 24.4	GCC 1,731 25.9	GCC 2,698 15.3	GCC 4,374 11.0
IPEF 10,866 564.3	IPEF 15,905 505.8	IPEF 23,618 474.3	IPEF 33,289 498.2	IPEF 44,735 253.9	IPEF 68,684 172.4
RCEP 4,098 212.8	RCEP 6,826 217.0	RCEP 11,774 236.5	RCEP 19,055 285.2	RCEP 34,412 195.3	RCEP 64,362 161.6
(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
Australia 419 21.7	Australia 559 17.8	Australia 752 15.1	Australia 1,068 16.0	Australia 1,451 8.2	Australia 2,027 5.1
France 1,397 72.6	France 1,726 54.9	France 2,294 46.1	France 2,932 43.9	France 3,405 19.3	France 4,202 10.5
Germany 1,398 72.6	Germany 2,001 63.6	Germany 2,562 51.4	Germany 3,182 47.6	Germany 3,634 20.6	Germany 4,273 10.7
Italy 2,279 118.3	Italy 3,031 96.4	Italy 3,816 76.6	Italy 4,658 69.7	Italy 5,085 28.9	Italy 5,935 14.9
New Zealand 1,493 77.5	New Zealand 2,169 69.0	New Zealand 2,749 55.2	New Zealand 3,258 48.8	New Zealand 3,351 19.0	New Zealand 3,568 9.0
UK 1,493 77.5	UK 2,169 69.0	UK 2,749 55.2	UK 3,258 48.8	UK 3,351 19.0	UK 3,568 9.0
US 6,800 353.1	US 9,296 295.6	US 12,733 255.7	US 17,810 266.5	US 21,174 120.2	US 29,298 73.5
EU15 9,157 475.6	EU15 12,499 397.5	EU15 15,929 319.9	EU15 20,147 301.5	EU15 22,775 129.3	EU15 27,048 67.9
			EU27 20,074 300.4	EU27 22,943 130.2	EU27 27,732 69.6

Unit: Billion USD.

Sources: Official national accounts in each country, including adjustments by APO-PDB.

Note: See Section 8.1 for the adjustments to harmonize GDP coverage across countries.

Table 9.3 GDP Growth, 1990–2024

—Growth in GDP at constant prices

1990–1995		1995–2000		2000–2005		2005–2010		2010–2015		2015–2019		2019–2024		2010–2024	
China	10.0	Qatar	9.8	Kuwait	12.6	Qatar	13.4	Mongolia	9.8	Maldives	7.8	Tajikistan	7.7	Uzbekistan	6.7
Malaysia	9.2	Vietnam	8.0	Afghanistan	12.5	Turkmenistan	11.7	Uzbekistan	8.4	Cambodia	7.3	India	5.5	Bangladesh	6.4
Thailand	8.7	Cambodia	8.0	Kazakhstan	12.0	China	11.1	Lao PDR	8.0	Bangladesh	7.2	Vietnam	5.4	Tajikistan	6.3
Singapore	8.6	Myanmar	7.9	Tajikistan	12.0	Bhutan	9.7	Bangladesh	7.3	Vietnam	7.0	Turkiye	5.3	Cambodia	5.9
Korea	8.4	China	7.5	Qatar	9.0	Uzbekistan	9.7	Cambodia	7.2	Tajikistan	6.9	Uzbekistan	5.0	Mongolia	5.9
Vietnam	8.3	Maldives	6.9	Cambodia	8.5	Bahrain	8.6	China	7.1	Uzbekistan	6.6	Bangladesh	5.0	China	5.8
ROC	7.6	UAE	6.6	Vietnam	8.4	India	8.4	Turkiye	6.7	Philippines	6.4	Kyrgyzstan	4.6	Vietnam	5.8
Indonesia	7.5	Bhutan	6.2	China	8.3	Vietnam	8.0	Qatar	6.4	Lao PDR	6.0	China	4.4	Lao PDR	5.7
Maldives	6.9	Singapore	6.2	Iran	8.1	Kazakhstan	7.6	India	6.3	China	6.0	Saudi Arabia	3.9	India	5.6
Kuwait	6.9	ROC	6.0	Bahrain	8.0	Maldives	7.5	Myanmar	6.0	Nepal	5.4	Turkmenistan	3.8	Turkiye	5.4
Pakistan	6.6	Pakistan	6.0	Uzbekistan	7.6	Tajikistan	7.5	Sri Lanka	5.8	Bhutan	5.4	ROC	3.6	Maldives	5.0
Hong Kong	5.9	Kyrgyzstan	5.8	India	7.1	Afghanistan	7.4	Bhutan	5.8	Indonesia	4.9	Cambodia	3.6	Philippines	5.0
Sri Lanka	5.6	Lao PDR	5.6	Bhutan	7.0	Singapore	7.2	Philippines	5.7	Mongolia	4.9	Singapore	3.3	Kyrgyzstan	4.5
Iran	5.5	India	5.5	Mongolia	6.3	Bangladesh	7.2	UAE	5.5	Pakistan	4.8	Malaysia	3.3	Indonesia	4.5
Bahrain	5.3	Korea	5.4	Bangladesh	6.2	Cambodia	7.0	Maldives	5.4	India	4.8	Indonesia	3.3	Bhutan	4.2
Lao PDR	5.3	Turkmenistan	5.1	Turkmenistan	6.1	Sri Lanka	6.6	Indonesia	5.4	Bahrain	4.8	Oman	3.2	Malaysia	4.2
Nepal	5.0	Bahrain	5.0	Lao PDR	5.7	Mongolia	6.4	Afghanistan	5.2	Malaysia	4.2	Lao PDR	3.2	Singapore	3.9
Oman	4.9	Malaysia	5.0	Myanmar	5.5	Lao PDR	5.8	Turkmenistan	5.2	Kyrgyzstan	4.2	Philippines	3.0	Nepal	3.9
India	4.5	Sri Lanka	4.9	Malaysia	5.3	Indonesia	5.6	Vietnam	5.2	Myanmar	4.1	Iran	2.9	Turkmenistan	3.9
Myanmar	4.1	Philippines	4.4	Thailand	5.2	Philippines	4.9	Malaysia	5.1	Turkiye	3.9	Kazakhstan	2.8	Saudi Arabia	3.8
Bangladesh	3.9	Bangladesh	4.3	Korea	5.2	Myanmar	4.7	Saudi Arabia	4.9	Sri Lanka	3.6	Mongolia	2.8	Kazakhstan	3.6
Qatar	3.8	Nepal	4.2	Pakistan	5.1	Kyrgyzstan	4.6	Kyrgyzstan	4.8	Singapore	3.6	Nepal	2.5	UAE	3.6
UAE	3.7	Iran	4.1	Sri Lanka	4.9	Korea	4.4	Singapore	4.7	Kazakhstan	3.5	Maldives	2.5	Pakistan	3.4
Cambodia	3.6	Turkiye	3.9	Turkiye	4.9	Nepal	4.3	Kazakhstan	4.5	Korea	3.0	UAE	2.4	ROC	3.2
Turkiye	3.3	Uzbekistan	3.7	Singapore	4.9	Iran	4.2	Oman	4.4	ROC	2.9	Pakistan	2.4	Oman	3.0
Philippines	3.1	Mongolia	3.6	UAE	4.8	ROC	4.2	Tajikistan	4.4	Afghanistan	2.8	Korea	2.0	Sri Lanka	3.0
Brunei	2.7	Oman	3.2	Philippines	4.7	Thailand	3.9	Nepal	4.1	UAE	2.7	Bhutan	1.8	Bahrain	2.7
Saudi Arabia	2.7	Tajikistan	3.0	Indonesia	4.6	Hong Kong	3.9	Fiji	3.7	Iran	2.7	Fiji	1.1	Korea	2.5
Fiji	2.6	Saudi Arabia	2.8	Maldives	4.3	Malaysia	3.8	Kuwait	3.6	Fiji	2.7	Bahrain	0.8	Qatar	2.5
Bhutan	2.3	Hong Kong	2.8	Saudi Arabia	4.2	Oman	3.6	Pakistan	3.4	Brunei	2.3	Kuwait	0.5	Fiji	2.5
Japan	1.6	Brunei	2.4	Hong Kong	4.1	UAE	3.6	Thailand	3.2	Turkmenistan	2.3	Hong Kong	0.3	Myanmar	2.2
Mongolia	–1.8	Fiji	2.0	ROC	4.1	Pakistan	3.4	Bahrain	3.0	Thailand	2.3	Japan	0.3	Kuwait	1.9
Uzbekistan	–4.2	Kuwait	1.7	Kyrgyzstan	3.7	Turkiye	3.2	ROC	2.9	Saudi Arabia	2.2	Qatar	0.1	Iran	1.9
Afghanistan	–5.6	Japan	1.1	Oman	3.7	Saudi Arabia	2.7	Hong Kong	2.9	Hong Kong	1.7	Thailand	0.1	Thailand	1.8
Kazakhstan	–9.7	Indonesia	0.7	Nepal	3.4	Kuwait	1.5	Korea	2.7	Kuwait	1.7	Sri Lanka	–0.5	Hong Kong	1.6
Turkmenistan	–10.8	Kazakhstan	0.6	Fiji	2.0	Fiji	0.7	Japan	1.2	Oman	1.1	Brunei	–0.6	Japan	0.8
Kyrgyzstan	–14.9	Thailand	0.5	Japan	1.1	Japan	0.0	Brunei	0.4	Japan	0.8	Myanmar	–3.3	Afghanistan	0.7
Tajikistan	–19.9	Afghanistan	–5.2	Brunei	1.0	Brunei	0.0	Iran	0.3	Qatar	0.8	Afghanistan	–5.5	Brunei	0.6
(region)		(region)		(region)		(region)		(region)		(region)		(region)		(region)	
APO21	4.5	APO21	3.2	APO21	4.5	APO21	4.4	APO21	4.2	APO21	3.8	APO21	3.4	APO21	3.8
Asia28	5.4	Asia28	4.2	Asia28	5.5	Asia28	6.5	Asia28	5.3	Asia28	4.6	Asia28	3.8	Asia28	4.6
Asia38	5.1	Asia38	4.2	Asia38	5.6	Asia38	6.5	Asia38	5.3	Asia38	4.6	Asia38	3.8	Asia38	4.6
East Asia	5.5	East Asia	4.5	East Asia	5.2	East Asia	7.1	East Asia	5.4	East Asia	4.8	East Asia	3.6	East Asia	4.6
SAARC	4.6	SAARC	5.3	SAARC	6.7	SAARC	7.6	SAARC	6.0	SAARC	4.9	SAARC	4.9	SAARC	5.3
ASEAN	7.5	ASEAN	2.6	ASEAN	5.2	ASEAN	5.3	ASEAN	4.9	ASEAN	4.7	ASEAN	2.9	ASEAN	4.1
ASEAN6	7.5	ASEAN6	2.0	ASEAN6	4.8	ASEAN6	5.0	ASEAN6	4.8	ASEAN6	4.4	ASEAN6	2.7	ASEAN6	3.9
C5	0.0	C5	0.0	C5	0.0	C5	0.0	C5	0.0	C5	0.0	C5	0.0	C5	0.0
CLMV	7.1	CLMV	7.9	CLMV	7.8	CLMV	7.5	CLMV	5.5	CLMV	6.7	CLMV	4.4	CLMV	5.5
GCC	3.3	GCC	3.8	GCC	5.2	GCC	3.7	GCC	5.0	GCC	2.1	GCC	3.0	GCC	3.5
IPEF	3.3	IPEF	3.6	IPEF	3.2	IPEF	2.7	IPEF	3.2	IPEF	3.1	IPEF	2.9	IPEF	3.1
RCEP	5.7	RCEP	4.0	RCEP	5.2	RCEP	6.6	RCEP	5.3	RCEP	4.7	RCEP	3.4	RCEP	4.5
(reference)		(reference)		(reference)		(reference)		(reference)		(reference)		(reference)		(reference)	
Australia	3.2	Australia	3.8	Australia	3.4	Australia	2.8	Australia	2.8	Australia	1.8	Australia	2.5	Australia	2.4
France	1.4	France	2.9	France	1.7	France	0.9	France	1.1	France	1.6	France	0.8	France	1.2
Germany	2.0	Germany	2.0	Germany	0.6	Germany	1.2	Germany	1.7	Germany	1.8	Germany	0.0	Germany	1.1
Italy	1.3	Italy	2.1	Italy	0.9	Italy	–0.3	Italy	–0.7	Italy	1.0	Italy	1.1	Italy	0.4
New Zealand	3.1	New Zealand	3.0	New Zealand	3.9	New Zealand	1.5	New Zealand	2.9	New Zealand	3.5	New Zealand	1.8	New Zealand	2.7
UK	1.4	UK	3.5	UK	2.4	UK	0.5	UK	1.9	UK	2.0	UK	0.8	UK	1.5
US	2.5	US	4.2	US	2.5	US	1.0	US	2.2	US	2.4	US	2.4	US	2.3
EU15	1.7	EU15	2.9	EU15	1.7	EU15	0.8	EU15	1.0	EU15	1.9	EU15	0.9	EU15	1.2
EU27		EU27	2.8	EU27	1.7	EU27	1.0	EU27	1.0	EU27	2.1	EU27	1.1	EU27	1.4

Unit: Percentage (average annual growth rate).

Sources: Official national accounts in each country, including adjustments by APO-PDB.

Note: See Section 8.1 for the adjustments to harmonize GDP coverage across countries.

Table 9.4 Population, 1970–2024

1970	(%)	1980	(%)	1990	(%)	2000	(%)	2010	(%)	2024	(%)
China	830 39.9	China	987 38.7	China	1,143 37.1	China	1,267 35.4	China	1,341 33.3	India	1,451 31.9
India	546 26.2	India	687 26.9	India	865 28.0	India	1,058 29.6	India	1,243 30.9	China	1,408 31.0
Indonesia	116 5.6	Indonesia	147 5.8	Indonesia	179 5.8	Indonesia	206 5.8	Indonesia	238 5.9	Indonesia	274 6.0
Japan	105 5.0	Japan	117 4.6	Japan	124 4.0	Pakistan	138 3.9	Pakistan	174 4.3	Pakistan	218 4.8
Bangladesh	71 3.4	Bangladesh	85 3.3	Pakistan	112 3.6	Japan	127 3.5	Bangladesh	147 3.7	Bangladesh	172 3.8
Pakistan	61 2.9	Pakistan	83 3.2	Bangladesh	109 3.5	Bangladesh	124 3.5	Japan	128 3.2	Japan	124 2.7
Vietnam	43 2.1	Vietnam	54 2.1	Vietnam	66 2.1	Vietnam	78 2.2	Philippines	92 2.3	Philippines	113 2.5
Philippines	37 1.8	Philippines	48 1.9	Philippines	61 2.0	Philippines	77 2.1	Vietnam	87 2.2	Vietnam	101 2.2
Turkiye	36 1.7	Thailand	45 1.8	Turkiye	56 1.8	Turkiye	68 1.9	Iran	74 1.8	Iran	88 1.9
Thailand	34 1.7	Turkiye	45 1.8	Iran	55 1.8	Iran	64 1.8	Turkiye	74 1.8	Turkiye	86 1.9
Korea	32 1.5	Iran	39 1.5	Thailand	55 1.8	Thailand	61 1.7	Thailand	66 1.6	Thailand	69 1.5
Iran	28 1.4	Korea	38 1.5	Korea	43 1.4	Korea	47 1.3	Korea	50 1.2	Myanmar	55 1.2
Myanmar	27 1.3	Myanmar	33 1.3	Myanmar	40 1.3	Myanmar	45 1.3	Myanmar	49 1.2	Korea	52 1.1
ROC	15 0.7	ROC	18 0.7	Uzbekistan	20 0.7	Uzbekistan	25 0.7	Malaysia	29 0.7	Afghanistan	38 0.8
Sri Lanka	13 0.6	Uzbekistan	16 0.6	ROC	20 0.7	Malaysia	23 0.7	Uzbekistan	28 0.7	Uzbekistan	36 0.8
Uzbekistan	12 0.6	Sri Lanka	15 0.6	Malaysia	18 0.6	Nepal	23 0.6	Afghanistan	26 0.7	Saudi Arabia	35 0.8
Kazakhstan	12 0.6	Nepal	15 0.6	Nepal	18 0.6	ROC	22 0.6	Nepal	26 0.7	Malaysia	34 0.7
Nepal	11 0.5	Kazakhstan	14 0.6	Sri Lanka	17 0.6	Afghanistan	20 0.6	Saudi Arabia	24 0.6	Nepal	29 0.6
Malaysia	11 0.5	Malaysia	14 0.5	Kazakhstan	16 0.5	Sri Lanka	19 0.5	ROC	23 0.6	ROC	23 0.5
Afghanistan	11 0.5	Afghanistan	13 0.5	Afghanistan	12 0.4	Saudi Arabia	16 0.5	Sri Lanka	21 0.5	Sri Lanka	22 0.5
Cambodia	6.8 0.3	Cambodia	6.6 0.3	Saudi Arabia	11 0.3	Kazakhstan	15 0.4	Kazakhstan	16 0.4	Kazakhstan	20 0.4
Hong Kong	4.0 0.2	Saudi Arabia	6.0 0.2	Cambodia	8.8 0.3	Cambodia	12 0.3	Cambodia	14 0.3	Cambodia	17 0.4
Saudi Arabia	3.6 0.2	Hong Kong	5.1 0.2	Hong Kong	5.7 0.2	Hong Kong	6.7 0.2	UAE	8.3 0.2	UAE	13 0.3
Kyrgyzstan	2.9 0.1	Tajikistan	3.9 0.2	Tajikistan	5.3 0.2	Tajikistan	6.2 0.2	Tajikistan	7.6 0.2	Tajikistan	10 0.2
Tajikistan	2.9 0.1	Kyrgyzstan	3.6 0.1	Kyrgyzstan	4.4 0.1	Lao PDR	5.2 0.1	Hong Kong	7.0 0.2	Lao PDR	7.8 0.2
Lao PDR	2.5 0.1	Lao PDR	3.2 0.1	Lao PDR	4.1 0.1	Kyrgyzstan	4.9 0.1	Lao PDR	6.3 0.2	Hong Kong	7.5 0.2
Turkmenistan	2.1 0.1	Turkmenistan	2.8 0.1	Turkmenistan	3.7 0.1	Turkmenistan	4.5 0.1	Turkmenistan	5.4 0.1	Turkmenistan	7.3 0.2
Singapore	2.1 0.1	Singapore	2.4 0.1	Singapore	3.0 0.1	Singapore	4.0 0.1	Kyrgyzstan	5.4 0.1	Kyrgyzstan	7.2 0.2
Mongolia	1.2 0.1	Mongolia	1.7 0.1	Mongolia	2.1 0.1	UAE	3.0 0.1	Singapore	5.1 0.1	Singapore	6.0 0.1
Kuwait	0.7 0.0	Kuwait	1.4 0.1	Kuwait	2.0 0.1	Mongolia	2.4 0.1	Kuwait	2.9 0.1	Kuwait	5.3 0.1
Oman	0.7 0.0	Oman	1.1 0.0	UAE	1.8 0.1	Oman	2.3 0.1	Oman	2.8 0.1	Kuwait	4.6 0.1
Fiji	0.5 0.0	UAE	1.0 0.0	Oman	1.6 0.1	Kuwait	1.9 0.1	Mongolia	2.8 0.1	Mongolia	3.6 0.1
Bhutan	0.3 0.0	Fiji	0.6 0.0	Fiji	0.7 0.0	Fiji	0.8 0.0	Qatar	1.7 0.0	Qatar	3.0 0.1
UAE	0.2 0.0	Bhutan	0.4 0.0	Bhutan	0.6 0.0	Bahrain	0.6 0.0	Bahrain	1.2 0.0	Bahrain	1.6 0.0
Bahrain	0.2 0.0	Bahrain	0.3 0.0	Bahrain	0.5 0.0	Qatar	0.6 0.0	Fiji	0.9 0.0	Fiji	0.9 0.0
Brunei	0.1 0.0	Qatar	0.2 0.0	Qatar	0.4 0.0	Bhutan	0.6 0.0	Bhutan	0.7 0.0	Bhutan	0.8 0.0
Maldives	0.1 0.0	Brunei	0.2 0.0	Brunei	0.3 0.0	Brunei	0.3 0.0	Brunei	0.4 0.0	Maldives	0.5 0.0
Qatar	0.1 0.0	Maldives	0.2 0.0	Maldives	0.2 0.0	Maldives	0.3 0.0	Maldives	0.3 0.0	Brunei	0.5 0.0
(region)		(region)		(region)		(region)		(region)		(region)	
APO21	1,175 56.5	APO21	1,469 57.5	APO21	1,823 59.1	APO21	2,166 60.5	APO21	2,508 62.2	APO21	2,897 63.8
Asia28	2,047 98.4	Asia28	2,509 98.3	Asia28	3,029 98.2	Asia28	3,516 98.2	Asia28	3,949 98.0	Asia28	4,434 97.6
Asia38	2,081 100.0	Asia38	2,553 100.0	Asia38	3,086 100.0	Asia38	3,579 100.0	Asia38	4,029 100.0	Asia38	4,543 100.0
East Asia	987 47.4	East Asia	1,167 45.7	East Asia	1,338 43.4	East Asia	1,473 41.1	East Asia	1,551 38.5	East Asia	1,618 35.6
SAARC	713 34.3	SAARC	898 35.2	SAARC	1,134 36.7	SAARC	1,383 38.6	SAARC	1,639 40.7	SAARC	1,930 42.5
ASEAN	279 13.4	ASEAN	354 13.9	ASEAN	435 14.1	ASEAN	511 14.3	ASEAN	586 14.5	ASEAN	676 14.9
ASEAN6	200 9.6	ASEAN6	257 10.1	ASEAN6	316 10.2	ASEAN6	371 10.4	ASEAN6	430 10.7	ASEAN6	496 10.9
C5	32 1.5	C5	40 1.6	C5	50 1.6	C5	55 1.5	C5	63 1.6	C5	81 1.8
CLMV	79 3.8	CLMV	97 3.8	CLMV	119 3.9	CLMV	140 3.9	CLMV	156 3.9	CLMV	180 4.0
GCC	5.6 0.3	GCC	10 0.4	GCC	17 0.5	GCC	25 0.7	GCC	41 1.0	GCC	63 1.4
IPEF	1,147 55.1	IPEF	1,399 54.8	IPEF	1,684 54.6	IPEF	1,986 55.5	IPEF	2,275 56.5	IPEF	2,597 57.2
RCEP	1,262 60.6	RCEP	1,514 59.3	RCEP	1,765 57.2	RCEP	1,975 55.2	RCEP	2,131 52.9	RCEP	2,292 50.4
(reference)		(reference)		(reference)		(reference)		(reference)		(reference)	
Australia	13 0.6	Australia	15 0.6	Australia	17 0.6	Australia	19 0.5	Australia	22 0.5	Australia	27 0.6
France	52 2.5	France	55 2.2	France	58 1.9	France	61 1.7	France	65 1.6	France	69 1.5
Germany	78 3.7	Germany	78 3.1	Germany	79 2.6	Germany	81 2.3	Germany	80 2.0	Germany	84 1.8
Italy	54 2.6	Italy	56 2.2	Italy	57 1.8	Italy	57 1.6	Italy	60 1.5	Italy	59 1.3
New Zealand	2.8 0.1	New Zealand	3.2 0.1	New Zealand	3.3 0.1	New Zealand	3.7 0.1	New Zealand	4.2 0.1	New Zealand	5.1 0.1
UK	56 2.7	UK	56 2.2	UK	57 1.9	UK	59 1.6	UK	63 1.6	UK	69 1.5
US	205 9.9	US	227 8.9	US	250 8.1	US	282 7.9	US	309 7.7	US	340 7.5
EU15	342 16.4	EU15	357 14.0	EU15	366 11.9	EU15	377 10.5	EU15	397 9.9	EU15	418 9.2
		EU27	405 15.9	EU27	418 13.5	EU27	428 12.0	EU27	441 10.9	EU27	449 9.9

Unit: Millions of persons.

Sources: Population census and other official data in each country, including interpolations in APO-PDB.

Table 9.5 Per Capita GDP using Exchange Rate, 1970–2024

—GDP at current market prices per person, using the annual average exchange rate

1970 (%)	1980 (%)	1990 (%)	2000 (%)	2010 (%)	2024 (%)
Qatar 4.97 100.0	UAE 42.3 100.0	UAE 28.9 100.0	Japan 39.7 100.0	Qatar 75.3 100.0	Singapore 94.9 100.0
UAE 4.28 86.1	Qatar 35.4 83.8	Japan 26.1 90.2	UAE 35.3 88.9	Singapore 47.2 62.8	Qatar 75.2 79.2
Kuwait 4.00 80.5	Brunei 33.0 78.1	Qatar 17.8 61.6	Qatar 29.5 74.4	Japan 45.4 60.3	Hong Kong 54.1 57.0
Japan 2.03 40.8	Saudi Arabia 27.2 64.4	Brunei 15.4 53.3	Hong Kong 25.8 64.8	Kuwait 40.7 54.1	UAE 43.0 45.3
Bahrain 1.88 37.9	Kuwait 21.8 51.6	Hong Kong 13.5 46.6	Singapore 23.9 60.0	UAE 37.3 49.6	Kuwait 36.6 38.5
Brunei 1.72 34.7	Bahrain 10.3 24.4	Singapore 12.8 44.1	Kuwait 20.6 51.9	Brunei 35.4 47.1	Korea 36.2 38.2
Saudi Arabia 1.51 30.4	Japan 9.63 22.8	Saudi Arabia 11.0 38.2	Brunei 20.5 51.5	Hong Kong 32.6 43.3	Saudi Arabia 35.5 37.4
Kazakhstan 1.30 26.1	Oman 6.61 15.6	Kuwait 9.65 33.3	ROC 14.8 37.4	Korea 24.1 32.0	ROC 34.3 36.1
Hong Kong 0.96 19.4	Hong Kong 5.70 13.5	Bahrain 9.25 32.0	Bahrain 13.2 33.2	Oman 23.7 31.5	Brunei 33.9 35.8
Singapore 0.93 18.6	Singapore 5.00 11.8	Oman 8.22 28.4	Korea 12.7 32.0	Saudi Arabia 22.0 29.3	Japan 33.8 35.7
Turkmenistan 0.71 14.3	Iran 2.53 6.0	ROC 8.16 28.2	Saudi Arabia 11.7 29.5	Bahrain 21.7 28.9	Bahrain 29.6 31.2
Turkiye 0.70 14.0	Kazakhstan 2.51 5.9	Korea 6.81 23.5	Oman 9.98 25.1	ROC 19.2 25.5	Oman 20.6 21.7
Uzbekistan 0.61 12.3	ROC 2.37 5.6	Turkiye 3.68 12.7	Turkiye 4.05 10.2	Turkiye 10.6 14.1	Turkiye 15.9 16.7
Tajikistan 0.48 9.7	Turkiye 2.10 5.0	Malaysia 2.50 8.6	Malaysia 4.04 10.2	Kazakhstan 9.16 12.2	Maldives 15.1 15.9
Oman 0.45 9.1	Fiji 1.92 4.5	Fiji 1.85 6.4	Maldives 3.29 8.3	Malaysia 8.92 11.9	Kazakhstan 14.6 15.4
Kyrgyzstan 0.43 8.6	Malaysia 1.78 4.2	Kazakhstan 1.84 6.3	Fiji 2.09 5.3	Maldives 8.42 11.2	China 13.8 14.5
Fiji 0.43 8.6	Korea 1.74 4.1	Iran 1.73 6.0	Thailand 2.09 5.3	Iran 7.34 9.8	Malaysia 12.4 13.1
Iran 0.40 8.0	Turkmenistan 1.41 3.3	Thailand 1.63 5.6	Iran 1.79 4.5	Thailand 5.18 6.9	Turkmenistan 9.41 9.9
ROC 0.39 7.9	Uzbekistan 1.30 3.1	Maldives 1.32 4.6	Kazakhstan 1.23 3.1	China 4.84 6.4	Thailand 7.77 8.2
Maldives 0.37 7.5	Tajikistan 0.93 2.2	Turkmenistan 0.84 2.9	Turkmenistan 1.11 2.8	Turkmenistan 4.19 5.6	Mongolia 6.65 7.0
Malaysia 0.36 7.2	Kyrgyzstan 0.83 2.0	Philippines 0.77 2.7	Philippines 1.09 2.8	Fiji 3.45 4.6	Fiji 6.43 6.8
Korea 0.28 5.7	Thailand 0.74 1.8	Mongolia 0.76 2.6	China 1.04 2.6	Indonesia 3.18 4.2	Iran 6.42 6.8
Sri Lanka 0.23 4.6	Philippines 0.69 1.6	Uzbekistan 0.72 2.5	Sri Lanka 1.01 2.5	Sri Lanka 2.82 3.8	Indonesia 5.13 5.4
Bhutan 0.22 4.4	Maldives 0.61 1.4	Indonesia 0.71 2.5	Indonesia 0.82 2.1	Mongolia 2.61 3.5	Vietnam 4.71 5.0
Thailand 0.21 4.3	Indonesia 0.54 1.3	Kyrgyzstan 0.60 2.1	Bhutan 0.76 1.9	Bhutan 2.41 3.2	Sri Lanka 4.60 4.8
Philippines 0.18 3.7	China 0.36 0.8	Sri Lanka 0.55 1.9	Pakistan 0.70 1.8	Philippines 2.26 3.0	Bhutan 4.26 4.5
Pakistan 0.17 3.4	Sri Lanka 0.33 0.8	Tajikistan 0.53 1.8	Mongolia 0.60 1.5	Uzbekistan 1.97 2.6	Philippines 4.10 4.3
Afghanistan 0.16 3.3	Bhutan 0.32 0.8	Bhutan 0.53 1.8	Uzbekistan 0.56 1.4	Vietnam 1.69 2.3	Uzbekistan 3.34 3.5
China 0.13 2.5	Pakistan 0.29 0.7	Pakistan 0.44 1.5	Vietnam 0.47 1.2	India 1.38 1.8	Cambodia 2.66 2.8
Cambodia 0.12 2.4	Afghanistan 0.29 0.7	India 0.39 1.3	India 0.46 1.2	Lao PDR 1.18 1.6	India 2.65 2.8
India 0.12 2.3	Mongolia 0.28 0.7	China 0.38 1.3	Bangladesh 0.42 1.0	Pakistan 1.12 1.5	Bangladesh 2.52 2.7
Nepal 0.11 2.2	India 0.28 0.7	Afghanistan 0.31 1.1	Lao PDR 0.35 0.9	Cambodia 1.00 1.3	Kyrgyzstan 2.44 2.6
Myanmar 0.10 2.0	Bangladesh 0.21 0.5	Bangladesh 0.29 1.0	Cambodia 0.32 0.8	Kyrgyzstan 0.88 1.2	Lao PDR 2.12 2.2
Bangladesh 0.09 1.9	Myanmar 0.18 0.4	Nepal 0.24 0.8	Nepal 0.29 0.7	Bangladesh 0.86 1.1	Pakistan 1.73 1.8
Mongolia 0.09 1.9	Nepal 0.17 0.4	Lao PDR 0.22 0.8	Kyrgyzstan 0.28 0.7	Tajikistan 0.78 1.0	Nepal 1.48 1.6
Indonesia 0.09 1.7	Cambodia 0.11 0.3	Cambodia 0.20 0.7	Afghanistan 0.18 0.4	Myanmar 0.76 1.0	Tajikistan 1.41 1.5
Lao PDR 0.05 1.0	Lao PDR 0.10 0.2	Myanmar 0.14 0.5	Myanmar 0.17 0.4	Nepal 0.70 0.9	Myanmar 0.56 0.6
Vietnam 0.03 0.6	Vietnam 0.02 0.0	Vietnam 0.10 0.3	Tajikistan 0.14 0.4	Afghanistan 0.57 0.8	Afghanistan 0.48 0.5
(region)	(region)	(region)	(region)	(region)	(region)
APO21 0.33 6.6	APO21 1.28 3.0	APO21 2.66 9.2	APO21 3.60 9.1	APO21 5.22 6.9	APO21 6.20 6.5
Asia28 0.24 4.9	Asia28 0.96 2.3	Asia28 1.79 6.2	Asia28 2.66 6.7	Asia28 5.11 6.8	Asia28 8.72 9.2
Asia38 0.25 5.1	Asia38 1.01 2.4	Asia38 1.81 6.2	Asia38 2.67 6.7	Asia38 5.23 6.9	Asia38 8.87 9.3
East Asia 0.34 6.8	East Asia 1.39 3.3	East Asia 3.14 10.8	East Asia 5.07 12.8	East Asia 9.14 12.1	East Asia 16.5 17.4
SAARC 0.12 2.4	SAARC 0.27 0.6	SAARC 0.38 1.3	SAARC 0.48 1.2	SAARC 1.30 1.7	SAARC 2.50 2.6
ASEAN 0.12 2.5	ASEAN 0.56 1.3	ASEAN 0.84 2.9	ASEAN 1.23 3.1	ASEAN 3.45 4.6	ASEAN 5.89 6.2
ASEAN6 0.15 3.0	ASEAN6 0.74 1.7	ASEAN6 1.11 3.8	ASEAN6 1.55 3.9	ASEAN6 4.22 5.6	ASEAN6 6.88 7.3
C5 0.85 17.0	C5 1.66 3.9	C5 1.06 3.7	C5 0.71 1.8	C5 3.77 5.0	C5 6.33 6.7
CLMV 0.06 1.2	CLMV 0.08 0.2	CLMV 0.13 0.4	CLMV 0.36 0.9	CLMV 1.32 1.7	CLMV 3.15 3.3
GCC 1.92 38.6	GCC 25.4 60.1	GCC 12.6 43.5	GCC 15.6 39.3	GCC 28.8 38.2	GCC 37.6 39.7
IPEF 1.26 25.3	IPEF 3.31 7.8	IPEF 6.26 21.6	IPEF 8.79 22.1	IPEF 12.0 15.9	IPEF 17.4 18.3
RCEP 0.33 6.6	RCEP 1.28 3.0	RCEP 2.66 9.2	RCEP 4.08 10.3	RCEP 7.96 10.6	RCEP 13.7 14.5
(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
Australia 3.58 72.1	Australia 11.8 28.0	Australia 19.0 65.7	Australia 21.6 54.4	Australia 59.2 78.7	Australia 67.4 71.0
France 3.66 73.6	France 9.58 22.7	France 17.5 60.4	France 26.1 65.6	France 36.1 47.9	France 61.2 64.5
Germany 4.03 81.2	Germany 10.3 24.5	Germany 19.4 67.0	Germany 27.7 69.6	Germany 40.3 53.6	Germany 72.5 76.4
Italy 3.64 73.2	Italy 9.82 23.2	Italy 18.7 64.5	Italy 27.1 68.3	Italy 34.9 46.4	Italy 61.0 64.3
New Zealand 2.35 47.3	New Zealand 7.40 17.5	New Zealand 13.8 47.6	New Zealand 14.6 36.8	New Zealand 35.2 46.8	New Zealand 51.5 54.2
UK 2.42 48.6	UK 10.72 25.4	UK 20.9 72.3	UK 28.3 71.3	UK 39.8 52.9	UK 53.1 56.0
US 5.23 105.3	US 12.6 29.7	US 23.9 82.6	US 36.3 91.4	US 48.7 64.7	US 86.2 90.8
EU15 3.66 73.6	EU15 9.34 22.1	EU15 17.5 60.6	EU15 26.4 66.3	EU15 37.0 49.1	EU15 65.5 69.0
			EU27 22.2 55.8	EU27 33.1 44.0	EU27 62.8 66.2

Unit: Thousand USD.

Source: Official national accounts in each country, including adjustments by APO-PDB.

Note: See Section 8.1 for the adjustments to harmonize GDP coverage across countries.

Table 9.6 Per Capita GDP, 1970–2024

—GDP at constant market prices per person, using the 2021 PPP, the reference year 2024

1970			1980			1990			2000			2010			2024		
Qatar	300.9	100.0	Brunei	204.5	100.0	UAE	113.2	100.0	Qatar	130.8	100.0	Qatar	145.1	100.0	Singapore	154.5	100.0
UAE	203.6	67.7	Qatar	187.8	91.8	Brunei	108.1	95.5	UAE	112.3	85.9	Singapore	106.4	73.4	Qatar	117.1	75.8
Kuwait	152.5	50.7	UAE	182.9	89.5	Qatar	96.8	85.5	Brunei	109.1	83.4	Brunei	96.5	66.5	Brunei	89.1	57.7
Saudi Arabia	137.5	45.7	Saudi Arabia	175.5	85.8	Saudi Arabia	76.5	67.6	Singapore	73.3	56.0	Kuwait	70.3	48.5	ROC	80.1	51.9
Brunei	121.6	40.4	Kuwait	66.5	32.5	Singapore	46.4	40.9	Saudi Arabia	66.3	50.7	Hong Kong	64.2	44.3	Hong Kong	75.4	48.8
Bahrain	36.1	12.0	Bahrain	46.0	22.5	Oman	43.7	38.6	Kuwait	54.3	41.5	Saudi Arabia	63.3	43.6	Saudi Arabia	73.0	47.2
Japan	18.4	6.1	Oman	31.2	15.2	Japan	40.3	35.6	Oman	47.3	36.1	UAE	62.1	42.8	UAE	64.9	42.0
Singapore	13.9	4.6	Singapore	28.7	14.0	Hong Kong	34.4	30.4	Hong Kong	45.5	34.8	Oman	55.4	38.2	Korea	62.2	40.3
Turkmenistan	12.6	4.2	Japan	26.9	13.1	Bahrain	34.0	30.1	Japan	44.9	34.3	Bahrain	52.4	36.1	Bahrain	59.1	38.2
Kazakhstan	12.5	4.2	Hong Kong	19.9	9.7	Kuwait	33.4	29.5	Bahrain	44.1	33.7	ROC	52.0	35.8	Kuwait	58.9	38.8
Iran	12.2	4.1	Kazakhstan	15.7	7.7	ROC	19.8	17.5	ROC	35.8	27.3	Japan	47.1	32.5	Japan	54.5	35.3
Hong Kong	10.5	3.5	Turkmenistan	14.0	6.9	Kazakhstan	18.7	16.5	Korea	29.8	22.8	Korea	45.5	31.3	Oman	44.2	28.6
Oman	9.08	3.0	Iran	10.7	5.2	Korea	16.4	14.5	Malaysia	20.5	15.7	Kazakhstan	31.6	21.8	Kazakhstan	42.3	27.4
Turkiye	8.68	2.9	Turkiye	10.3	5.0	Turkiye	13.7	12.1	Turkiye	16.3	12.5	Malaysia	26.5	18.3	Turkiye	41.1	26.6
Fiji	6.78	2.3	Malaysia	9.59	4.7	Turkmenistan	13.1	11.6	Thailand	14.4	11.0	Turkiye	22.5	15.5	Malaysia	40.2	26.0
Kyrgyzstan	5.74	1.9	ROC	9.42	4.6	Malaysia	13.1	11.5	Maldives	13.9	10.6	Maldives	21.9	15.1	Maldives	29.0	18.8
Malaysia	5.73	1.9	Fiji	8.87	4.3	Thailand	10.1	8.9	Iran	13.5	10.4	Iran	21.6	14.9	China	28.3	18.3
Afghanistan	5.03	1.7	Kyrgyzstan	6.94	3.4	Iran	9.75	8.6	Kazakhstan	12.9	9.9	Thailand	20.9	14.4	Thailand	25.9	16.8
Maldives	4.85	1.6	Korea	6.77	3.3	Fiji	9.53	8.4	Fiji	11.1	8.5	Turkmenistan	16.2	11.2	Iran	23.9	15.5
ROC	4.00	1.3	Thailand	5.61	2.7	Maldives	8.83	7.8	Turkmenistan	8.07	6.2	China	13.1	9.1	Turkmenistan	20.7	13.4
Mongolia	3.86	1.3	Mongolia	5.25	2.6	Kyrgyzstan	7.26	6.4	Indonesia	7.26	5.6	Sri Lanka	11.4	7.8	Mongolia	19.4	12.6
Thailand	3.62	1.2	Afghanistan	5.09	2.5	Mongolia	7.09	6.3	Sri Lanka	6.92	5.3	Fiji	11.1	7.7	Bhutan	17.4	11.3
Philippines	3.42	1.1	Maldives	4.93	2.4	Indonesia	5.52	4.9	Mongolia	6.72	5.1	Bhutan	11.0	7.6	Indonesia	17.2	11.1
Korea	3.19	1.1	Philippines	4.68	2.3	Philippines	4.81	4.2	Philippines	5.57	4.3	Mongolia	11.0	7.6	Vietnam	16.5	10.7
Cambodia	2.85	0.9	Uzbekistan	3.86	1.9	Afghanistan	4.69	4.1	Bhutan	5.41	4.1	Indonesia	10.5	7.2	Sri Lanka	16.2	10.5
Tajikistan	2.84	0.9	Tajikistan	3.81	1.9	Sri Lanka	4.60	4.1	China	5.27	4.0	Vietnam	8.52	5.9	Fiji	15.5	10.0
Uzbekistan	2.78	0.9	Indonesia	3.66	1.8	Tajikistan	4.19	3.7	Pakistan	4.57	3.5	Philippines	7.45	5.1	Uzbekistan	12.5	8.1
Sri Lanka	2.72	0.9	Sri Lanka	3.53	1.7	Uzbekistan	3.78	3.3	Vietnam	4.21	3.2	Uzbekistan	6.31	4.3	Philippines	12.2	7.9
Bangladesh	2.15	0.7	Bhutan	2.45	1.2	Bhutan	3.56	3.1	Kyrgyzstan	4.11	3.1	Lao PDR	5.73	3.9	India	10.5	6.8
Indonesia	2.08	0.7	Lao PDR	2.19	1.1	Pakistan	3.01	2.7	Lao PDR	3.86	3.0	India	5.61	3.9	Lao PDR	10.3	6.7
Lao PDR	2.08	0.7	Pakistan	2.06	1.0	Lao PDR	2.83	2.5	Uzbekistan	3.05	2.3	Kyrgyzstan	5.59	3.9	Bangladesh	9.67	6.3
Bhutan	1.88	0.6	Vietnam	2.00	1.0	China	2.43	2.1	India	3.04	2.3	Pakistan	5.58	3.8	Cambodia	8.40	5.4
Nepal	1.85	0.6	Bangladesh	1.80	0.9	India	2.25	2.0	Nepal	2.81	2.2	Bangladesh	4.58	3.2	Kyrgyzstan	8.01	5.2
Pakistan	1.75	0.6	Nepal	1.75	0.9	Nepal	2.24	2.0	Bangladesh	2.78	2.1	Cambodia	4.41	3.0	Pakistan	7.17	4.6
Vietnam	1.61	0.5	India	1.72	0.8	Vietnam	2.19	1.9	Cambodia	2.35	1.8	Nepal	3.59	2.5	Tajikistan	5.84	3.8
India	1.59	0.5	Cambodia	1.54	0.8	Bangladesh	2.10	1.9	Afghanistan	1.61	1.2	Tajikistan	3.37	2.3	Nepal	5.70	3.7
China	1.04	0.3	China	1.38	0.7	Cambodia	1.78	1.6	Tajikistan	1.55	1.2	Afghanistan	3.28	2.3	Myanmar	2.84	1.8
Myanmar	0.62	0.2	Myanmar	0.86	0.4	Myanmar	0.95	0.8	Myanmar	1.52	1.2	Myanmar	2.34	1.6	Afghanistan	2.54	1.6
(region)			(region)			(region)			(region)			(region)			(region)		
AP021	3.96	1.3	AP021	5.10	2.5	AP021	6.93	6.1	AP021	8.56	6.5	AP021	11.5	7.9	AP021	17.0	11.0
Asia28	2.98	1.0	Asia28	4.00	2.0	Asia28	5.40	4.8	Asia28	7.52	5.8	Asia28	12.2	8.4	Asia28	20.7	13.4
Asia38	3.14	1.0	Asia38	4.22	2.1	Asia38	5.58	4.9	Asia38	7.66	5.9	Asia38	12.5	8.6	Asia38	21.0	13.6
East Asia	3.04	1.0	East Asia	4.32	2.1	East Asia	6.78	6.0	East Asia	10.1	7.7	East Asia	17.8	12.3	East Asia	32.3	20.9
SAARC	1.74	0.6	SAARC	1.84	0.9	SAARC	2.38	2.1	SAARC	3.20	2.4	SAARC	5.52	3.8	SAARC	9.89	6.4
ASEAN	2.54	0.8	ASEAN	3.99	2.0	ASEAN	5.63	5.0	ASEAN	7.93	6.1	ASEAN	11.7	8.1	ASEAN	18.1	11.7
ASEAN6	2.99	1.0	ASEAN6	4.90	2.4	ASEAN6	7.08	6.3	ASEAN6	9.73	7.4	ASEAN6	13.7	9.5	ASEAN6	20.6	13.3
C5	7.37	2.4	C5	9.04	4.4	C5	9.64	8.5	C5	6.04	4.6	C5	13.2	9.1	C5	19.3	12.5
CLMV	1.39	0.5	CLMV	1.59	0.8	CLMV	1.76	1.6	CLMV	3.17	2.4	CLMV	6.10	4.2	CLMV	11.3	7.3
GCC	126.6	42.1	GCC	142.5	69.7	GCC	71.7	63.3	GCC	70.5	53.9	GCC	66.0	45.5	GCC	69.6	45.1
IPEF	9.47	3.1	IPEF	11.4	5.6	IPEF	14.0	12.4	IPEF	16.8	12.8	IPEF	19.7	13.6	IPEF	26.5	17.1
RCEP	3.25	1.1	RCEP	4.51	2.2	RCEP	6.67	5.9	RCEP	9.65	7.4	RCEP	16.1	11.1	RCEP	28.1	18.2
(reference)			(reference)			(reference)			(reference)			(reference)			(reference)		
Australia	33.1	11.0	Australia	38.1	18.6	Australia	44.1	38.9	Australia	56.1	42.9	Australia	65.9	45.4	Australia	74.5	48.2
France	26.9	8.9	France	36.3	17.7	France	44.0	38.9	France	52.4	40.1	France	56.1	38.7	France	62.3	40.3
Germany	29.3	9.7	Germany	38.7	18.9	Germany	48.1	42.5	Germany	57.2	43.7	Germany	63.3	43.6	Germany	71.1	46.0
Italy	27.7	9.2	Italy	38.4	18.8	Italy	48.5	42.8	Italy	57.2	43.8	Italy	56.0	38.6	Italy	60.5	39.2
New Zealand	27.8	9.3	New Zealand	29.9	14.6	New Zealand	34.0	30.0	New Zealand	41.0	31.4	New Zealand	48.0	33.1	New Zealand	57.6	37.3
UK	25.1	8.3	UK	30.6	15.0	UK	40.1	35.4	UK	49.8	38.1	UK	54.2	37.4	UK	60.7	39.3
US	33.2	11.0	US	40.9	20.0	US	51.0	45.1	US	63.1	48.3	US	68.5	47.2	US	86.2	55.8
EU15	26.8	8.9	EU15	35.0	17.1	EU15	43.5	38.4	EU15	53.4	40.8	EU15	57.4	39.5	EU15	64.8	41.9
									EU27	46.9	35.8	EU27	52.1	35.9	EU27	61.7	40.4

Unit: Thousand USD.

Source: Official national accounts in each country, including adjustments by APO-PDB.

Note: See Section 8.1 for the adjustments to harmonize GDP coverage across countries.

Table 9.7 Final Demand Shares in GDP, 1970–2024

—Shares of final demands to GDP at current prices

	1970				1990				2000				2010				2024			
	Household consumption	Government consumption	Investment	Net exports	Household consumption	Government consumption	Investment	Net exports	Household consumption	Government consumption	Investment	Net exports	Household consumption	Government consumption	Investment	Net exports	Household consumption	Government consumption	Investment	Net exports
Afghanistan	90.2	6.5	5.5	−2.2	88.6	6.0	8.2	−2.8	117.5	8.6	13.7	−39.8	84.7	17.9	13.2	−15.9	111.4	23.6	17.3	−52.2
Bahrain	67.8	14.8	21.3	−3.9	62.1	23.4	12.8	1.8	48.9	17.3	10.1	23.8	41.2	12.4	28.6	17.8	39.8	14.2	28.5	17.5
Bangladesh	93.5	1.6	7.6	−2.7	84.8	4.6	17.4	−6.8	75.9	5.0	23.8	−4.6	74.1	5.1	26.0	−5.2	69.2	5.9	30.7	−5.9
Bhutan	76.9	27.1	25.0	−28.9	53.9	26.4	23.1	−3.3	47.7	23.3	47.4	−18.4	50.4	20.3	56.8	−27.5	61.6	19.7	35.4	−16.6
Brunei	22.2	8.3	14.2	55.3	39.1	21.8	19.7	19.5	30.4	25.5	18.9	25.3	14.7	22.2	23.7	39.4	33.2	23.0	28.4	15.4
Cambodia	68.6	22.6	10.6	−1.8	95.6	5.7	6.9	−8.3	86.5	5.1	20.0	−11.5	80.6	6.5	22.5	−9.6	62.5	6.0	33.9	−2.5
China	60.5	9.8	29.6	0.1	54.1	12.5	30.9	2.4	51.0	15.7	31.1	2.2	38.4	14.2	44.0	3.4	41.9	16.2	39.1	2.8
ROC	55.9	17.7	26.4	0.0	52.3	18.0	25.5	4.2	55.2	15.7	27.2	1.8	53.2	15.1	25.1	6.6	47.0	13.2	26.9	13.0
Fiji	66.9	14.0	22.3	−3.1	73.5	17.1	14.0	−4.7	67.4	17.3	20.4	−5.1	72.6	15.0	18.8	−6.4	70.4	18.9	20.9	−10.2
Hong Kong	66.2	5.7	20.4	7.7	57.5	6.8	27.2	8.5	58.6	9.4	27.6	4.4	61.4	8.9	23.9	5.9	67.3	12.8	15.8	4.1
India	74.0	9.4	16.7	−0.1	62.4	11.8	27.2	−1.4	64.5	12.7	23.7	−0.9	58.1	11.4	34.9	−4.3	57.7	10.6	33.5	−1.8
Indonesia	77.0	8.2	17.1	−2.2	61.8	7.9	27.7	2.5	61.1	6.4	22.2	10.3	56.1	9.0	33.0	1.9	58.8	7.7	31.7	1.8
Iran	53.9	17.4	29.2	−0.5	55.7	11.7	40.7	−8.1	52.5	12.6	27.4	7.6	47.5	11.9	37.9	2.6	51.3	8.2	38.3	2.3
Japan	45.9	10.3	42.6	1.2	49.0	13.2	37.0	0.7	52.7	16.3	29.7	1.3	56.1	19.0	23.6	1.3	53.8	19.4	27.7	−0.9
Kazakhstan	76.3	12.3	35.5	−24.0	63.4	12.4	46.8	−22.6	62.2	12.1	18.3	7.5	49.4	10.8	25.5	14.3	56.2	10.8	27.6	5.4
Korea	73.4	9.8	26.4	−9.6	50.1	10.6	40.1	−0.9	54.8	10.6	33.0	1.7	51.3	13.5	32.7	2.5	48.6	17.5	29.9	4.1
Kuwait	39.8	13.2	12.3	34.7	59.6	37.4	15.7	−12.7	42.2	21.1	10.9	25.9	30.0	16.7	17.8	35.4	44.2	24.9	15.9	15.0
Kyrgyzstan	54.5	17.4	37.2	−9.0	72.4	25.0	22.9	−20.3	65.9	20.0	19.8	−5.7	84.9	18.1	27.1	−30.1	95.6	15.4	29.8	−40.8
Lao PDR	79.7	35.0	21.5	−36.1	78.5	7.2	27.4	−13.2	77.5	6.7	29.9	−14.1	72.9	10.7	22.7	−6.2	36.0	8.7	47.5	7.7
Malaysia	57.4	18.2	20.2	4.2	52.6	13.4	31.9	2.0	43.8	10.0	27.1	19.0	48.1	12.6	23.4	15.9	60.8	12.0	21.9	5.3
Maldives	37.2	12.0	18.0	32.8	34.8	14.0	24.4	26.8	40.2	18.7	23.9	17.2	41.6	20.8	25.9	11.7	51.3	17.3	31.5	0.0
Mongolia	77.8	24.1	32.6	−34.6	64.8	20.4	31.4	−16.7	72.4	14.4	24.3	−11.1	55.2	12.7	42.1	−10.0	49.7	15.6	35.7	−1.0
Myanmar	90.7	8.1	10.1	−8.9	90.8	7.5	7.9	−6.3	84.9	3.6	11.2	0.4	42.5	4.7	16.8	36.0	59.5	10.7	34.6	−4.8
Nepal	90.9	5.4	6.4	−2.7	84.5	6.2	19.0	−9.7	79.3	6.4	22.6	−8.2	87.3	8.6	26.8	−22.7	87.8	7.5	30.2	−25.6
Oman	25.0	11.2	16.8	47.0	43.2	23.7	20.8	12.4	37.7	18.6	18.9	24.7	33.2	16.2	29.1	21.5	41.1	18.3	23.7	16.9
Pakistan	76.6	10.3	15.8	−2.7	71.6	14.1	19.2	−4.9	76.1	9.9	16.2	−2.2	79.9	10.9	15.9	−6.7	84.9	8.9	13.1	−6.8
Philippines	66.2	10.1	24.5	−0.8	70.1	10.6	26.3	−7.0	71.7	11.1	15.7	1.5	70.2	9.7	20.4	−0.4	76.2	14.5	23.7	−14.3
Qatar	21.7	20.3	23.4	34.6	28.1	32.2	18.7	20.9	15.6	19.3	21.1	44.0	16.8	13.7	31.8	37.7	24.1	17.0	34.3	24.6
Saudi Arabia	32.5	15.9	22.4	29.2	46.3	29.0	15.7	9.0	36.2	25.9	19.3	18.6	32.3	20.2	30.9	16.6	44.6	21.3	31.7	2.4
Singapore	69.0	11.8	38.2	−19.0	44.8	9.5	35.7	10.1	42.0	10.5	35.2	12.3	36.3	9.7	27.7	26.3	32.1	10.1	21.8	36.0
Sri Lanka	79.4	6.3	16.9	−2.5	81.0	7.0	18.7	−6.7	73.0	7.5	28.3	−8.8	67.2	8.5	31.4	−7.1	68.8	6.9	26.9	−2.6
Tajikistan	76.9	3.5	10.2	9.4	71.0	6.9	12.6	9.5	86.0	11.5	10.2	−7.7	89.6	9.9	31.5	−30.9	88.7	11.2	34.3	−34.2
Thailand	67.0	11.9	25.3	−4.2	55.8	10.0	41.7	−7.4	55.6	13.5	22.5	8.4	53.0	15.8	25.5	5.7	57.7	16.4	22.3	3.6
Türkiye	75.5	7.8	17.1	−0.4	69.2	9.2	22.8	−1.1	66.5	12.0	24.0	−2.5	60.6	14.7	28.5	−3.8	54.3	14.5	30.7	0.5
Turkmenistan	58.7	6.6	19.3	15.4	47.7	8.8	39.9	3.7	35.2	14.4	35.5	14.8	6.9	9.2	52.3	31.6	11.3	9.0	49.7	30.0
UAE	30.1	6.3	32.6	30.9	49.6	9.9	25.9	14.7	55.7	9.3	23.2	11.9	42.5	9.4	28.7	19.4	46.5	12.1	27.8	13.5
Uzbekistan	38.7	18.3	33.9	9.2	57.6	25.3	36.0	−18.9	61.1	18.5	20.4	0.1	63.9	11.2	25.5	−0.6	60.6	14.8	39.0	−14.4
Vietnam (region)	38.8	64.2	21.7	−24.7	80.1	14.8	14.2	−9.1	61.5	11.4	29.1	−2.1	58.1	10.4	37.2	−5.6	54.0	8.9	30.7	6.4
APO21	60.4	11.2	29.1	−0.7	56.7	11.8	32.2	−0.7	58.5	12.7	26.4	2.4	57.1	13.2	29.3	0.4	57.3	12.3	29.7	0.7
Asia28	58.4	11.3	28.3	2.0	55.9	12.7	31.0	0.3	55.8	14.0	27.3	2.9	49.5	13.8	34.6	2.1	50.3	14.2	33.9	1.6
Asia38	57.9	11.4	28.2	2.5	55.9	13.0	31.1	0.0	55.6	14.0	27.0	3.4	49.1	13.7	34.4	2.8	50.2	14.2	33.7	1.8
East Asia	51.6	10.3	37.6	0.5	51.0	12.9	34.7	1.4	52.4	15.3	30.5	1.8	44.4	15.1	37.4	3.1	44.3	16.5	36.4	2.7
SAARC	77.5	8.3	15.0	−0.8	66.5	11.3	24.7	−2.5	67.7	11.5	22.7	−1.9	62.2	10.8	31.8	−4.9	61.4	10.0	31.4	−2.8
ASEAN	66.5	16.2	21.0	−3.7	61.1	9.9	30.2	−1.2	58.0	9.7	23.5	8.8	54.5	11.0	28.7	5.7	57.9	10.6	27.6	3.8
ASEAN6	68.8	10.6	21.6	−1.0	59.1	9.6	31.8	−0.5	56.8	9.7	23.2	10.3	53.9	11.3	28.0	6.8	58.7	11.0	26.8	3.6
C5	65.5	12.5	32.6	−10.7	61.9	14.7	41.3	−17.8	59.9	14.2	20.5	5.4	50.5	11.0	28.6	9.9	55.8	11.9	33.4	−1.2
CLMV	53.9	46.9	18.0	−18.8	83.1	12.4	13.3	−8.8	67.5	9.6	25.8	−2.8	58.2	9.4	33.2	−0.9	54.3	8.8	31.9	5.0
GCC	33.3	14.9	21.5	30.3	47.0	26.0	17.7	9.2	39.7	21.5	19.5	19.4	32.9	16.9	29.4	20.8	43.0	19.1	29.7	8.2
IPEF	59.1	15.6	25.3	0.1	59.6	14.3	26.8	−0.8	61.8	13.8	25.1	−0.7	61.6	15.3	24.4	−1.2	61.1	13.5	26.3	−0.9
RCEP (reference)	54.4	11.7	34.3	−0.4	53.4	12.6	33.4	0.6	53.7	14.4	28.7	3.2	46.3	14.6	35.7	3.3	46.9	15.8	34.8	2.6
Australia	54.3	13.9	32.0	−0.3	57.3	18.6	24.2	−0.1	58.1	18.5	23.3	0.1	54.0	18.6	26.4	1.0	51.9	23.1	24.5	0.5
France	53.5	17.3	28.3	0.9	54.7	21.5	24.4	−0.6	53.9	22.6	21.8	1.7	55.4	24.2	21.3	−0.9	54.7	24.2	21.5	−0.3
Germany	51.1	16.5	33.9	−1.5	55.8	19.4	25.0	−0.2	56.6	19.5	23.8	0.2	55.9	19.6	19.3	5.1	52.9	22.0	21.3	3.8
Italy	58.0	15.1	26.7	0.2	57.0	19.7	23.1	0.2	60.1	17.8	21.3	0.8	60.4	20.7	20.7	−1.8	57.2	18.1	22.5	2.2
New Zealand	64.2	14.9	23.9	−2.9	60.2	18.4	20.5	0.9	57.9	17.1	22.0	3.0	57.7	19.7	20.4	2.3	56.6	21.6	23.1	−1.3
UK	60.3	16.3	22.7	0.7	61.5	16.5	23.4	−1.4	65.8	16.6	18.9	−1.2	63.6	21.4	16.6	−1.6	61.1	20.9	18.9	−0.9
US	60.3	18.0	21.4	0.4	63.9	15.9	21.5	−1.3	66.0	14.0	23.7	−3.7	68.2	16.7	18.7	−3.5	67.9	13.6	21.5	−3.1
EU15	56.0	16.1	28.2	−0.4	56.3	19.5	24.7	−0.6	57.5	19.2	22.7	0.6	57.0	21.7	20.1	1.2	53.9	21.4	21.2	3.5
EU27									55.9	19.8	23.4	0.9	55.8	21.7	20.9	1.6	52.6	21.5	21.7	4.3

Unit: Percentage.

Source: Official national accounts in each country, including adjustments by APO-PDB.

Notes: Final demand shares in country groups are computed using the PPP for GDP. Household consumption includes the consumption of NPISHs. The investment consists of GFCF plus changes in inventories.

Table 9.8 Per-Worker Labor Productivity Level, 1970–2024

—GDP at constant basic prices per worker, using the 2021 PPP, the reference year 2024

1970 (%)	1980 (%)	1990 (%)	2000 (%)	2010 (%)	2024 (%)
Qatar 560.0 100.0	Brunei 591.6 100.0	Brunei 275.8 100.0	Qatar 259.8 100.0	Brunei 210.6 100.0	Singapore 226.2 100.0
Kuwait 508.4 90.8	Qatar 349.5 59.1	Oman 203.1 73.6	Brunei 250.4 96.4	Qatar 193.7 92.0	Brunei 180.0 79.6
UAE 412.5 73.7	Saudi Arabia 342.9 58.0	UAE 190.7 69.2	Oman 201.3 77.5	Singapore 168.2 79.9	Qatar 156.7 69.3
Brunei 407.5 72.8	UAE 298.2 50.4	Qatar 188.3 68.3	UAE 168.0 64.7	Saudi Arabia 146.7 69.6	ROC 154.0 68.1
Saudi Arabia 381.9 68.2	Kuwait 197.4 33.4	Saudi Arabia 160.1 58.0	Saudi Arabia 165.8 63.8	UAE 136.6 64.9	Hong Kong 146.9 64.9
Oman 132.7 23.7	Oman 189.8 32.1	Kuwait 102.4 37.1	Singapore 133.6 51.4	Kuwait 129.5 61.5	UAE 136.8 60.5
Bahrain 130.0 23.2	Bahrain 118.0 19.9	Singapore 86.4 31.3	Kuwait 130.1 50.1	Hong Kong 123.6 58.7	Saudi Arabia 125.2 55.3
Iran 44.6 8.0	Singapore 59.7 10.1	Bahrain 81.1 29.4	Bahrain 100.6 38.7	Oman 120.7 57.3	Korea 103.2 45.6
Singapore 42.0 7.5	Japan 54.9 9.3	Japan 78.3 28.4	Hong Kong 89.9 34.6	ROC 108.9 51.7	Bahrain 103.2 45.6
Kazakhstan 39.4 7.0	Kazakhstan 48.4 8.2	Hong Kong 69.5 25.2	Japan 84.9 32.7	Japan 91.2 43.3	Kuwait 100.9 44.6
Japan 37.3 6.7	Hong Kong 42.8 7.2	Kazakhstan 62.9 22.8	ROC 78.8 30.3	Bahrain 90.8 43.1	Turkiye 96.1 42.5
Turkmenistan 35.3 6.3	Iran 41.7 7.1	ROC 45.5 16.5	Korea 58.5 22.5	Korea 82.8 39.3	Japan 93.1 41.2
Hong Kong 26.1 4.7	Turkmenistan 34.3 5.8	Iran 41.8 15.2	Turkiye 51.3 19.7	Iran 76.7 36.4	Oman 86.3 38.1
Turkiye 25.7 4.6	Turkiye 29.5 5.0	Turkiye 38.0 13.8	Iran 50.5 19.4	Kazakhstan 69.5 33.0	Iran 83.3 36.8
Fiji 23.4 4.2	Fiji 26.7 4.5	Korea 33.8 12.3	Malaysia 49.2 18.9	Turkiye 65.4 31.1	Kazakhstan 82.8 36.6
Kyrgyzstan 20.1 3.6	Malaysia 26.2 4.4	Malaysia 33.4 12.1	Kazakhstan 41.7 16.1	Malaysia 60.0 28.5	Malaysia 78.4 34.7
Malaysia 17.1 3.0	ROC 24.0 4.1	Turkmenistan 31.4 11.4	Maldives 28.9 11.1	Turkmenistan 37.8 18.0	Turkmenistan 61.7 27.3
Maldives 16.3 2.9	Kyrgyzstan 21.3 3.6	Fiji 25.6 9.3	Fiji 27.3 10.5	Maldives 31.4 14.9	China 49.7 21.9
Afghanistan 15.6 2.8	Korea 17.1 2.9	Maldives 25.5 9.2	Thailand 22.8 8.8	Thailand 31.3 14.8	Mongolia 45.9 20.3
ROC 11.6 2.1	Afghanistan 16.1 2.7	Kyrgyzstan 19.5 7.1	Turkmenistan 18.0 6.9	Sri Lanka 27.7 13.1	Sri Lanka 42.3 18.7
Philippines 10.4 1.9	Maldives 15.8 2.7	Mongolia 16.9 6.1	Mongolia 17.9 6.9	Fiji 27.0 12.8	Thailand 41.3 18.2
Korea 10.0 1.8	Mongolia 14.4 2.4	Thailand 16.2 5.9	Sri Lanka 17.8 6.8	Mongolia 26.4 12.5	Maldives 39.3 17.4
Mongolia 9.5 1.7	Philippines 12.7 2.1	Afghanistan 16.0 5.8	Indonesia 16.0 6.2	Indonesia 22.3 10.6	Fiji 34.0 15.0
Thailand 7.9 1.4	Thailand 10.6 1.8	Sri Lanka 13.1 4.8	Pakistan 15.5 6.0	China 21.2 10.1	Bhutan 32.7 14.5
Uzbekistan 7.7 1.4	Sri Lanka 10.2 1.7	Indonesia 12.5 4.5	Philippines 14.7 5.6	Bhutan 21.1 10.0	Indonesia 32.3 14.3
Sri Lanka 7.7 1.4	Uzbekistan 9.8 1.7	Philippines 12.4 4.5	Bhutan 12.4 4.8	Philippines 18.0 8.6	Uzbekistan 28.9 12.8
Bangladesh 6.6 1.2	Indonesia 9.4 1.6	Pakistan 10.1 3.7	Kyrgyzstan 9.6 3.7	Pakistan 17.2 8.1	Philippines 27.5 12.1
Indonesia 6.2 1.1	Tajikistan 7.4 1.2	Tajikistan 10.0 3.6	China 8.5 3.3	Uzbekistan 14.4 6.8	Vietnam 27.4 12.1
Cambodia 6.0 1.1	Pakistan 6.6 1.1	Uzbekistan 9.1 3.3	Uzbekistan 7.8 3.0	India 13.9 6.6	India 26.1 11.5
Pakistan 5.4 1.0	Bhutan 5.8 1.0	Bhutan 8.7 3.1	Vietnam 7.7 3.0	Vietnam 13.6 6.5	Bangladesh 23.0 10.2
Tajikistan 4.5 0.8	Bangladesh 5.1 0.9	Bangladesh 6.1 2.2	India 7.7 2.9	Kyrgyzstan 11.7 5.6	Pakistan 21.3 9.4
Bhutan 4.3 0.8	Lao PDR 4.3 0.7	Lao PDR 5.7 2.1	Bangladesh 7.4 2.8	Bangladesh 11.1 5.3	Tajikistan 19.9 8.8
Vietnam 4.2 0.7	Vietnam 4.3 0.7	India 5.3 1.9	Lao PDR 7.3 2.8	Lao PDR 10.2 4.8	Kyrgyzstan 18.0 8.0
Nepal 3.9 0.7	Cambodia 4.1 0.7	Nepal 5.0 1.8	Nepal 6.3 2.4	Afghanistan 10.0 4.8	Lao PDR 17.2 7.6
India 3.6 0.6	India 3.8 0.6	Cambodia 4.4 1.6	Afghanistan 5.1 2.0	Tajikistan 10.0 4.7	Nepal 11.7 5.2
Lao PDR 3.6 0.6	Nepal 3.5 0.6	Vietnam 4.2 1.5	Tajikistan 4.8 1.9	Nepal 8.4 4.0	Cambodia 11.7 5.2
China 2.2 0.4	China 2.6 0.4	China 3.9 1.4	Cambodia 4.6 1.8	Cambodia 7.2 3.4	Afghanistan 8.2 3.6
Myanmar 1.8 0.3	Myanmar 2.3 0.4	Myanmar 2.4 0.9	Myanmar 3.5 1.3	Myanmar 4.9 2.3	Myanmar 5.7 2.5
(region)	(region)	(region)	(region)	(region)	(region)
APO21 10.4 1.9	APO21 12.6 2.1	APO21 17.1 6.2	APO21 21.1 8.1	APO21 27.8 13.2	APO21 40.2 17.8
Asia28 7.4 1.3	Asia28 9.1 1.5	Asia28 11.5 4.2	Asia28 16.0 6.2	Asia28 25.9 12.3	Asia28 45.1 19.9
Asia38 7.8 1.4	Asia38 9.6 1.6	Asia38 11.9 4.3	Asia38 16.4 6.3	Asia38 26.5 12.6	Asia38 45.6 20.2
East Asia 7.1 1.3	East Asia 8.9 1.5	East Asia 12.1 4.4	East Asia 17.6 6.8	East Asia 31.0 14.7	East Asia 59.8 26.4
SAARC 4.4 0.8	SAARC 4.5 0.8	SAARC 6.2 2.3	SAARC 8.7 3.4	SAARC 14.7 7.0	SAARC 26.4 11.7
ASEAN 7.2 1.3	ASEAN 10.0 1.7	ASEAN 12.6 4.6	ASEAN 17.1 6.6	ASEAN 23.5 11.2	ASEAN 34.6 15.3
ASEAN6 8.6 1.5	ASEAN6 12.3 2.1	ASEAN6 15.8 5.7	ASEAN6 21.3 8.2	ASEAN6 28.7 13.6	ASEAN6 40.0 17.7
C5 21.3 3.8	C5 25.2 4.3	C5 27.0 9.8	C5 17.2 6.6	C5 32.0 15.2	C5 47.4 21.0
CLMV 3.8 0.7	CLMV 4.0 0.7	CLMV 4.0 1.4	CLMV 6.6 2.5	CLMV 11.3 5.3	CLMV 20.7 9.1
GCC 390.8 69.8	GCC 318.1 53.8	GCC 163.9 59.4	GCC 171.2 65.9	GCC 145.4 69.0	GCC 126.3 55.8
IPEF 22.9 4.1	IPEF 26.0 4.4	IPEF 31.3 11.3	IPEF 37.6 14.5	IPEF 44.7 21.2	IPEF 59.0 26.1
RCEP 7.8 1.4	RCEP 9.7 1.6	RCEP 12.5 4.5	RCEP 17.7 6.8	RCEP 29.2 13.9	RCEP 52.4 23.2
(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
Australia 71.9 12.8	Australia 82.5 13.9	Australia 88.7 32.2	Australia 111.2 42.8	Australia 122.0 57.9	Australia 130.8 57.8
France 57.6 10.3	France 77.6 13.1	France 94.9 34.4	France 108.5 41.8	France 118.2 56.1	France 122.3 54.0
Germany 73.5 13.1	Germany 96.3 16.3	Germany 111.9 40.6	Germany 104.2 40.1	Germany 110.6 52.5	Germany 115.4 51.0
Italy 67.4 12.0	Italy 91.2 15.4	Italy 109.3 39.6	Italy 127.4 49.0	Italy 121.5 57.7	Italy 120.1 53.1
New Zealand 65.1 11.6	New Zealand 65.0 11.0	New Zealand 66.8 24.2	New Zealand 77.6 29.9	New Zealand 85.0 40.4	New Zealand 92.4 40.8
UK 52.2 9.3	UK 62.1 10.5	UK 76.8 27.8	UK 95.6 36.8	UK 104.2 49.5	UK 112.3 49.6
US 75.0 13.4	US 83.7 14.1	US 96.9 35.1	US 117.0 45.0	US 142.1 67.4	US 166.2 73.5
EU15 58.1 10.4	EU15 74.9 12.7	EU15 89.3 32.4	EU15 106.1 40.8	EU15 112.6 53.5	EU15 118.4 52.3
			EU27 95.4 36.7	EU27 104.2 49.5	EU27 112.6 49.8

Unit: Thousand USD (as of 2024).

Source: APO Productivity Database 2026.

Table 9.9 Per-Worker Labor Productivity Growth, 1990–2024

—Growth in GDP at constant prices per worker, using the 2021 PPP

1990–1995	1995–2000		2000–2005		2005–2010		2010–2015		2015–2019		2019–2024		2010–2024		
China	9.0	China	6.4	Afghanistan	8.3	Turkmenistan	11.0	Mongolia	7.7	China	6.7	Tajikistan	5.8	China	6.1
Malaysia	6.6	Vietnam	6.1	Tajikistan	8.2	China	10.7	China	6.8	Vietnam	6.2	Vietnam	5.1	Bangladesh	5.2
Thailand	6.5	Myanmar	5.5	China	7.6	India	7.2	Sri Lanka	6.4	Tajikistan	6.1	China	4.9	Uzbekistan	5.0
Indonesia	6.4	ROC	5.1	Kazakhstan	7.1	Uzbekistan	7.1	Lao PDR	6.2	Bangladesh	6.1	India	4.4	Vietnam	5.0
Korea	6.0	Korea	5.0	Kuwait	6.3	Bhutan	6.9	Uzbekistan	6.1	Uzbekistan	5.6	Bangladesh	3.9	Tajikistan	4.9
Vietnam	5.9	Kyrgyzstan	4.7	Cambodia	6.2	Tajikistan	6.3	Bangladesh	5.8	Cambodia	4.7	ROC	3.5	India	4.5
ROC	5.9	Qatar	4.7	Vietnam	5.9	Vietnam	5.6	Turkmenistan	5.2	India	4.7	Uzbekistan	3.4	Mongolia	4.0
Kuwait	5.0	India	4.2	Uzbekistan	5.1	Sri Lanka	5.4	Myanmar	4.6	Philippines	4.4	Turkmenistan	3.0	Lao PDR	3.8
Pakistan	4.8	Tajikistan	4.2	India	4.7	Afghanistan	5.1	Cambodia	4.5	Lao PDR	4.1	Iran	2.4	Turkmenistan	3.5
Hong Kong	4.5	Singapore	4.2	Turkiye	4.4	Mongolia	5.1	India	4.5	Thailand	4.0	Turkiye	2.3	Cambodia	3.5
Singapore	4.5	Turkiye	4.0	Iran	4.3	Bangladesh	4.6	Bhutan	4.1	Nepal	3.9	Indonesia	2.2	Bhutan	3.1
Sri Lanka	4.4	Cambodia	3.9	Thailand	3.8	Iran	4.0	Philippines	4.1	Bhutan	3.6	Kyrgyzstan	2.2	Kyrgyzstan	3.1
Bhutan	3.5	Oman	3.7	Turkmenistan	3.8	Nepal	3.5	Vietnam	3.9	Myanmar	3.4	Singapore	1.9	Sri Lanka	3.0
Iran	3.2	Pakistan	3.7	Indonesia	3.7	Korea	3.4	Kyrgyzstan	3.9	Mongolia	3.3	Bhutan	1.8	Philippines	3.0
India	3.0	Bhutan	3.6	Bhutan	3.7	Lao PDR	3.3	Afghanistan	3.6	Kyrgyzstan	3.2	Malaysia	1.6	Turkiye	2.7
Bahrain	2.9	Lao PDR	3.2	Malaysia	3.7	Myanmar	3.2	Indonesia	3.5	Pakistan	3.2	Cambodia	1.5	Indonesia	2.7
Nepal	2.6	Philippines	3.1	Bangladesh	3.6	Hong Kong	3.1	Fiji	3.5	Maldives	2.8	Korea	1.2	ROC	2.5
Myanmar	2.3	Turkmenistan	2.9	Korea	3.5	ROC	3.1	Turkiye	3.4	Singapore	2.8	Kazakhstan	1.2	Nepal	2.4
Turkiye	2.0	Bangladesh	2.6	Sri Lanka	3.5	Kazakhstan	3.1	Nepal	3.3	Bahrain	2.6	Hong Kong	1.1	Singapore	2.1
Qatar	1.7	Mongolia	2.5	Myanmar	3.4	Kyrgyzstan	3.1	Tajikistan	3.1	Turkiye	2.6	Lao PDR	1.1	Thailand	2.0
Lao PDR	1.7	Uzbekistan	2.4	Lao PDR	3.4	Indonesia	2.9	Thailand	3.1	Malaysia	2.6	Mongolia	0.8	Malaysia	1.9
Bangladesh	1.1	Nepal	2.0	ROC	3.4	Maldives	2.8	Maldives	2.6	Sri Lanka	2.5	Philippines	0.8	Fiji	1.6
Maldives	1.0	Sri Lanka	1.6	Singapore	3.3	Cambodia	2.8	Singapore	1.8	ROC	2.3	Nepal	0.4	Maldives	1.6
Saudi Arabia	0.4	Maldives	1.5	Hong Kong	3.2	Philippines	2.7	Kazakhstan	1.8	Korea	2.2	Pakistan	0.4	Korea	1.6
Japan	0.4	Bahrain	1.4	Mongolia	2.7	Thailand	2.5	Malaysia	1.7	Fiji	2.1	Sri Lanka	0.1	Pakistan	1.5
Fiji	0.3	Kazakhstan	1.2	Pakistan	2.3	Singapore	1.3	ROC	1.6	Indonesia	2.1	Japan	−0.2	Kazakhstan	1.3
Philippines	0.2	Japan	1.2	Nepal	2.2	Bahrain	0.6	Korea	1.4	Turkmenistan	2.0	Maldives	−0.3	Hong Kong	1.2
Brunei	−1.2	Malaysia	1.1	Fiji	2.0	Turkiye	0.5	Pakistan	1.4	Hong Kong	1.4	Fiji	−0.6	Myanmar	1.1
Mongolia	−1.4	UAE	1.1	Philippines	1.4	Malaysia	0.3	Hong Kong	1.2	Afghanistan	1.2	Brunei	−0.6	Bahrain	0.9
Cambodia	−3.0	Fiji	1.0	Japan	1.3	Japan	0.1	Bahrain	1.2	Kazakhstan	0.7	UAE	−0.7	Iran	0.6
UAE	−3.6	Hong Kong	0.6	Kyrgyzstan	0.9	Pakistan	−0.3	Japan	0.9	Oman	0.4	Thailand	−0.7	Japan	0.1
Oman	−3.9	Iran	0.6	Qatar	0.2	Brunei	−1.7	UAE	0.4	UAE	0.4	Bahrain	−0.7	UAE	0.0
Uzbekistan	−5.5	Thailand	0.3	Saudi Arabia	−0.3	UAE	−1.8	Saudi Arabia	−0.2	Iran	0.3	Qatar	−1.1	Brunei	−1.1
Kazakhstan	−9.4	Saudi Arabia	0.3	Maldives	−1.1	Saudi Arabia	−2.1	Kuwait	−0.5	Japan	−0.4	Saudi Arabia	−2.2	Saudi Arabia	−1.1
Turkmenistan	−14.0	Kuwait	−0.2	Oman	−1.7	Fiji	−2.2	Iran	−1.0	Saudi Arabia	−1.0	Oman	−2.2	Afghanistan	−1.4
Afghanistan	−14.2	Brunei	−0.8	Brunei	−1.7	Qatar	−6.1	Brunei	−1.0	Qatar	−1.1	Kuwait	−2.3	Qatar	−1.5
Tajikistan	−18.7	Indonesia	−1.6	UAE	−2.3	Kuwait	−6.4	Qatar	−2.2	Brunei	−1.9	Myanmar	−4.3	Kuwait	−1.8
Kyrgyzstan	−18.8	Afghanistan	−8.6	Bahrain	−2.7	Oman	−8.6	Oman	−4.9	Kuwait	−2.7	Afghanistan	−8.4	Oman	−2.4
		(region)		(region)		(region)		(region)		(region)		(region)		(region)	
APO21	2.5	APO21	1.8	APO21	2.6	APO21	2.9	APO21	2.7	APO21	2.8	APO21	2.4	APO21	2.6
Asia28	3.8	Asia28	2.9	Asia28	4.1	Asia28	5.5	Asia28	4.3	Asia28	4.3	Asia28	3.3	Asia28	4.0
Asia38	3.5	Asia38	2.9	Asia38	4.2	Asia38	5.4	Asia38	4.3	Asia38	4.2	Asia38	3.2	Asia38	3.9
East Asia	4.2	East Asia	3.4	East Asia	4.6	East Asia	6.7	East Asia	5.0	East Asia	5.2	East Asia	4.0	East Asia	4.7
SAARC	2.9	SAARC	3.9	SAARC	4.3	SAARC	6.1	SAARC	4.3	SAARC	4.5	SAARC	3.8	SAARC	4.2
ASEAN	5.5	ASEAN	0.7	ASEAN	3.5	ASEAN	2.9	ASEAN	3.3	ASEAN	3.2	ASEAN	1.8	ASEAN	2.8
ASEAN6	5.7	ASEAN6	0.3	ASEAN6	3.4	ASEAN6	2.5	ASEAN6	3.2	ASEAN6	2.6	ASEAN6	1.4	ASEAN6	2.4
C5	−10.5	C5	1.4	C5	6.8	C5	5.6	C5	3.5	C5	2.9	C5	2.1	C5	2.8
CLMV	4.5	CLMV	5.6	CLMV	5.5	CLMV	5.1	CLMV	4.0	CLMV	5.6	CLMV	3.6	CLMV	4.3
GCC	0.0	GCC	0.9	GCC	−0.3	GCC	−2.9	GCC	−0.5	GCC	−0.7	GCC	−1.8	GCC	−1.0
IPEF	1.6	IPEF	2.1	IPEF	1.8	IPEF	1.7	IPEF	1.9	IPEF	2.0	IPEF	2.0	IPEF	2.0
RCEP	4.2	RCEP	2.8	RCEP	4.3	RCEP	5.8	RCEP	4.6	RCEP	4.6	RCEP	3.4	RCEP	4.2
(reference)		(reference)		(reference)		(reference)		(reference)		(reference)		(reference)		(reference)	
Australia	2.4	Australia	2.2	Australia	1.3	Australia	0.6	Australia	1.5	Australia	−0.4	Australia	0.2	Australia	0.5
France	1.3	France	1.3	France	1.2	France	0.5	France	0.7	France	0.6	France	−0.5	France	0.2
Germany	−2.4	Germany	1.0	Germany	0.9	Germany	0.3	Germany	0.7	Germany	0.5	Germany	−0.3	Germany	0.3
Italy	2.0	Italy	1.1	Italy	−0.4	Italy	−0.6	Italy	−0.4	Italy	0.0	Italy	0.2	Italy	−0.1
New Zealand	1.3	New Zealand	1.7	New Zealand	1.0	New Zealand	0.8	New Zealand	1.0	New Zealand	0.4	New Zealand	0.3	New Zealand	0.6
UK	2.2	UK	2.2	UK	1.5	UK	0.2	UK	0.6	UK	0.7	UK	0.4	UK	0.5
US	1.5	US	2.3	US	2.3	US	1.6	US	0.7	US	1.0	US	1.7	US	1.1
EU15	2.0	EU15	1.4	EU15	0.9	EU15	0.3	EU15	0.6	EU15	0.5	EU15	0.1	EU15	0.4
		EU27	1.8	EU27	1.2	EU27	0.6	EU27	0.7	EU27	0.7	EU27	0.2	EU27	0.5

Unit: Percentage (average annual growth rate).

Source: APO Productivity Database 2026.

Table 9.10 Per-Hour Labor Productivity Level, 1970–2024

—GDP at constant basic prices per hour, using the 2021 PPP, the reference year 2024

1970 (%)			1980 (%)			1990 (%)			2000 (%)			2010 (%)			2024 (%)		
Brunei	176.1	100.0	Brunei	256.2	100.0	Brunei	119.7	100.0	Brunei	109.0	100.0	Brunei	91.7	100.0	Singapore	104.8	100.0
Saudi Arabia	153.4	87.1	Saudi Arabia	137.3	53.6	Saudi Arabia	64.0	53.5	Saudi Arabia	67.6	62.0	Singapore	72.5	79.1	Brunei	78.7	75.2
Singapore	19.2	10.9	Singapore	28.1	11.0	Singapore	38.1	31.8	Singapore	55.7	51.1	Saudi Arabia	60.0	65.4	ROC	78.1	74.5
Iran	17.8	10.1	Japan	25.5	10.0	Japan	37.5	31.3	Japan	45.0	41.3	Hong Kong	53.7	58.6	Hong Kong	69.1	65.9
Japan	16.5	9.4	Hong Kong	17.3	6.7	Hong Kong	30.5	25.5	Hong Kong	38.6	35.4	ROC	52.8	57.6	Korea	55.6	53.1
Turkiye	12.9	7.3	Iran	16.6	6.5	ROC	20.4	17.0	ROC	36.2	33.2	Japan	50.8	55.4	Japan	55.5	53.0
Fiji	12.5	7.1	Turkiye	14.6	5.7	Turkiye	18.1	15.1	Turkiye	24.3	22.3	Korea	36.8	40.2	Saudi Arabia	54.4	52.0
Hong Kong	10.3	5.8	Fiji	14.2	5.5	Iran	16.4	13.7	Korea	23.2	21.3	Iran	32.2	35.1	Turkiye	49.6	47.3
Afghanistan	8.0	4.5	Malaysia	11.7	4.6	Malaysia	14.9	12.5	Malaysia	21.9	20.1	Turkiye	30.0	32.7	Malaysia	36.4	34.8
Maldives	7.8	4.4	ROC	10.4	4.0	Fiji	14.1	11.8	Iran	20.1	18.4	Malaysia	27.0	29.4	Iran	36.3	34.6
Malaysia	7.7	4.3	Afghanistan	8.3	3.2	Korea	12.6	10.5	Fiji	14.7	13.5	Mongolia	15.7	17.1	Mongolia	24.8	23.7
ROC	5.0	2.9	Maldives	7.7	3.0	Maldives	12.1	10.1	Maldives	13.9	12.7	Fiji	15.0	16.4	China	24.1	23.0
Philippines	4.7	2.7	Mongolia	7.0	2.7	Afghanistan	8.6	7.2	Mongolia	9.5	8.7	Maldives	14.8	16.1	Sri Lanka	22.0	20.9
Mongolia	4.7	2.6	Korea	6.3	2.5	Mongolia	8.3	6.9	Thailand	9.1	8.4	Sri Lanka	14.8	16.1	Thailand	20.3	19.4
Sri Lanka	4.1	2.3	Philippines	5.9	2.3	Sri Lanka	6.6	5.5	Sri Lanka	8.9	8.2	Thailand	13.3	14.5	Maldives	18.6	17.8
Korea	3.7	2.1	Sri Lanka	5.2	2.0	Indonesia	6.6	5.5	Indonesia	8.1	7.4	Indonesia	10.8	11.7	Fiji	18.0	17.2
Indonesia	3.4	1.9	Indonesia	5.1	2.0	Thailand	6.3	5.3	Pakistan	7.1	6.5	China	9.7	10.6	Indonesia	16.5	15.7
Thailand	3.2	1.8	Thailand	3.9	1.5	Philippines	5.8	4.8	Philippines	6.9	6.4	Philippines	8.7	9.5	Bhutan	13.9	13.2
Bangladesh	3.0	1.7	Pakistan	3.0	1.2	Pakistan	4.6	3.8	Bhutan	4.4	4.0	Pakistan	8.1	8.8	Philippines	13.8	13.2
Cambodia	2.7	1.5	Bangladesh	2.3	0.9	Bhutan	3.0	2.5	China	4.0	3.7	Bhutan	7.7	8.4	India	12.3	11.7
Pakistan	2.4	1.4	Nepal	2.0	0.8	Nepal	2.8	2.3	India	3.7	3.4	India	6.6	7.2	Vietnam	12.1	11.5
Nepal	2.3	1.3	Bhutan	2.0	0.8	Bangladesh	2.6	2.2	Nepal	3.5	3.2	Vietnam	5.9	6.5	Pakistan	9.9	9.5
Vietnam	1.8	1.0	Vietnam	1.9	0.7	India	2.6	2.1	Bangladesh	3.3	3.1	Afghanistan	5.6	6.1	Bangladesh	9.8	9.4
India	1.7	1.0	India	1.8	0.7	Lao PDR	2.3	2.0	Vietnam	3.2	2.9	Bangladesh	5.1	5.5	Lao PDR	7.1	6.8
Bhutan	1.5	0.9	Cambodia	1.8	0.7	Cambodia	2.0	1.7	Lao PDR	3.0	2.7	Nepal	4.6	5.0	Nepal	6.4	6.2
Lao PDR	1.5	0.8	Lao PDR	1.8	0.7	China	1.9	1.6	Afghanistan	2.9	2.6	Lao PDR	4.2	4.6	Afghanistan	4.9	4.7
China	1.1	0.6	China	1.3	0.5	Vietnam	1.8	1.5	Cambodia	2.0	1.8	Cambodia	3.0	3.3	Cambodia	4.7	4.5
Myanmar (region)	0.7	0.4	Myanmar (region)	1.0	0.4	Myanmar (region)	1.0	0.8	Myanmar (region)	1.4	1.3	Myanmar (region)	2.0	2.2	Myanmar (region)	3.0	2.8
APO21	4.9	2.8	APO21	5.9	2.3	APO21	8.0	6.7	APO21	9.9	9.1	APO21	13.1	14.3	APO21	19.3	18.4
Asia28	3.5	2.0	Asia28	4.4	1.7	Asia28	5.5	4.6	Asia28	7.5	6.9	Asia28	12.1	13.2	Asia28	21.7	20.7
East Asia	3.4	1.9	East Asia	4.3	1.7	East Asia	5.9	4.9	East Asia	8.4	7.7	East Asia	14.4	15.7	East Asia	29.6	28.2
SAARC	2.1	1.2	SAARC	2.2	0.8	SAARC	3.0	2.5	SAARC	4.2	3.8	SAARC	7.0	7.6	SAARC	12.4	11.8
ASEAN	3.4	1.9	ASEAN	4.6	1.8	ASEAN	5.8	4.8	ASEAN	7.8	7.1	ASEAN	10.7	11.7	ASEAN	16.9	16.1
ASEAN6	4.2	2.4	ASEAN6	5.8	2.3	ASEAN6	7.5	6.3	ASEAN6	10.0	9.2	ASEAN6	13.4	14.6	ASEAN6	20.1	19.1
CLMV	1.6	0.9	CLMV	1.7	0.7	CLMV	1.7	1.4	CLMV	2.8	2.5	CLMV	4.8	5.2	CLMV	9.4	9.0
IPEF	11.4	6.4	IPEF	12.9	5.1	IPEF	15.5	13.0	IPEF	18.7	17.1	IPEF	22.2	24.2	IPEF	29.8	28.5
RCEP	3.8	2.1	RCEP	4.7	1.8	RCEP	6.0	5.0	RCEP	8.3	7.6	RCEP	13.5	14.7	RCEP	25.9	24.7
(reference)			(reference)			(reference)			(reference)			(reference)			(reference)		
Australia	39.1	22.2	Australia	45.3	17.7	Australia	49.8	41.6	Australia	62.8	57.7	Australia	72.2	78.7	Australia	80.2	76.6
France	28.9	16.4	France	43.0	16.8	France	57.7	48.2	France	70.4	64.6	France	77.3	84.3	France	82.0	78.3
									Germany	71.1	65.3	Germany	77.6	84.7	Germany	86.7	82.7
									Italy	69.7	64.0	Italy	69.7	76.0	Italy	70.3	67.0
									New Zealand	42.3	38.8	New Zealand	48.4	52.8	New Zealand	53.1	50.6
UK	29.4	16.7	UK	38.4	15.0	UK	47.5	39.7	UK	62.7	57.5	UK	69.9	76.2	UK	74.3	70.9
US	46.8	26.6	US	54.1	21.1	US	62.8	52.5	US	74.9	68.7	US	92.5	100.8	US	107.1	102.2
									EU15	66.2	60.7	EU15	72.2	78.7	EU15	78.1	74.6

Unit: USD.

Source: APO Productivity Database 2026.

Table 9.11 Per-Hour Labor Productivity Growth, 1990–2024

—Growth in GDP at constant basic prices per hour, using the 2021 PPP

1990–1995		1995–2000		2000–2005		2005–2010		2010–2015		2015–2019		2019–2024		2010–2024	
China	9.0	Korea	5.7	Afghanistan	8.4	China	11.3	China	8.0	Vietnam	6.1	China	5.8	China	6.5
Malaysia	6.5	ROC	5.5	Vietnam	7.7	Bhutan	7.4	Bhutan	6.6	Myanmar	6.0	Vietnam	4.5	Vietnam	5.1
Korea	6.5	China	5.5	China	6.4	India	7.1	Lao PDR	6.2	Bangladesh	5.8	India	4.4	Bangladesh	4.7
Thailand	6.3	Myanmar	5.4	Cambodia	5.6	Mongolia	6.0	Mongolia	6.1	China	5.5	Bangladesh	3.9	India	4.5
Indonesia	6.3	Vietnam	5.4	Thailand	5.2	Sri Lanka	5.5	Sri Lanka	5.8	Philippines	5.2	ROC	3.7	Bhutan	4.2
Vietnam	6.0	Turkiye	4.5	Sri Lanka	4.6	Afghanistan	5.2	Cambodia	5.3	India	4.6	Turkiye	3.0	Lao PDR	3.8
ROC	5.9	India	4.1	India	4.6	Iran	5.1	Vietnam	4.9	Korea	4.4	Korea	2.9	Turkiye	3.6
Pakistan	4.8	Mongolia	4.0	Korea	4.5	Bangladesh	4.9	Bangladesh	4.7	Thailand	4.3	Indonesia	2.7	Philippines	3.3
Sri Lanka	4.8	Pakistan	3.9	Iran	4.4	Korea	4.7	Myanmar	4.6	Lao PDR	4.1	Singapore	2.5	Mongolia	3.3
Hong Kong	4.8	Singapore	3.7	Bhutan	4.0	Vietnam	4.6	Afghanistan	4.5	Nepal	3.9	Mongolia	2.4	Cambodia	3.2
Singapore	3.9	Bhutan	3.6	Mongolia	4.0	ROC	3.7	India	4.4	Cambodia	3.7	Bhutan	2.4	Indonesia	3.1
Bhutan	3.6	Bangladesh	3.2	ROC	3.8	Hong Kong	3.5	Thailand	4.4	Turkiye	3.6	Iran	2.3	Thailand	3.0
Iran	3.3	Lao PDR	3.1	Singapore	3.7	Lao PDR	3.4	Turkiye	4.1	Bhutan	3.4	Malaysia	1.9	Korea	2.9
India	3.0	Cambodia	3.0	Bangladesh	3.6	Nepal	3.3	Indonesia	4.0	Maldives	3.4	Hong Kong	1.7	Sri Lanka	2.8
Nepal	2.4	Philippines	2.8	Myanmar	3.4	Myanmar	3.2	Philippines	3.7	Singapore	3.4	Philippines	1.3	ROC	2.8
Myanmar	2.2	Nepal	2.1	Lao PDR	3.4	Philippines	2.6	Nepal	3.3	Pakistan	3.1	Lao PDR	1.1	Myanmar	2.8
Lao PDR	1.7	Japan	2.0	Indonesia	3.3	Cambodia	2.6	Fiji	2.6	ROC	2.8	Cambodia	0.9	Singapore	2.6
Japan	1.6	Maldives	1.6	Malaysia	3.2	Indonesia	2.4	Maldives	2.3	Sri Lanka	2.5	Thailand	0.6	Nepal	2.4
Turkiye	1.5	Thailand	1.1	Hong Kong	3.1	Maldives	2.4	Malaysia	2.2	Malaysia	2.3	Nepal	0.2	Malaysia	2.2
Bangladesh	1.4	Malaysia	1.1	Turkiye	2.6	Thailand	2.4	Singapore	2.1	Indonesia	2.3	Japan	0.2	Hong Kong	1.8
Maldives	1.1	Sri Lanka	1.1	Pakistan	2.6	Singapore	1.5	Hong Kong	2.0	Fiji	2.1	Sri Lanka	0.1	Maldives	1.6
Philippines	0.8	Fiji	0.8	Nepal	2.3	Turkiye	1.5	ROC	1.9	Hong Kong	1.7	Pakistan	0.0	Pakistan	1.5
Saudi Arabia	0.4	Iran	0.7	Philippines	2.0	Malaysia	1.0	Korea	1.8	Afghanistan	1.6	Brunei	–0.2	Fiji	1.3
Fiji	0.0	Saudi Arabia	0.7	Japan	1.7	Japan	0.7	Saudi Arabia	1.6	Iran	1.1	Maldives	–0.4	Iran	0.8
Brunei	–1.1	Hong Kong	0.0	Fiji	1.5	Pakistan	0.1	Pakistan	1.6	Mongolia	0.7	Fiji	–0.5	Japan	0.6
Mongolia	–1.2	Brunei	–0.7	Saudi Arabia	–0.5	Fiji	–1.2	Japan	1.3	Japan	0.4	Myanmar	–1.6	Saudi Arabia	–0.7
Cambodia	–3.2	Indonesia	–2.3	Maldives	–1.2	Brunei	–1.7	Iran	–0.8	Saudi Arabia	–0.5	Saudi Arabia	–3.2	Afghanistan	–1.0
Afghanistan	–13.7	Afghanistan	–8.3	Brunei	–1.7	Saudi Arabia	–1.9	Brunei	–0.9	Brunei	–2.3	Afghanistan	–8.6	Brunei	–1.1
(region)		(region)		(region)		(region)		(region)		(region)		(region)		(region)	
APO21	2.6	APO21	1.8	APO21	2.7	APO21	2.9	APO21	2.8	APO21	2.9	APO21	2.5	APO21	2.7
Asia28	3.9	Asia28	2.5	Asia28	3.6	Asia28	5.7	Asia28	4.9	Asia28	4.0	Asia28	3.7	Asia28	4.2
East Asia	4.3	East Asia	2.7	East Asia	3.5	East Asia	7.4	East Asia	6.1	East Asia	4.4	East Asia	4.8	East Asia	5.1
SAARC	2.9	SAARC	3.9	SAARC	4.2	SAARC	6.1	SAARC	4.1	SAARC	4.5	SAARC	3.7	SAARC	4.1
ASEAN	5.4	ASEAN	0.5	ASEAN	3.9	ASEAN	2.6	ASEAN	3.9	ASEAN	3.6	ASEAN	2.3	ASEAN	3.2
ASEAN6	5.6	ASEAN6	0.2	ASEAN6	3.5	ASEAN6	2.3	ASEAN6	3.7	ASEAN6	2.9	ASEAN6	2.0	ASEAN6	2.9
CLMV	4.6	CLMV	5.1	CLMV	6.5	CLMV	4.5	CLMV	4.7	CLMV	6.2	CLMV	3.8	CLMV	4.8
IPEF	1.6	IPEF	2.1	IPEF	1.9	IPEF	1.6	IPEF	2.0	IPEF	2.2	IPEF	2.1	IPEF	2.1
RCEP	4.3	RCEP	2.2	RCEP	3.5	RCEP	6.2	RCEP	5.6	RCEP	4.1	RCEP	4.1	RCEP	4.6
(reference)		(reference)		(reference)		(reference)		(reference)		(reference)		(reference)		(reference)	
Australia	2.3	Australia	2.4	Australia	1.8	Australia	0.9	Australia	1.7	Australia	–0.1	Australia	0.5	Australia	0.8
France	2.2	France	1.8	France	1.5	France	0.4	France	1.0	France	0.6	France	–0.3	France	0.4
		Germany	1.8	Germany	1.4	Germany	0.4	Germany	1.0	Germany	1.1	Germany	0.3	Germany	0.8
		Italy	1.1	Italy	0.2	Italy	–0.2	Italy	0.2	Italy	0.1	Italy	–0.1	Italy	0.1
New Zealand	0.9	New Zealand	1.8	New Zealand	1.2	New Zealand	1.5	New Zealand	1.0	New Zealand	–0.1	New Zealand	0.8	New Zealand	0.7
UK	2.6	UK	3.0	UK	1.5	UK	0.6	UK	0.3	UK	0.7	UK	0.3	UK	0.4
US	1.4	US	2.1	US	2.5	US	1.7	US	0.4	US	1.0	US	1.8	US	1.1
				EU15	1.1	EU15	0.6	EU15	0.8	EU15	0.6	EU15	0.3	EU15	0.6

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

Table 9.12 TFP Growth, 1990–2024

—Growth in total factor productivity

1990–1995	1995–2000	2000–2005	2005–2010	2010–2015	2015–2019	2019–2024	2010–2024
China 5.0	Mongolia 3.5	Afghanistan 9.0	China 4.2	Mongolia 2.9	Mongolia 2.1	India 2.5	India 1.8
Vietnam 3.4	Myanmar 2.7	Mongolia 3.1	Bhutan 3.5	Fiji 2.5	China 2.0	Iran 2.1	Mongolia 1.7
Sri Lanka 3.3	ROC 2.6	India 2.5	Afghanistan 2.7	Lao PDR 2.2	Vietnam 2.0	ROC 1.6	China 1.4
ROC 3.3	Pakistan 2.0	Thailand 2.4	India 2.6	Nepal 2.1	India 1.9	Vietnam 1.3	ROC 1.4
Pakistan 2.1	Korea 1.9	Lao PDR 2.3	Sri Lanka 2.3	Afghanistan 1.7	Thailand 1.7	Singapore 1.1	Fiji 1.2
Iran 1.9	India 1.8	Cambodia 2.2	Hong Kong 2.1	Malaysia 1.5	Korea 1.7	Korea 0.9	Vietnam 1.0
Hong Kong 1.7	Cambodia 1.8	Iran 1.9	Singapore 2.1	China 1.4	Nepal 1.6	China 0.9	Malaysia 0.9
India 1.7	China 1.8	Hong Kong 1.9	ROC 2.0	Turkiye 1.2	ROC 1.6	Hong Kong 0.9	Hong Kong 0.9
Korea 1.6	Saudi Arabia 1.4	Malaysia 1.8	Philippines 1.5	India 1.1	Pakistan 1.4	Turkiye 0.8	Korea 0.9
Indonesia 1.1	Sri Lanka 1.2	Philippines 1.8	Korea 1.2	Japan 1.0	Myanmar 1.3	Malaysia 0.4	Singapore 0.8
Singapore 0.9	Iran 0.9	ROC 1.7	Bangladesh 1.1	Pakistan 1.0	Fiji 1.3	Indonesia 0.3	Pakistan 0.7
Malaysia 0.7	Vietnam 0.8	Sri Lanka 1.7	Nepal 1.0	ROC 1.0	Lao PDR 1.2	Philippines 0.2	Philippines 0.7
Myanmar 0.7	Brunei 0.8	Singapore 1.3	Indonesia 0.9	Philippines 0.9	Hong Kong 1.0	Pakistan 0.0	Turkiye 0.6
Lao PDR –0.1	Bhutan 0.6	Pakistan 1.2	Lao PDR 0.5	Hong Kong 0.9	Malaysia 1.0	Mongolia 0.0	Nepal 0.6
Philippines –0.2	Singapore 0.6	China 1.2	Myanmar 0.4	Saudi Arabia 0.8	Singapore 0.9	Saudi Arabia 0.0	Lao PDR 0.5
Japan –0.3	Japan 0.3	Vietnam 1.1	Thailand 0.4	Sri Lanka 0.3	Philippines 0.9	Fiji –0.2	Saudi Arabia 0.4
Bhutan –0.4	Philippines 0.3	Saudi Arabia 1.0	Malaysia 0.2	Singapore 0.3	Bangladesh 0.7	Japan –0.3	Japan 0.2
Mongolia –0.4	Turkiye 0.1	Myanmar 0.7	Iran 0.0	Bangladesh 0.2	Afghanistan 0.7	Brunei –0.7	Thailand 0.2
Bangladesh –0.5	Bangladesh 0.0	Korea 0.6	Fiji 0.0	Korea 0.2	Maldives 0.6	Maldives –0.7	Iran 0.2
Nepal –0.6	Fiji –0.1	Japan 0.6	Japan –0.3	Thailand 0.2	Saudi Arabia 0.5	Bangladesh –0.7	Bangladesh 0.1
Turkiye –0.9	Lao PDR –0.1	Fiji 0.4	Pakistan –0.5	Cambodia 0.2	Iran 0.3	Bhutan –0.9	Indonesia –0.2
Saudi Arabia –1.0	Malaysia –0.7	Bangladesh 0.4	Maldives –0.6	Vietnam –0.2	Cambodia 0.1	Thailand –1.0	Maldives –0.3
Cambodia –1.2	Nepal –1.1	Turkiye 0.3	Cambodia –0.7	Bhutan –0.6	Brunei 0.0	Nepal –1.6	Cambodia –0.7
Thailand –1.3	Hong Kong –1.5	Indonesia 0.3	Saudi Arabia –1.5	Maldives –0.7	Japan 0.0	Lao PDR –1.7	Bhutan –0.7
Fiji –1.3	Maldives –1.7	Nepal –0.4	Mongolia –1.5	Indonesia –0.7	Indonesia –0.1	Cambodia –2.1	Brunei –0.8
Brunei –1.7	Thailand –3.2	Brunei –0.9	Brunei –1.9	Myanmar –1.2	Turkiye –0.3	Sri Lanka –2.9	Myanmar –1.1
Maldives –2.1	Indonesia –4.5	Maldives –0.9	Vietnam –2.0	Brunei –1.5	Bhutan –0.6	Myanmar –3.0	Sri Lanka –1.5
Afghanistan –10.7	Afghanistan –8.0	Bhutan –2.9	Turkiye –2.1	Iran –1.8	Sri Lanka –2.1	Afghanistan –9.1	Afghanistan –2.4
(region)	(region)	(region)	(region)	(region)	(region)	(region)	(region)
APO21 0.5	APO21 0.0	APO21 1.2	APO21 0.8	APO21 0.7	APO21 1.0	APO21 1.0	APO21 0.9
Asia28 1.3	Asia28 0.7	Asia28 1.4	Asia28 2.1	Asia28 1.2	Asia28 1.5	Asia28 1.0	Asia28 1.2
East Asia 1.4	East Asia 0.8	East Asia 1.0	East Asia 3.0	East Asia 1.7	East Asia 1.9	East Asia 1.0	East Asia 1.5
SAARC 1.4	SAARC 1.7	SAARC 2.1	SAARC 1.9	SAARC 0.9	SAARC 1.6	SAARC 1.8	SAARC 1.4
ASEAN 1.2	ASEAN –2.0	ASEAN 1.5	ASEAN 0.7	ASEAN 0.2	ASEAN 0.9	ASEAN 0.2	ASEAN 0.4
ASEAN6 0.8	ASEAN6 –2.7	ASEAN6 1.2	ASEAN6 0.9	ASEAN6 0.0	ASEAN6 0.6	ASEAN6 0.1	ASEAN6 0.2
CLMV 2.5	CLMV 1.3	CLMV 1.2	CLMV –1.6	CLMV –0.2	CLMV 1.9	CLMV 0.6	CLMV 0.7
(reference)	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
US 0.7	US 1.0	US 1.1	US 0.2	US 0.3	US 0.4	US 0.9	US 0.5

Unit: Percentage (average annual growth rate). Source: APO Productivity Database 2026.

Table 9.13 Economic Growth and Contributions of Labor, Capital, and TFP, 1970–2024

		Out-put	Labor			Capital			TFP			Out-put	Labor			Capital			TFP						
			Hours Worked	Labor Quality		ICT	Non-ICT						Hours Worked	Labor Quality		ICT	Non-ICT								
Afghanistan	1970–1975	2.6	1.3	(50)	−0.2	(−6)	0.0	(0)	2.0	(77)	−0.5	(−21)	Bangladesh	1970–1975	−4.1	1.0	(−23)	0.1	(−2)	0.0	(0)	−0.5	(11)	−4.7	(114)
	1975–1980	0.7	0.2	(29)	−0.2	(−29)	0.0	(0)	5.8	(786)	−5.1	(−686)		1975–1980	4.3	1.5	(35)	0.8	(19)	0.0	(1)	0.9	(22)	1.0	(22)
	1980–1985	2.2	−1.8	(−80)	−0.4	(−18)	0.0	(0)	2.6	(119)	1.7	(79)		1980–1985	3.3	1.3	(39)	0.5	(14)	0.1	(2)	2.2	(66)	−0.7	(−21)
	1985–1990	−5.3	−0.1	(2)	−0.3	(6)	0.0	(0)	0.2	(−4)	−5.1	(97)		1985–1990	4.7	1.2	(27)	0.3	(7)	0.1	(2)	2.3	(49)	0.7	(16)
	1990–1995	−5.6	4.9	(−87)	−0.4	(7)	0.0	(0)	0.6	(−11)	−10.7	(192)		1990–1995	3.9	1.2	(31)	0.5	(13)	0.1	(3)	2.6	(66)	−0.5	(−12)
	1995–2000	−5.2	2.2	(−42)	−0.4	(7)	0.0	(0)	0.9	(−18)	−8.0	(153)		1995–2000	4.3	0.5	(12)	0.1	(3)	0.2	(4)	3.5	(82)	0.0	(0)
	2000–2005	12.5	3.2	(26)	−0.3	(−3)	0.0	(0)	0.6	(4)	9.0	(72)		2000–2005	6.2	1.1	(18)	0.4	(6)	0.4	(7)	3.8	(62)	0.4	(6)
	2005–2010	7.4	1.5	(20)	1.1	(14)	0.0	(0)	2.1	(28)	2.7	(37)		2005–2010	7.2	0.9	(12)	0.3	(4)	0.7	(10)	4.2	(58)	1.1	(16)
	2010–2015	5.2	0.5	(9)	0.5	(10)	0.0	(0)	2.5	(48)	1.7	(33)		2010–2015	7.3	0.9	(13)	0.8	(11)	0.5	(6)	4.8	(66)	0.2	(3)
	2015–2019	2.8	0.6	(21)	−0.2	(−7)	0.0	(−1)	1.7	(62)	0.7	(25)		2015–2019	7.2	0.4	(6)	0.4	(6)	0.4	(6)	5.2	(72)	0.7	(10)
	2019–2024	−5.5	2.0	(−36)	0.1	(−2)	0.0	(0)	1.4	(−26)	−9.1	(164)		2019–2024	5.0	0.3	(6)	0.1	(3)	0.1	(1)	5.2	(104)	−0.7	(−14)
1970–2024	1.0	1.3	(127)	−0.1	(−5)	0.0	(1)	1.9	(179)	−2.1	(−201)	1970–2024	4.4	1.0	(22)	0.4	(9)	0.2	(5)	3.1	(70)	−0.2	(−5)		
Bhutan	1970–1975	4.2	1.6	(37)	0.5	(12)	0.0	(0)	2.9	(69)	−0.8	(−18)	Brunei	1970–1975	5.6	0.5	(10)	0.3	(5)	0.0	(0)	4.5	(82)	0.2	(4)
	1975–1980	7.9	1.5	(19)	0.1	(1)	0.0	(0)	2.3	(29)	4.0	(50)		1975–1980	12.1	0.8	(6)	0.3	(3)	0.1	(1)	1.4	(11)	9.5	(78)
	1980–1985	6.2	1.3	(22)	0.3	(5)	0.0	(0)	3.1	(51)	1.4	(23)		1980–1985	−4.2	0.4	(−10)	0.2	(−6)	0.0	(−1)	−0.9	(22)	−4.0	(94)
	1985–1990	7.5	1.3	(17)	1.9	(26)	0.0	(0)	2.8	(38)	1.5	(20)		1985–1990	−2.5	1.0	(−39)	0.5	(−18)	0.2	(−7)	0.4	(14)	−4.5	(178)
	1990–1995	2.3	−0.6	(−27)	0.9	(38)	0.2	(9)	2.2	(95)	−0.4	(−16)		1990–1995	2.7	0.8	(29)	0.2	(9)	0.3	(10)	3.1	(114)	−1.7	(−61)
	1995–2000	6.2	1.1	(18)	0.6	(9)	0.8	(13)	3.2	(51)	0.6	(9)		1995–2000	2.4	0.6	(26)	0.1	(4)	0.1	(4)	0.8	(34)	0.8	(32)
	2000–2005	7.0	1.1	(16)	0.9	(13)	0.2	(3)	7.7	(110)	−2.9	(−42)		2000–2005	1.0	0.5	(52)	0.2	(19)	0.1	(6)	1.1	(105)	−0.9	(−82)
	2005–2010	9.7	0.7	(8)	0.9	(10)	0.5	(5)	4.0	(41)	3.5	(36)		2005–2010	0.0	0.4	(2056)	0.1	(716)	0.1	(703)	1.2	(6426)	−1.9	(−9801)
	2010–2015	5.8	−0.3	(−5)	1.2	(21)	0.1	(2)	5.4	(93)	−0.6	(−11)		2010–2015	0.4	0.3	(68)	−0.1	(−17)	0.1	(26)	1.6	(390)	−1.5	(−368)
	2015–2019	5.4	0.7	(14)	0.9	(17)	0.0	(0)	4.3	(80)	−0.6	(−11)		2015–2019	2.3	1.3	(58)	−0.2	(−7)	0.0	(0)	1.1	(47)	0.0	(1)
	2019–2024	1.8	−0.3	(−16)	0.8	(44)	0.8	(44)	1.4	(76)	−0.9	(−49)		2019–2024	−0.6	−0.1	(19)	0.2	(−39)	0.0	(−3)	−0.1	(12)	−0.7	(111)
1970–2024	5.8	0.7	(13)	0.8	(14)	0.3	(4)	3.6	(61)	0.5	(8)	1970–2024	1.7	0.6	(34)	0.2	(11)	0.1	(6)	1.3	(74)	−0.4	(−24)		
Cambodia	1970–1975	−5.4	−0.3	(5)	0.1	(−2)	0.0	(1)	2.6	(−48)	−7.9	(145)	China	1970–1975	4.2	1.6	(39)	0.4	(10)	0.0	(1)	2.8	(67)	−0.7	(−17)
	1975–1980	−7.4	−1.5	(21)	0.1	(−2)	0.0	(0)	0.5	(−7)	−6.5	(88)		1975–1980	4.9	1.6	(33)	0.3	(5)	0.0	(1)	2.4	(50)	0.5	(11)
	1980–1985	1.4	0.9	(67)	0.2	(11)	0.0	(0)	0.4	(29)	−0.1	(−8)		1980–1985	8.2	1.9	(24)	0.5	(7)	0.1	(1)	2.3	(28)	3.4	(41)
	1985–1990	7.3	1.3	(17)	0.3	(5)	0.0	(0)	1.1	(14)	4.6	(63)		1985–1990	6.1	1.3	(22)	0.4	(7)	0.1	(1)	3.1	(51)	1.2	(19)
	1990–1995	3.6	2.5	(69)	0.5	(13)	0.0	(0)	1.8	(51)	−1.2	(−34)		1990–1995	10.0	0.5	(5)	1.0	(10)	0.1	(1)	3.4	(34)	5.0	(50)
	1995–2000	8.0	2.4	(30)	0.7	(9)	0.0	(0)	3.1	(39)	1.8	(23)		1995–2000	7.5	0.9	(12)	0.4	(5)	0.2	(3)	4.2	(56)	1.8	(23)
	2000–2005	8.5	1.3	(16)	0.5	(6)	0.0	(0)	4.4	(52)	2.2	(26)		2000–2005	8.3	0.9	(10)	0.8	(9)	0.7	(9)	4.8	(58)	1.2	(14)
	2005–2010	7.0	1.8	(26)	0.4	(5)	0.0	(0)	5.6	(79)	−0.7	(−10)		2005–2010	11.1	−0.1	(−1)	0.9	(8)	0.5	(4)	5.7	(51)	4.2	(38)
	2010–2015	7.2	0.8	(11)	1.4	(20)	0.0	(1)	4.8	(67)	0.2	(2)		2010–2015	7.1	−0.4	(−6)	0.7	(9)	0.5	(7)	4.9	(69)	1.4	(20)
	2015–2019	7.3	1.6	(22)	0.3	(3)	0.0	(1)	5.4	(73)	0.1	(1)		2015–2019	6.0	0.2	(4)	−0.6	(−11)	0.6	(9)	3.9	(64)	2.0	(33)
	2019–2024	3.6	1.2	(35)	0.0	(−1)	0.0	(1)	4.4	(123)	−2.1	(−58)		2019–2024	4.4	−0.6	(−14)	0.2	(4)	0.8	(18)	3.1	(71)	0.9	(21)
1970–2024	3.7	1.1	(30)	0.4	(11)	0.0	(0)	3.1	(83)	−0.9	(−24)	1970–2024	7.1	0.7	(10)	0.5	(7)	0.3	(5)	3.7	(52)	1.9	(27)		
ROC	1970–1975	9.8	1.8	(19)	0.1	(1)	0.2	(3)	3.6	(37)	4.0	(41)	Fiji	1970–1975	5.6	1.8	(32)	0.9	(16)	0.0	(0)	2.9	(51)	0.1	(2)
	1975–1980	11.2	1.7	(16)	1.1	(10)	0.2	(2)	3.4	(30)	4.8	(43)		1975–1980	3.7	1.5	(42)	1.4	(37)	0.0	(1)	3.1	(84)	−2.3	(−63)
	1980–1985	7.9	1.2	(15)	0.2	(3)	0.3	(3)	2.6	(33)	3.6	(45)		1980–1985	0.7	1.2	(171)	1.1	(150)	0.1	(8)	1.7	(241)	−3.3	(−470)
	1985–1990	9.6	1.0	(10)	0.8	(8)	0.3	(3)	2.5	(26)	5.0	(53)		1985–1990	3.7	1.2	(33)	1.4	(37)	0.2	(5)	0.9	(24)	0.0	(1)
	1990–1995	7.6	1.0	(13)	0.6	(8)	0.3	(3)	2.4	(32)	3.3	(44)		1990–1995	2.6	1.2	(46)	1.4	(52)	0.1	(3)	1.3	(48)	−1.3	(−49)
	1995–2000	6.0	0.3	(4)	0.6	(10)	0.6	(9)	2.0	(34)	2.6	(42)		1995–2000	2.0	0.7	(34)	0.7	(34)	0.0	(2)	0.7	(35)	−0.1	(−4)
	2000–2005	4.1	0.1	(3)	0.8	(21)	0.2	(6)	1.2	(29)	1.7	(42)		2000–2005	2.0	0.2	(11)	0.5	(27)	0.1	(4)	0.7	(38)	0.4	(20)
	2005–2010	4.2	0.2	(5)	0.9	(22)	0.0	(1)	1.0	(23)	2.0	(49)		2005–2010	0.7	0.8	(114)	0.4	(51)	0.1	(11)	−0.5	(−72)	0.0	(−5)
	2010–2015	2.9	0.5	(17)	0.7	(22)	0.1	(2)	0.7	(25)	1.0	(33)		2010–2015	3.7	0.5	(13)	0.1	(2)	0.2	(5)	0.4	(12)	2.5	(68)
	2015–2019	2.9	0.1	(3)	0.4	(14)	0.1	(2)	0.8	(26)	1.6	(55)		2015–2019	2.7	0.3	(10)	0.3	(13)	0.2	(8)	0.6	(23)	1.3	(47)
	2019–2024	3.6	0.0	(−1)	0.7	(19)	0.1	(2)	1.3	(37)	1.6	(44)		2019–2024	1.1	0.8	(68)	0.0	(4)	0.1	(13)	0.3	(31)	−0.2	(−16)
1970–2024	6.4	0.7	(11)	0.6	(10)	0.2	(3)	2.0	(31)	2.9	(45)	1970–2024	2.6	0.9	(36)	0.7	(29)	0.1	(4)	1.1	(43)	−0.3	(−11)		
Hong Kong	1970–1975	6.5	2.1	(32)	0.0	(0)	0.2	(2)	2.8	(43)	1.5	(23)	India	1970–1975	2.8	1.7	(60)	0.3	(11)	0.1	(2)	1.0	(35)	−0.2	(−9)
	1975–1980	11.3	1.9	(17)	0.6	(5)	0.2	(2)	3.7	(33)	4.9	(43)		1975–1980	3.1	1.8	(58)	0.5	(17)	0.1	(2)	1.3	(42)	−0.6	(−19)
	1980–1985	5.4	0.9	(16)	0.3	(6)	0.3	(5)	3.1	(57)	0.8	(16)		1980–1985	5.0	1.5	(30)	0.8	(15)	0.1	(2)	1.4	(29)	1.2	(24)
	1985–1990	8.0	0.2	(2)	0.7	(9)	0.3	(4)	2.4	(30)	4.4	(55)		1985–1990	5.8	1.4	(24)	0.9	(15)	0.3	(5)	1.6	(27)	1.7	(30)
	1990–1995	5.9	0.6	(10)	0.6	(10)	0.4	(6)	2.7	(46)	1.7	(28)		1990–1995	5.0	1.3	(26)	0.4	(8)	0.2	(5)	1.4	(28)	1.7	(33)
	1995–2000	2.8	1.5	(52)	0.3	(11)	0.6	(22)	1.9	(68)	−1.5	(−53)		1995–2000	5.8	1.0	(18)	0.9	(16)	0.3	(6)	1.7	(29)	1.8	(32)
	2000–2005	4.1	0.5	(13)	0.3	(7)	0.3	(8)	1.0	(25)	1.9	(47)		2000–2005	6.6	1.2	(18)	0.5	(8)	0.3	(5)	2.0	(31)	2.5	(38)
	2005–2010	3.9	0.2	(5)	0.3	(7)	0.4	(10)	0.9	(24)	2.1	(54)		2005–2010	8.0	0.5									

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		Out-put	Labor		Capital		TFP			Out-put	Labor		Capital		TFP
			Hours Worked	Labor Quality	ICT	Non-ICT					Hours Worked	Labor Quality	ICT	Non-ICT	
Japan	1970–1975	4.4	−0.4 (−10)	1.0 (23)	0.2 (5)	2.7 (61)	0.9 (21)	Korea	1970–1975	9.5	1.6 (16)	0.2 (3)	0.1 (1)	4.3 (45)	3.3 (35)
	1975–1980	4.7	0.7 (14)	0.8 (17)	0.2 (3)	1.5 (33)	1.5 (32)		1975–1980	7.8	1.3 (17)	0.5 (7)	0.3 (4)	6.0 (78)	−0.5 (−6)
	1980–1985	4.3	0.5 (11)	0.6 (14)	0.4 (8)	1.5 (35)	1.4 (32)		1980–1985	9.1	1.1 (12)	1.7 (19)	0.4 (4)	3.8 (42)	2.1 (23)
	1985–1990	4.9	0.4 (8)	0.6 (12)	0.5 (10)	1.6 (33)	1.8 (37)		1985–1990	10.0	1.6 (16)	1.4 (14)	0.5 (5)	4.4 (44)	2.0 (20)
	1990–1995	1.2	−0.2 (−20)	0.4 (35)	0.3 (21)	1.0 (85)	−0.3 (−21)		1990–1995	8.4	1.0 (12)	1.6 (19)	0.4 (5)	3.8 (46)	1.6 (19)
	1995–2000	1.0	−0.6 (−54)	0.4 (39)	0.3 (33)	0.5 (52)	0.3 (30)		1995–2000	5.7	0.0 (0)	0.7 (12)	0.5 (10)	2.6 (45)	1.9 (33)
	2000–2005	1.1	−0.3 (−28)	0.5 (41)	0.2 (20)	0.2 (17)	0.6 (51)		2000–2005	5.0	0.2 (4)	1.2 (25)	0.4 (8)	2.5 (50)	0.6 (13)
	2005–2010	0.0	−0.4 (−23699)	0.4 (25033)	0.1 (8541)	0.1 (7186)	−0.3 (−16960)		2005–2010	4.4	−0.1 (−3)	1.0 (22)	0.1 (3)	2.2 (50)	1.2 (28)
	2010–2015	1.2	0.0 (−2)	0.2 (15)	0.2 (13)	−0.1 (−9)	1.0 (82)		2010–2015	3.1	0.6 (21)	0.6 (19)	0.1 (3)	1.6 (51)	0.2 (7)
	2015–2019	0.7	0.1 (20)	0.1 (16)	0.3 (37)	0.2 (27)	0.0 (0)		2015–2019	3.0	−0.7 (−23)	0.4 (14)	0.1 (3)	1.5 (51)	1.7 (55)
Lao PDR	1970–1975	0.2	0.0 (5)	0.3 (137)	0.3 (139)	0.0 (4)	−0.3 (−184)	Malaysia	1970–1975	2.2	−0.4 (−18)	0.4 (18)	0.1 (4)	1.1 (53)	0.9 (42)
	1975–1980	2.2	0.0 (−1)	0.5 (22)	0.3 (12)	0.9 (39)	0.6 (28)		1975–1980	6.3	0.6 (9)	0.9 (14)	0.3 (5)	3.1 (50)	1.4 (22)
	1980–1985	4.1	1.0 (24)	0.1 (3)	0.0 (0)	2.2 (55)	0.7 (18)		1980–1985	7.5	1.3 (18)	0.4 (5)	0.0 (1)	3.6 (48)	2.2 (29)
	1985–1990	1.9	0.1 (7)	0.2 (8)	0.0 (0)	1.5 (78)	0.1 (6)		1985–1990	7.7	1.3 (17)	0.8 (10)	0.1 (1)	4.1 (53)	1.5 (19)
	1990–1995	6.8	0.5 (8)	0.2 (3)	0.1 (1)	2.9 (42)	3.2 (47)		1990–1995	5.0	1.3 (25)	0.8 (17)	0.1 (2)	4.9 (99)	−2.1 (−43)
	1995–2000	3.4	1.7 (50)	0.1 (4)	0.1 (2)	2.9 (85)	−1.4 (−42)		1995–2000	6.5	1.3 (20)	0.7 (11)	0.2 (3)	2.4 (37)	1.9 (29)
	2000–2005	5.3	1.6 (30)	0.1 (3)	0.2 (4)	3.4 (65)	−0.1 (−1)		2000–2005	9.2	1.0 (11)	1.1 (12)	0.4 (5)	6.0 (65)	0.7 (8)
	2005–2010	5.6	1.1 (19)	0.5 (9)	0.1 (2)	4.1 (73)	−0.1 (−2)		2005–2010	5.0	1.3 (26)	0.6 (11)	0.5 (10)	3.3 (66)	−0.7 (−13)
	2010–2015	5.7	0.9 (16)	0.4 (7)	0.1 (1)	2.0 (35)	2.3 (40)		2010–2015	5.3	0.7 (13)	0.8 (16)	0.8 (15)	1.2 (22)	1.8 (34)
	2015–2019	5.8	0.9 (16)	0.8 (13)	0.2 (3)	3.5 (60)	0.5 (9)		2015–2019	3.8	1.0 (26)	0.5 (12)	0.5 (14)	1.7 (44)	0.2 (5)
Maldives	1970–1975	8.0	0.6 (8)	0.6 (7)	0.1 (1)	4.4 (55)	2.2 (28)	Mongolia	1970–1975	5.1	1.1 (21)	0.4 (8)	0.4 (9)	1.7 (34)	1.5 (29)
	1975–1980	6.1	0.7 (11)	0.0 (0)	0.1 (1)	4.1 (68)	1.2 (20)		1975–1980	4.2	0.8 (18)	0.3 (7)	0.3 (7)	1.9 (46)	1.0 (23)
	1980–1985	3.2	0.8 (26)	0.1 (2)	0.0 (0)	4.0 (126)	−1.7 (−53)		1980–1985	3.3	0.5 (14)	0.7 (22)	0.2 (7)	1.5 (45)	0.4 (12)
	1985–1990	5.1	0.9 (18)	0.3 (6)	0.1 (1)	3.2 (63)	0.6 (12)		1985–1990	5.7	1.0 (18)	0.6 (11)	0.3 (6)	2.9 (51)	0.8 (13)
	1990–1995	1.1	1.3 (117)	0.1 (7)	0.0 (1)	0.9 (86)	−1.2 (−110)		1990–1995	6.5	0.5 (8)	2.4 (37)	0.1 (1)	3.1 (48)	0.4 (6)
	1995–2000	5.0	1.7 (34)	0.4 (8)	0.0 (0)	1.5 (30)	1.4 (28)		1995–2000	5.4	0.8 (15)	0.6 (11)	0.2 (3)	4.8 (89)	−1.0 (−19)
	2000–2005	8.9	2.2 (24)	0.8 (9)	0.0 (1)	3.9 (44)	1.9 (22)		2000–2005	6.6	0.8 (12)	0.5 (7)	0.2 (4)	5.1 (78)	−0.1 (−1)
	2005–2010	9.5	1.7 (18)	0.7 (8)	0.1 (1)	4.1 (44)	2.8 (29)		2005–2010	3.8	1.4 (36)	0.2 (6)	0.1 (2)	2.7 (71)	−0.6 (−15)
	2010–2015	6.9	2.8 (40)	1.5 (22)	0.1 (1)	4.6 (67)	−2.1 (−30)		2010–2015	−1.8	−0.2 (12)	−1.2 (66)	0.0 (−2)	0.0 (−1)	−0.4 (25)
	2015–2019	6.9	2.2 (32)	1.3 (19)	0.2 (2)	4.9 (71)	−1.7 (−25)		2015–2019	3.6	−0.1 (−2)	0.1 (3)	0.2 (4)	−0.1 (−3)	3.5 (98)
Myanmar	1970–1975	4.3	2.6 (60)	0.4 (10)	0.2 (4)	2.0 (46)	−0.9 (−20)	Nepal	1970–1975	6.3	0.5 (9)	1.1 (17)	0.3 (5)	1.3 (20)	3.1 (49)
	1975–1980	7.5	2.5 (33)	1.4 (19)	0.2 (3)	4.1 (54)	−0.6 (−8)		1975–1980	6.4	0.0 (1)	0.2 (4)	0.3 (5)	7.3 (114)	−1.5 (−24)
	1980–1985	5.4	1.4 (27)	0.7 (14)	0.3 (5)	3.6 (67)	−0.7 (−12)		1980–1985	9.8	1.1 (11)	1.0 (11)	0.1 (2)	4.6 (47)	2.9 (30)
	1985–1990	7.8	2.1 (27)	0.8 (10)	0.1 (1)	4.2 (54)	0.6 (8)		1985–1990	4.9	1.3 (27)	0.6 (13)	0.2 (3)	0.7 (13)	2.1 (43)
	1990–1995	2.5	1.5 (62)	0.9 (36)	0.0 (−2)	0.7 (30)	−0.7 (−26)		1990–1995	2.8	0.1 (4)	0.3 (10)	0.2 (6)	2.2 (79)	0.0 (1)
	1995–2000	5.9	2.0 (34)	0.8 (14)	0.1 (2)	3.1 (53)	−0.1 (−2)		1995–2000	4.9	0.6 (11)	0.5 (11)	0.2 (3)	2.9 (59)	0.7 (15)
	2000–2005	3.6	1.2 (32)	−0.1 (−2)	0.0 (0)	2.9 (80)	−0.4 (−10)		2000–2005	1.0	1.8 (180)	0.3 (27)	0.1 (6)	0.9 (89)	−2.0 (−202)
	2005–2010	7.0	1.3 (19)	0.7 (9)	0.1 (2)	4.9 (69)	0.1 (1)		2005–2010	3.0	1.9 (62)	0.3 (9)	0.1 (2)	1.7 (57)	−0.9 (−30)
	2010–2015	4.8	1.3 (26)	0.6 (12)	0.1 (2)	5.4 (112)	−2.5 (−51)		2010–2015	3.2	1.1 (33)	2.3 (70)	0.1 (2)	2.1 (66)	−2.3 (−70)
	2015–2019	0.6	1.4 (225)	0.7 (117)	0.0 (7)	0.8 (132)	−2.4 (−382)		2015–2019	6.0	0.6 (11)	2.0 (34)	0.0 (1)	2.3 (39)	1.0 (16)
Pakistan	1970–1975	4.1	1.2 (30)	0.2 (6)	0.1 (1)	1.9 (47)	0.7 (16)	Philippines	1970–1975	5.0	1.5 (30)	1.9 (37)	0.0 (1)	2.1 (43)	−0.6 (−11)
	1975–1980	7.9	1.6 (21)	0.5 (7)	0.2 (2)	2.9 (36)	2.7 (34)		1975–1980	4.2	1.3 (32)	2.1 (49)	0.1 (1)	1.9 (45)	−1.1 (−27)
	1980–1985	5.5	1.1 (20)	0.7 (13)	0.1 (2)	2.9 (52)	0.7 (13)		1980–1985	3.4	0.8 (22)	1.4 (41)	0.0 (1)	1.6 (48)	−0.4 (−12)
	1985–1990	4.7	0.7 (15)	0.7 (15)	0.1 (2)	2.7 (58)	0.4 (9)		1985–1990	4.3	0.6 (13)	0.8 (18)	0.0 (0)	2.0 (45)	1.0 (24)
	1990–1995	6.0	0.6 (10)	0.6 (10)	0.2 (3)	5.8 (97)	−1.2 (−19)		1990–1995	4.1	0.5 (11)	−0.1 (−3)	0.0 (0)	1.6 (40)	2.1 (51)
	1995–2000	4.1	−1.2 (−28)	0.4 (10)	0.1 (2)	3.5 (85)	1.3 (31)		1995–2000	5.4	0.9 (16)	−0.1 (−2)	0.0 (1)	2.9 (54)	1.6 (30)
	2000–2005	−3.3	−1.4 (42)	0.6 (−19)	−0.1 (3)	0.6 (−18)	−3.0 (92)		2000–2005	2.5	1.3 (52)	0.1 (6)	0.0 (1)	2.7 (107)	−1.6 (−64)
	2005–2010	4.1	0.8 (18)	0.5 (13)	0.1 (2)	3.1 (76)	−0.4 (−9)		2005–2010	3.8	1.1 (29)	1.0 (27)	0.0 (1)	2.0 (52)	−0.3 (−9)
	2010–2015	3.7	1.2 (33)	0.7 (19)	0.0 (1)	1.8 (48)	0.0 (−1)		2010–2015	6.3	1.9 (31)	0.1 (2)	0.1 (2)	3.8 (61)	0.3 (4)
	2015–2019	5.8	1.7 (30)	1.0 (17)	0.0 (0)	2.3 (40)	0.8 (13)		2015–2019	5.5	1.1 (20)	0.8 (14)	0.1 (2)	4.4 (81)	−0.9 (−17)
Saudi Arabia	1970–1975	6.0	1.4 (24)	0.1 (2)	0.0 (1)	2.3 (39)	2.1 (34)	Singapore	1970–1975	−0.5	1.2 (−233)	0.4 (−79)	0.2 (−46)	3.2 (−641)	−5.4 (1098)
	1975–1980	7.6	1.4 (18)	1.1 (14)	0.1 (1)	2.8 (36)	2.3 (30)		1975–1980	5.7	1.0 (17)	0.7 (12)	0.1 (2)	1.1 (19)	2.8 (50)
	1980–1985	6.6	0.9 (14)	0.8 (12)	0.1 (1)	2.8 (43)	2.1 (31)		1980–1985	3.1	1.0 (31)	0.1 (3)	0.1 (4)	2.2 (70)	−0.2 (−8)
	1985–1990	6.0	0.9 (15)	0.3 (5)	0.0 (0)	2.8 (47)	2.0 (33)		1985–1990	4.4	0.7 (16)	1.0 (22)	0.3 (7)	2.1 (48)	0.3 (7)
	1990–1995	5.1	0.9 (17)	0.5 (11)	0.1 (3)	2.4 (47)	1.2 (23)		1990–1995	4.7	1.1 (23)	0.2 (3)	0.2 (5)	1.4 (31)	1.8 (38)
	1995–2000	3.4	1.1 (32)	0.1 (4)	0.2 (7)	2.5 (72)	−0.5 (−15)		1995–2000	4.9	0.9 (19)	0.5 (10)	0.1 (2)	1.8 (37)	1.5 (31)
	2000–2005	4.8	0.7 (19)	0.5 (15)	0.0 (1)	1.2 (36)	1.0 (28)		2000–2005	5.7	0.8 (13)	0.4 (8)	0.1 (2)	3.5 (61)	0.9 (16)
	2005–2010	3.4	0.7 (15)	0.6 (13)	0.1 (2)	2.0 (42)	1.4 (28)		2005–2010	6.4	0.5 (8)	0.7 (10)	0.2 (3)	4.3 (66)	0.9 (13)
	2010–2015	2.4	1.0 (42)	0.1 (2)	0.1 (3)	1.2 (51)	0.0 (2)		2010–2015	3.0	0.7 (24)	−0.3 (−12)	0.1 (3)	2.3 (79)	0.2 (7)
	2015–2019	5.0	1.1 (22)	0.5 (11)	0.1 (2)	2.2 (44)	1.1 (22)		2015–2019	4.4	1.0 (22)	0.4 (9)	0.2 (4)	2.7 (61)	0.2 (4)

		Out- put	Labor		Capital		TFP
			Hours Worked	Labor Quality	ICT	Non-ICT	
Sri Lanka	1970–1975	3.5	0.7 (21)	0.2 (7)	0.0 (1)	2.2 (62)	0.3 (9)
	1975–1980	5.0	0.9 (18)	0.2 (4)	0.0 (1)	2.7 (54)	1.2 (23)
	1980–1985	4.5	0.1 (3)	1.1 (25)	0.1 (2)	2.9 (65)	0.2 (5)
	1985–1990	3.6	1.5 (42)	0.5 (15)	0.0 (0)	0.8 (23)	0.7 (20)
	1990–1995	5.6	0.4 (7)	1.0 (18)	0.0 (1)	0.8 (14)	3.3 (59)
	1995–2000	4.9	2.0 (40)	0.2 (3)	0.1 (2)	1.5 (30)	1.2 (24)
	2000–2005	4.9	0.0 (1)	1.0 (20)	0.2 (5)	1.9 (40)	1.7 (35)
	2005–2010	6.6	0.4 (6)	–0.1 (–2)	0.2 (3)	3.8 (58)	2.3 (35)
	2010–2015	5.8	0.0 (0)	0.3 (5)	0.2 (3)	5.1 (86)	0.3 (5)
	2015–2019	3.6	0.3 (9)	0.4 (12)	0.4 (11)	4.6 (126)	–2.1 (–59)
	2019–2024	–0.5	–0.2 (36)	0.3 (–74)	0.4 (–78)	1.9 (–406)	–2.9 (623)
Turkey	1970–1975	4.3	0.6 (13)	0.5 (11)	0.1 (3)	2.5 (58)	0.6 (14)
	1975–1980	5.6	0.9 (16)	0.2 (4)	0.0 (1)	5.4 (96)	–0.9 (–16)
	1980–1985	2.3	0.4 (18)	0.4 (15)	0.0 (0)	3.2 (137)	–1.6 (–70)
	1985–1990	4.8	0.5 (10)	0.1 (3)	0.1 (2)	2.5 (53)	1.6 (33)
	1990–1995	5.5	0.8 (15)	0.4 (7)	0.2 (4)	3.2 (58)	0.9 (16)
	1995–2000	3.3	0.4 (13)	0.3 (11)	0.1 (3)	3.3 (101)	–0.9 (–27)
	2000–2005	3.9	–0.2 (–4)	0.6 (14)	0.3 (7)	3.1 (78)	0.1 (4)
	2005–2010	4.9	0.7 (15)	1.0 (20)	0.2 (5)	2.6 (54)	0.3 (6)
	2010–2015	3.2	0.6 (17)	0.5 (15)	0.3 (9)	4.0 (126)	–2.1 (–67)
	2015–2019	6.7	0.9 (13)	0.7 (11)	0.3 (4)	3.5 (53)	1.2 (18)
	2019–2024	3.9	0.1 (3)	0.6 (16)	0.3 (7)	3.2 (82)	–0.3 (–8)
US	1970–1975	5.3	0.7 (12)	0.4 (8)	0.2 (4)	3.1 (59)	0.8 (16)
	1975–1980	4.5	0.5 (12)	0.5 (11)	0.2 (4)	3.4 (75)	–0.1 (–2)
	1980–1985	2.6	0.5 (19)	0.1 (3)	0.1 (4)	1.2 (47)	0.7 (27)
	1985–1990	3.6	1.6 (44)	0.1 (2)	0.2 (6)	1.0 (29)	0.7 (20)
	1990–1995	3.1	0.8 (25)	0.2 (6)	0.3 (10)	0.7 (23)	1.1 (36)
	1995–2000	3.2	1.2 (39)	0.2 (7)	0.3 (11)	0.9 (27)	0.5 (17)
	2000–2005	2.5	0.7 (26)	0.3 (13)	0.3 (11)	0.6 (22)	0.7 (28)
	2005–2010	4.2	1.3 (30)	0.3 (7)	0.6 (15)	1.0 (24)	1.0 (23)
	2010–2015	2.5	0.0 (–1)	0.2 (8)	0.4 (15)	0.8 (32)	1.1 (45)
	2015–2019	1.0	–0.4 (–44)	0.3 (33)	0.3 (33)	0.5 (56)	0.2 (22)
	2019–2024	2.2	1.0 (46)	0.2 (10)	0.3 (12)	0.4 (19)	0.3 (14)
Asia28	1970–1975	2.4	0.8 (34)	0.2 (8)	0.3 (14)	0.6 (26)	0.4 (18)
	1975–1980	2.4	0.3 (13)	0.2 (8)	0.4 (16)	0.6 (25)	0.9 (37)
	1980–1985	2.7	0.7 (26)	0.2 (8)	0.3 (12)	0.8 (28)	0.7 (26)
	1985–1990	5.0	1.3 (25)	0.3 (7)	0.1 (2)	3.2 (63)	0.2 (4)
	1990–1995	4.6	1.4 (30)	0.3 (7)	0.1 (2)	3.0 (64)	–0.2 (–4)
	1995–2000	4.1	1.4 (35)	0.6 (13)	0.2 (5)	1.8 (44)	0.1 (3)
	2000–2005	5.6	1.2 (21)	0.5 (10)	0.3 (4)	2.1 (38)	1.5 (27)
	2005–2010	5.3	0.7 (13)	0.7 (14)	0.2 (3)	2.3 (44)	1.3 (25)
	2010–2015	4.3	0.8 (20)	0.5 (12)	0.2 (6)	2.0 (47)	0.7 (16)
	2015–2019	5.5	0.8 (15)	0.7 (13)	0.2 (5)	2.2 (41)	1.4 (26)
	2019–2024	6.5	0.3 (5)	0.7 (11)	0.2 (4)	3.1 (48)	2.1 (33)
SAARC	1970–1975	5.2	0.2 (3)	0.6 (12)	0.3 (6)	3.0 (57)	1.2 (22)
	1975–1980	4.8	0.4 (8)	–0.1 (–2)	0.3 (7)	2.6 (55)	1.5 (32)
	1980–1985	3.8	0.0 (1)	0.2 (4)	0.4 (11)	2.2 (58)	1.0 (26)
	1985–1990	5.0	0.8 (16)	0.5 (9)	0.2 (5)	2.5 (50)	1.0 (20)
	1990–1995	2.2	1.6 (72)	0.3 (14)	0.0 (2)	1.1 (51)	–0.8 (–39)
	1995–2000	3.4	1.7 (50)	0.6 (17)	0.1 (1)	1.5 (44)	–0.5 (–13)
	2000–2005	4.8	1.4 (29)	0.7 (14)	0.1 (2)	1.7 (35)	1.0 (20)
	2005–2010	5.6	1.3 (24)	0.8 (15)	0.2 (4)	1.8 (32)	1.4 (26)
	2010–2015	4.9	1.3 (25)	0.5 (10)	0.2 (4)	1.6 (32)	1.4 (29)
	2015–2019	5.6	1.0 (18)	0.8 (14)	0.3 (5)	1.9 (34)	1.7 (30)
	2019–2024	6.4	1.2 (19)	0.5 (8)	0.3 (4)	2.2 (35)	2.1 (34)
ASEAN6	1970–1975	7.3	0.7 (9)	0.9 (13)	0.5 (6)	3.3 (45)	1.9 (26)
	1975–1980	5.4	0.7 (13)	0.7 (14)	0.4 (8)	2.7 (49)	0.9 (16)
	1980–1985	5.5	0.6 (10)	0.4 (8)	0.5 (9)	2.4 (43)	1.6 (30)
	1985–1990	4.8	0.6 (12)	0.3 (6)	0.2 (4)	1.9 (40)	1.8 (37)
	1990–1995	5.1	1.1 (23)	0.6 (12)	0.2 (5)	2.0 (39)	1.1 (22)
	1995–2000	7.2	1.4 (20)	0.7 (10)	0.1 (1)	3.9 (54)	1.1 (16)
	2000–2005	7.4	1.6 (22)	0.5 (7)	0.1 (2)	3.9 (53)	1.3 (17)
	2005–2010	3.9	1.3 (33)	0.7 (18)	0.2 (5)	3.3 (86)	–1.6 (–41)
	2010–2015	7.5	1.1 (15)	1.1 (14)	0.3 (4)	2.8 (37)	2.3 (31)
	2015–2019	7.4	0.7 (9)	1.5 (21)	0.4 (5)	4.1 (55)	0.8 (10)
	2019–2024	2.1	0.8 (36)	1.1 (52)	0.2 (10)	2.8 (131)	–2.7 (–129)
CLMV	1970–1975	4.9	0.5 (11)	1.2 (24)	0.3 (7)	1.6 (33)	1.2 (25)
	1975–1980	4.9	1.0 (19)	0.6 (12)	0.3 (7)	2.2 (44)	0.9 (17)
	1980–1985	4.8	0.4 (8)	1.5 (31)	0.3 (7)	2.6 (54)	0.0 (–1)
	1985–1990	4.6	0.7 (15)	0.7 (16)	0.2 (4)	2.4 (53)	0.6 (12)
	1990–1995	2.7	0.2 (9)	0.3 (10)	0.1 (5)	2.0 (71)	0.1 (4)
	1995–2000	5.2	0.9 (17)	0.9 (17)	0.2 (4)	2.9 (55)	0.3 (7)
	2000–2005	7.2	1.4 (20)	0.7 (10)	0.1 (1)	3.9 (54)	1.1 (16)
	2005–2010	7.4	1.6 (22)	0.5 (7)	0.1 (2)	3.9 (53)	1.3 (17)
	2010–2015	3.9	1.3 (33)	0.7 (18)	0.2 (5)	3.3 (86)	–1.6 (–41)
	2015–2019	7.5	1.1 (15)	1.1 (14)	0.3 (4)	2.8 (37)	2.3 (31)
	2019–2024	2.1	0.8 (36)	1.1 (52)	0.2 (10)	2.8 (131)	–2.7 (–129)
East Asia	1970–1975	4.9	0.5 (11)	1.2 (24)	0.3 (7)	1.6 (33)	1.2 (25)
	1975–1980	4.9	1.0 (19)	0.6 (12)	0.3 (7)	2.2 (44)	0.9 (17)
	1980–1985	4.8	0.4 (8)	1.5 (31)	0.3 (7)	2.6 (54)	0.0 (–1)
	1985–1990	4.6	0.7 (15)	0.7 (16)	0.2 (4)	2.4 (53)	0.6 (12)
	1990–1995	2.7	0.2 (9)	0.3 (10)	0.1 (5)	2.0 (71)	0.1 (4)
	1995–2000	5.2	0.9 (17)	0.9 (17)	0.2 (4)	2.9 (55)	0.3 (7)
	2000–2005	7.2	1.4 (20)	0.7 (10)	0.1 (1)	3.9 (54)	1.1 (16)
	2005–2010	7.4	1.6 (22)	0.5 (7)	0.1 (2)	3.9 (53)	1.3 (17)
	2010–2015	3.9	1.3 (33)	0.7 (18)	0.2 (5)	3.3 (86)	–1.6 (–41)
	2015–2019	7.5	1.1 (15)	1.1 (14)	0.3 (4)	2.8 (37)	2.3 (31)
	2019–2024	2.1	0.8 (36)	1.1 (52)	0.2 (10)	2.8 (131)	–2.7 (–129)
ASEAN	1970–1975	2.9	1.9 (67)	0.4 (15)	0.0 (0)	1.8 (64)	–1.3 (–46)
	1975–1980	3.8	1.2 (32)	0.8 (20)	0.0 (0)	3.2 (86)	–1.5 (–39)
	1980–1985	3.4	1.6 (46)	0.4 (12)	0.0 (1)	1.9 (55)	–0.5 (–14)
	1985–1990	2.8	1.5 (53)	0.2 (9)	0.0 (1)	1.2 (44)	–0.2 (–6)
	1990–1995	7.1	1.2 (16)	0.1 (1)	0.0 (1)	3.3 (47)	2.5 (35)
	1995–2000	7.9	1.2 (15)	0.2 (3)	0.1 (1)	5.2 (66)	1.3 (16)
	2000–2005	7.8	0.5 (7)	0.9 (12)	0.1 (1)	5.1 (65)	1.2 (15)
	2005–2010	7.5	1.2 (16)	0.7 (10)	0.1 (1)	7.0 (94)	–1.6 (–21)
	2010–2015	5.5	0.3 (6)	0.5 (8)	0.2 (3)	4.8 (86)	–0.2 (–3)
	2015–2019	6.7	0.2 (3)	0.9 (13)	0.1 (2)	3.6 (53)	1.9 (28)
	2019–2024	4.4	0.3 (6)	0.4 (9)	0.1 (1)	3.0 (69)	0.6 (15)
	1970–1975	5.4	1.0 (19)	0.5 (9)	0.1 (1)	3.7 (68)	0.2 (3)

Unit: Percentage (average annual growth rate) and percentage points (contributions written in parentheses).

Source: APO Productivity Database 2026.

Table 9.14 TFP and Capital Deepening in Labor Productivity Growth, 1970–2024

		Labor Productivity		Labor Quality		Capital deepening		TFP				Labor Productivity		Labor Quality		Capital deepening		TFP			
						ICT	Non-ICT							ICT	Non-ICT						
Afghanistan	1970–1975	0.3	−0.2	(−47)	0.0	(0)	1.0	(319)	−0.5	(−171)	Bangladesh	1970–1975	−6.2	0.1	(−1)	0.0	(0)	−1.5	(25)	−4.7	(76)
	1975–1980	0.4	−0.2	(−60)	0.0	(0)	5.6	(1595)	−5.1	(−1435)		1975–1980	0.8	0.8	(103)	0.0	(5)	−1.0	(−127)	1.0	(119)
	1980–1985	5.8	−0.4	(−7)	0.0	(0)	4.4	(77)	1.7	(30)		1980–1985	0.6	0.5	(80)	0.1	(11)	0.8	(133)	−0.7	(−124)
	1985–1990	−5.0	−0.3	(6)	0.0	(0)	0.4	(−9)	−5.1	(103)		1985–1990	2.2	0.3	(15)	0.1	(4)	1.0	(47)	0.7	(34)
	1990–1995	−13.7	−0.4	(3)	0.0	(0)	−2.6	(19)	−10.7	(78)		1990–1995	1.4	0.5	(35)	0.1	(6)	1.3	(92)	−0.5	(−33)
	1995–2000	−8.3	−0.4	(4)	0.0	(0)	0.0	(−1)	−8.0	(96)		1995–2000	3.2	0.1	(4)	0.1	(5)	2.9	(92)	0.0	(0)
	2000–2005	8.4	−0.3	(−4)	0.0	(0)	−0.4	(−5)	9.0	(108)		2000–2005	3.6	0.4	(11)	0.4	(12)	2.4	(66)	0.4	(11)
	2005–2010	5.2	1.1	(21)	0.0	(0)	1.4	(27)	2.7	(52)		2005–2010	4.9	0.3	(6)	0.6	(13)	2.9	(58)	1.1	(23)
	2010–2015	4.5	0.5	(11)	0.0	(0)	2.3	(51)	1.7	(38)		2010–2015	4.7	0.8	(17)	0.4	(8)	3.3	(70)	0.2	(5)
	2015–2019	1.6	−0.2	(−12)	0.0	(−2)	1.1	(71)	0.7	(43)		2015–2019	5.8	0.4	(7)	0.4	(6)	4.3	(74)	0.7	(13)
2019–2024	−8.6	0.1	(−1)	0.0	(0)	0.4	(−5)	−9.1	(106)	2019–2024	3.9	0.1	(3)	0.0	(1)	4.4	(114)	−0.7	(−18)		
1970–2024	−0.9	−0.1	(6)	0.0	(−1)	1.3	(−139)	−2.1	(233)	1970–2024	2.2	0.4	(18)	0.2	(9)	1.8	(84)	−0.2	(−11)		
Bhutan	1970–1975	0.9	0.5	(53)	0.0	(0)	1.2	(127)	−0.8	(−80)	Brunei	1970–1975	1.7	0.3	(16)	0.0	(−3)	1.3	(74)	0.2	(13)
	1975–1980	4.8	0.1	(2)	0.0	(0)	0.7	(15)	4.0	(82)		1975–1980	5.8	0.3	(5)	0.1	(2)	−4.1	(−72)	9.5	(165)
	1980–1985	3.4	0.3	(9)	0.0	(0)	1.7	(50)	1.4	(41)		1980–1985	−7.2	0.2	(−3)	0.0	(0)	−3.5	(48)	−4.0	(55)
	1985–1990	5.0	1.9	(39)	0.0	(0)	1.6	(32)	1.5	(30)		1985–1990	−8.0	0.5	(−6)	0.1	(−2)	−4.0	(51)	−4.5	(57)
	1990–1995	3.6	0.9	(25)	0.2	(6)	2.9	(80)	−0.4	(−10)		1990–1995	−1.1	0.2	(−21)	0.2	(−19)	0.1	(−9)	−1.7	(148)
	1995–2000	3.6	0.6	(15)	0.7	(20)	1.7	(48)	0.6	(16)		1995–2000	−0.7	0.1	(−12)	0.0	(−6)	−1.7	(225)	0.8	(−107)
	2000–2005	4.0	0.9	(23)	0.1	(3)	5.9	(147)	−2.9	(−73)		2000–2005	−1.7	0.2	(−11)	0.0	(−1)	−1.1	(63)	−0.9	(50)
	2005–2010	7.4	0.9	(13)	0.4	(6)	2.5	(34)	3.5	(48)		2005–2010	−1.7	0.1	(−8)	0.1	(−6)	−0.1	(7)	−1.9	(107)
	2010–2015	6.6	1.2	(19)	0.1	(2)	5.8	(89)	−0.6	(−10)		2010–2015	−0.9	−0.1	(7)	0.1	(−10)	0.5	(−59)	−1.5	(161)
	2015–2019	3.4	0.9	(26)	0.0	(−1)	3.1	(91)	−0.6	(−17)		2015–2019	−2.3	−0.2	(7)	−0.1	(3)	−2.1	(92)	0.0	(−1)
2019–2024	2.4	0.8	(34)	0.8	(32)	1.7	(71)	−0.9	(−37)	2019–2024	−0.2	0.2	(−91)	0.0	(−10)	0.1	(−60)	−0.7	(261)		
1970–2024	4.1	0.8	(20)	0.2	(5)	2.6	(64)	0.5	(11)	1970–2024	−1.5	0.2	(−12)	0.1	(−4)	−1.3	(88)	−0.4	(28)		
Cambodia	1970–1975	−4.7	0.1	(−2)	0.0	(1)	3.1	(−65)	−7.9	(167)	China	1970–1975	1.4	0.4	(30)	0.0	(1)	1.6	(120)	−0.7	(−51)
	1975–1980	−2.8	0.1	(−4)	0.0	(0)	3.6	(−128)	−6.5	(232)		1975–1980	2.0	0.3	(13)	0.0	(1)	1.2	(58)	0.5	(27)
	1980–1985	−1.4	0.2	(−11)	0.0	(0)	−1.4	(104)	−0.1	(8)		1980–1985	4.7	0.5	(11)	0.0	(1)	0.7	(15)	3.4	(72)
	1985–1990	3.3	0.3	(11)	0.0	(0)	−1.7	(−51)	4.6	(141)		1985–1990	3.7	0.4	(12)	0.1	(2)	2.0	(54)	1.2	(32)
	1990–1995	−3.2	0.5	(−15)	0.0	(0)	−2.5	(77)	−1.2	(38)		1990–1995	9.0	1.0	(11)	0.1	(2)	2.9	(32)	5.0	(55)
	1995–2000	3.0	0.7	(24)	0.0	(1)	0.4	(14)	1.8	(61)		1995–2000	5.5	0.4	(7)	0.2	(4)	3.1	(57)	1.8	(32)
	2000–2005	5.6	0.5	(8)	0.0	(0)	2.9	(52)	2.2	(40)		2000–2005	6.4	0.8	(12)	0.7	(11)	3.8	(59)	1.2	(18)
	2005–2010	2.6	0.4	(14)	0.0	(1)	3.0	(113)	−0.7	(−27)		2005–2010	11.3	0.9	(8)	0.5	(4)	5.8	(51)	4.2	(37)
	2010–2015	5.3	1.4	(27)	0.0	(1)	3.6	(69)	0.2	(3)		2010–2015	8.0	0.7	(8)	0.5	(7)	5.3	(67)	1.4	(18)
	2015–2019	3.7	0.3	(7)	0.0	(1)	3.3	(90)	0.1	(2)		2015–2019	5.5	−0.6	(−11)	0.5	(10)	3.6	(65)	2.0	(36)
2019–2024	0.9	0.0	(−2)	0.0	(2)	2.9	(345)	−2.1	(−245)	2019–2024	5.8	0.2	(3)	0.9	(15)	3.8	(66)	0.9	(16)		
1970–2024	1.1	0.4	(38)	0.0	(1)	1.5	(145)	−0.9	(−84)	1970–2024	5.8	0.5	(8)	0.3	(6)	3.1	(53)	1.9	(33)		
ROC	1970–1975	6.4	0.1	(2)	0.2	(3)	2.1	(32)	4.0	(62)	Fiji	1970–1975	1.9	0.9	(48)	0.0	(−3)	0.9	(49)	0.1	(5)
	1975–1980	8.0	1.1	(14)	0.2	(2)	2.0	(25)	4.8	(59)		1975–1980	0.7	1.4	(204)	0.0	(1)	1.6	(244)	−2.3	(−350)
	1980–1985	5.7	0.2	(4)	0.2	(4)	1.7	(30)	3.6	(62)		1980–1985	−1.5	1.1	(−71)	0.0	(−3)	0.7	(−50)	−3.3	(224)
	1985–1990	7.8	0.8	(10)	0.2	(3)	1.7	(22)	5.0	(65)		1985–1990	1.4	1.4	(101)	0.2	(12)	−0.2	(−16)	0.0	(3)
	1990–1995	5.9	0.6	(11)	0.2	(4)	1.8	(30)	3.3	(56)		1990–1995	0.0	1.4	(−9966)	0.1	(−4176)	−0.1	(9950)	−1.3	(93992)
	1995–2000	5.5	0.6	(11)	0.6	(10)	1.8	(33)	2.6	(46)		1995–2000	0.8	0.7	(85)	0.0	(2)	0.2	(24)	−0.1	(−11)
	2000–2005	3.8	0.8	(22)	0.2	(6)	1.1	(27)	1.7	(45)		2000–2005	1.5	0.5	(35)	0.1	(4)	0.5	(34)	0.4	(26)
	2005–2010	3.7	0.9	(24)	0.0	(1)	0.8	(21)	2.0	(54)		2005–2010	−1.2	0.4	(−31)	0.0	(−3)	−1.5	(132)	0.0	(3)
	2010–2015	1.9	0.7	(34)	0.0	(2)	0.2	(13)	1.0	(51)		2010–2015	2.6	0.1	(3)	0.2	(6)	−0.2	(−7)	2.5	(98)
	2015–2019	2.8	0.4	(15)	0.1	(2)	0.7	(26)	1.6	(57)		2015–2019	2.1	0.3	(16)	0.2	(10)	0.3	(14)	1.3	(60)
2019–2024	3.7	0.7	(19)	0.1	(2)	1.3	(37)	1.6	(43)	2019–2024	−0.5	0.0	(−9)	0.1	(−17)	−0.5	(92)	−0.2	(33)		
1970–2024	5.1	0.6	(13)	0.2	(4)	1.4	(27)	2.9	(56)	1970–2024	0.7	0.7	(110)	0.1	(10)	0.2	(22)	−0.3	(−43)		
Hong Kong	1970–1975	2.9	0.0	(0)	0.1	(4)	1.3	(44)	1.5	(52)	India	1970–1975	0.5	0.3	(69)	0.0	(11)	0.3	(73)	−0.2	(−53)
	1975–1980	7.5	0.6	(7)	0.2	(2)	1.9	(25)	4.9	(65)		1975–1980	0.6	0.5	(93)	0.1	(10)	0.6	(102)	−0.6	(−105)
	1980–1985	3.6	0.3	(9)	0.3	(7)	2.2	(61)	0.8	(23)		1980–1985	2.9	0.8	(26)	0.1	(4)	0.8	(28)	1.2	(42)
	1985–1990	7.7	0.7	(9)	0.3	(4)	2.2	(29)	4.4	(57)		1985–1990	3.8	0.9	(23)	0.2	(6)	1.0	(26)	1.7	(45)
	1990–1995	4.8	0.6	(13)	0.4	(7)	2.1	(45)	1.7	(35)		1990–1995	3.0	0.4	(13)	0.2	(7)	0.8	(25)	1.7	(55)
	1995–2000	0.0	0.3	(−727)	0.5	(−1247)	0.6	(−1496)	−1.5	(3570)		1995–2000	4.1	0.9	(22)	0.3	(7)	1.1	(26)	1.8	(45)
	2000–2005	3.1	0.3	(9)	0.3	(10)	0.6	(19)	1.9	(62)		2000–2005	4.6	0.5	(12)	0.2	(5)	1.3	(27)	2.5	(55)
	2005–2010	3.5	0.3	(8)	0.4	(10)	0.8	(23)	2.1	(59)		2005–2010	7.1	1.2	(17)	0.5	(7)	2.8	(40)	2.6	(36)
	2010–2015	2.0	0.6	(30)	0.3	(15)	0.2	(10)	0.9	(45)		2010–2015	4.4	0.8	(17)	0.5	(11)	2.1	(48)	1.1	(25)
	2015–2019	1.7	0.4	(23)	0.1	(7)	0.2	(10)	1.0	(60)		2015–2019	4.6	0.4	(8)	0.6	(12)	1.8	(40)	1.9	(40)
2019–2024	1.7	0.4	(25)	0.1	(7)	0.3	(16)	0.9	(51)	2019–2024	4.4	0.3	(7)	0.2	(5)	1.4	(32)	2.5	(56)		
1970–2024	3.5	0.4	(11)	0.3	(8)	1.1	(32)	1.7	(48)	1970–2024	3.6	0.6	(18)	0.3	(7)	1.3	(35)	1.5	(40)		
Indonesia	1970–1975	4.3	0.8	(18)	0.0	(0)	1.6	(37)	2.0	(45)	Iran	1970–1975	4.8	0.6	(12)	0.1	(2)	2.0	(42)	2.1	(44)
	1975–1980	3.7	0.5	(15)	0.1	(2)	1.5	(41)	1.6	(42)		1975–1980	−6.2	0.1	(−1)	0.0	(0)	0.7	(−12)	−7.0	(113)
	1980–1985	0.6	0.4	(77)	0.1	(9)	0.3	(59)	−0.3	(−45)		1980–1985	1.5	0.1	(8)	0.1	(4)	0.7	(49)	0.6	(38)
	1985–1990	4.8	1.2	(25)	0.2	(3)	1.2	(25)	2.2	(47)		1985–1990	−1.6	0.7	(−43)	0.1	(−3)	−0.2	(10)	−2.2	(136)
	1990–1995	6.3	2.4	(39)	0.2	(3)	2.5	(40)	1.1	(18)		1990–1995	3.3	0.5	(15)	0.2	(6)	0.7	(22)	1.9	(57)
	1995–2000	−2.3	1.0	(−42)	0.1	(−4)	1.2	(−51)	−4.5	(97)		1995–2000	0.7	0.3	(49)	0.1	(8)	−0.6	(−89)	0.9	(132)
	2000–2005	3.3	1.4	(44)	0.2	(5)	1.4	(													

		Labor		Capital deepening		TFP				Labor		Capital deepening		TFP	
		Productivity	Quality	ICT	Non-ICT					Productivity	Quality	ICT	Non-ICT		
Japan	1970–1975	5.1	1.0 (20)	0.2 (4)	3.0 (58)	0.9 (18)	Korea	1970–1975	5.9	0.2 (4)	0.1 (1)	2.3 (39)	3.3 (56)		
	1975–1980	3.6	0.8 (23)	0.1 (4)	1.1 (31)	1.5 (42)		1975–1980	4.8	0.5 (11)	0.3 (6)	4.5 (92)	−0.5 (−10)		
	1980–1985	3.5	0.6 (18)	0.3 (10)	1.2 (34)	1.4 (39)		1980–1985	6.9	1.7 (25)	0.3 (5)	2.7 (40)	2.1 (30)		
	1985–1990	4.2	0.6 (14)	0.5 (11)	1.3 (31)	1.8 (43)		1985–1990	6.9	1.4 (21)	0.5 (7)	2.9 (43)	2.0 (30)		
	1990–1995	1.6	0.4 (25)	0.3 (16)	1.2 (73)	−0.3 (−15)		1990–1995	6.5	1.6 (24)	0.4 (5)	3.0 (46)	1.6 (24)		
	1995–2000	2.0	0.4 (20)	0.4 (19)	0.9 (46)	0.3 (15)		1995–2000	5.7	0.7 (12)	0.5 (9)	2.6 (45)	1.9 (33)		
	2000–2005	1.7	0.5 (27)	0.2 (15)	0.4 (25)	0.6 (34)		2000–2005	4.5	1.2 (27)	0.4 (8)	2.3 (51)	0.6 (14)		
	2005–2010	0.7	0.4 (59)	0.2 (24)	0.4 (57)	−0.3 (−40)		2005–2010	4.7	1.0 (21)	0.2 (3)	2.3 (50)	1.2 (26)		
	2010–2015	1.3	0.2 (15)	0.2 (13)	−0.1 (−7)	1.0 (80)		2010–2015	1.8	0.6 (31)	0.1 (3)	1.0 (54)	0.2 (11)		
	2015–2019	0.4	0.1 (27)	0.3 (60)	0.1 (14)	0.0 (0)		2015–2019	4.4	0.4 (10)	0.1 (3)	2.2 (49)	1.7 (38)		
2019–2024	0.2	0.3 (138)	0.3 (141)	0.0 (7)	−0.3 (−186)	2019–2024	2.9	0.4 (14)	0.1 (4)	1.4 (50)	0.9 (32)				
1970–2024	2.3	0.5 (22)	0.3 (12)	0.9 (39)	0.6 (27)	1970–2024	5.0	0.9 (18)	0.3 (5)	2.5 (49)	1.4 (27)				
Lao PDR	1970–1975	2.2	0.1 (6)	0.0 (−1)	1.4 (62)	0.7 (33)	Malaysia	1970–1975	4.2	0.4 (9)	0.0 (1)	1.6 (38)	2.2 (53)		
	1975–1980	1.6	0.2 (9)	0.0 (0)	1.4 (83)	0.1 (7)		1975–1980	4.3	0.8 (18)	0.1 (1)	2.0 (46)	1.5 (34)		
	1980–1985	5.7	0.2 (3)	0.1 (1)	2.3 (40)	3.2 (56)		1980–1985	1.7	0.8 (49)	0.1 (5)	2.9 (171)	−2.1 (−126)		
	1985–1990	−0.4	0.1 (−32)	0.1 (−14)	0.8 (−205)	−1.4 (351)		1985–1990	3.2	0.7 (22)	0.2 (6)	0.4 (12)	1.9 (60)		
	1990–1995	1.7	0.1 (8)	0.2 (10)	1.5 (86)	−0.1 (−4)		1990–1995	6.5	1.1 (17)	0.4 (6)	4.3 (66)	0.7 (11)		
	1995–2000	3.1	0.5 (15)	0.1 (2)	2.7 (87)	−0.1 (−4)		1995–2000	1.1	0.6 (50)	0.4 (35)	0.8 (74)	−0.7 (−59)		
	2000–2005	3.4	0.4 (12)	0.0 (1)	0.7 (20)	2.3 (67)		2000–2005	3.2	0.8 (26)	0.7 (22)	−0.2 (−5)	1.8 (57)		
	2005–2010	3.4	0.8 (23)	0.1 (4)	1.9 (58)	0.5 (15)		2005–2010	1.0	0.5 (45)	0.4 (41)	0.0 (−3)	0.2 (17)		
	2010–2015	6.2	0.6 (9)	0.1 (1)	3.3 (53)	2.2 (36)		2010–2015	2.2	0.4 (18)	0.3 (14)	0.0 (1)	1.5 (66)		
	2015–2019	4.1	0.0 (0)	0.0 (1)	2.9 (70)	1.2 (30)		2015–2019	2.3	0.3 (12)	0.2 (10)	0.9 (38)	1.0 (41)		
2019–2024	1.1	0.1 (5)	0.0 (−1)	2.8 (248)	−1.7 (−151)	2019–2024	1.9	0.7 (38)	0.2 (8)	0.6 (32)	0.4 (21)				
1970–2024	2.9	0.3 (10)	0.1 (2)	2.0 (67)	0.6 (21)	1970–2024	2.9	0.6 (23)	0.3 (9)	1.2 (42)	0.8 (26)				
Maldives	1970–1975	−1.5	0.1 (−5)	0.0 (−1)	−0.4 (24)	−1.2 (81)	Mongolia	1970–1975	5.1	2.4 (48)	0.1 (1)	2.2 (43)	0.4 (7)		
	1975–1980	1.0	0.4 (38)	0.0 (0)	−0.8 (−76)	1.4 (138)		1975–1980	3.1	0.6 (19)	0.1 (4)	3.4 (109)	−1.0 (−33)		
	1980–1985	3.8	0.8 (21)	0.0 (1)	1.0 (26)	1.9 (52)		1980–1985	4.0	0.5 (12)	0.2 (5)	3.3 (84)	−0.1 (−1)		
	1985–1990	5.5	0.7 (13)	0.1 (1)	1.9 (35)	2.8 (51)		1985–1990	−0.7	0.2 (−34)	0.0 (−1)	−0.4 (52)	−0.6 (83)		
	1990–1995	1.1	1.5 (139)	0.1 (5)	1.6 (151)	−2.1 (−195)		1990–1995	−1.2	−1.2 (99)	0.0 (−3)	0.4 (−33)	−0.4 (37)		
	1995–2000	1.6	1.3 (80)	0.1 (7)	1.9 (119)	−1.7 (−106)		1995–2000	4.0	0.1 (3)	0.2 (4)	0.2 (6)	3.5 (88)		
	2000–2005	−1.2	0.4 (−37)	0.1 (−9)	−0.8 (72)	−0.9 (74)		2000–2005	4.0	1.1 (27)	0.2 (6)	−0.4 (−10)	3.1 (78)		
	2005–2010	2.4	1.4 (59)	0.1 (5)	1.5 (62)	−0.6 (−26)		2005–2010	6.0	0.2 (4)	0.3 (5)	7.0 (116)	−1.5 (−25)		
	2010–2015	2.3	0.7 (32)	0.2 (9)	2.0 (88)	−0.7 (−29)		2010–2015	6.1	1.0 (17)	0.1 (2)	2.1 (34)	2.9 (48)		
	2015–2019	3.4	0.8 (23)	0.0 (−1)	2.0 (58)	0.6 (19)		2015–2019	0.7	0.6 (87)	0.1 (13)	−2.1 (−303)	2.1 (302)		
2019–2024	−0.4	0.9 (−212)	−0.1 (25)	−0.5 (131)	−0.7 (156)	2019–2024	2.4	0.3 (11)	0.2 (7)	2.0 (81)	0.0 (1)				
1970–2024	1.6	0.8 (51)	0.1 (3)	0.8 (52)	−0.1 (−7)	1970–2024	3.1	0.5 (17)	0.1 (4)	1.7 (54)	0.7 (24)				
Myanmar	1970–1975	1.3	−0.1 (−7)	0.0 (1)	1.8 (133)	−0.4 (−27)	Nepal	1970–1975	−2.0	0.3 (−13)	0.1 (−3)	−0.3 (16)	−2.0 (99)		
	1975–1980	4.3	0.7 (16)	0.1 (2)	3.4 (80)	0.1 (2)		1975–1980	−0.2	0.3 (−135)	0.0 (−19)	0.4 (−174)	−0.9 (427)		
	1980–1985	2.1	0.6 (27)	0.1 (3)	4.0 (187)	−2.5 (−117)		1980–1985	1.5	2.3 (155)	0.0 (3)	1.4 (97)	−2.3 (−155)		
	1985–1990	−1.8	0.7 (−40)	0.0 (−2)	−0.2 (12)	−2.4 (130)		1985–1990	5.0	2.0 (41)	0.0 (1)	1.9 (39)	1.0 (20)		
	1990–1995	2.2	0.2 (10)	0.1 (2)	1.3 (58)	0.7 (30)		1990–1995	2.4	1.9 (76)	0.0 (1)	1.1 (45)	−0.6 (−23)		
	1995–2000	5.4	0.5 (10)	0.2 (3)	2.0 (38)	2.7 (49)		1995–2000	2.1	2.1 (99)	0.0 (2)	1.1 (53)	−1.1 (−54)		
	2000–2005	3.4	0.7 (20)	0.1 (2)	2.0 (57)	0.7 (21)		2000–2005	2.3	1.4 (62)	0.0 (2)	1.2 (54)	−0.4 (−18)		
	2005–2010	3.2	0.7 (22)	0.1 (3)	2.0 (61)	0.4 (14)		2005–2010	3.3	0.8 (23)	0.0 (0)	1.5 (46)	1.0 (31)		
	2010–2015	4.6	0.6 (13)	0.1 (3)	5.0 (109)	−1.2 (−26)		2010–2015	3.3	−0.1 (−3)	0.0 (0)	1.3 (41)	2.1 (62)		
	2015–2019	6.0	0.4 (7)	0.1 (2)	4.2 (70)	1.3 (21)		2015–2019	3.9	−0.1 (−2)	0.0 (1)	2.3 (59)	1.6 (42)		
2019–2024	−1.6	0.6 (−38)	−0.1 (4)	0.9 (−55)	−3.0 (189)	2019–2024	0.2	0.1 (61)	0.0 (4)	1.7 (746)	−1.6 (−711)				
1970–2024	2.6	0.5 (20)	0.1 (3)	2.4 (91)	−0.4 (−14)	1970–2024	1.9	1.0 (52)	0.0 (2)	1.2 (63)	−0.3 (−17)				
Pakistan	1970–1975	1.3	0.7 (55)	0.0 (1)	0.6 (46)	0.0 (−2)	Philippines	1970–1975	1.9	0.1 (7)	0.1 (3)	1.5 (76)	0.3 (14)		
	1975–1980	2.7	1.0 (36)	0.0 (0)	1.0 (36)	0.8 (28)		1975–1980	2.7	0.8 (28)	0.0 (2)	2.8 (104)	−0.9 (−34)		
	1980–1985	3.7	0.1 (4)	0.0 (1)	1.4 (39)	2.1 (57)		1980–1985	−3.5	0.4 (−11)	0.2 (−5)	1.3 (−38)	−5.4 (154)		
	1985–1990	5.1	1.1 (21)	0.1 (2)	1.6 (32)	2.3 (45)		1985–1990	3.3	0.7 (22)	0.0 (1)	−0.3 (−10)	2.8 (87)		
	1990–1995	4.8	0.8 (16)	0.1 (1)	1.9 (40)	2.1 (43)		1990–1995	0.8	0.1 (10)	0.1 (12)	0.9 (107)	−0.2 (−29)		
	1995–2000	3.9	0.3 (8)	0.0 (0)	1.6 (42)	2.0 (50)		1995–2000	2.8	1.0 (35)	0.3 (11)	1.2 (44)	0.3 (11)		
	2000–2005	2.6	0.5 (21)	0.1 (5)	0.7 (28)	1.2 (46)		2000–2005	2.0	0.2 (8)	0.2 (8)	−0.1 (−7)	1.8 (91)		
	2005–2010	0.1	0.1 (218)	0.2 (316)	0.3 (406)	−0.5 (−841)		2005–2010	2.6	0.5 (19)	0.1 (2)	0.6 (21)	1.5 (57)		
	2010–2015	1.6	0.5 (33)	0.0 (0)	0.1 (6)	1.0 (61)		2010–2015	3.7	0.4 (12)	0.1 (3)	2.3 (60)	0.9 (25)		
	2015–2019	3.1	0.6 (20)	0.1 (2)	1.1 (35)	1.4 (43)		2015–2019	5.2	0.7 (13)	0.2 (3)	3.5 (68)	0.9 (16)		
2019–2024	0.0	0.1 (26466)	0.0 (14752)	−0.1 (−61155)	0.0 (20038)	2019–2024	1.3	−0.3 (−26)	0.1 (4)	1.4 (107)	0.2 (15)				
1970–2024	2.6	0.5 (20)	0.1 (2)	0.9 (35)	1.1 (42)	1970–2024	2.0	0.4 (20)	0.1 (6)	1.3 (66)	0.2 (9)				
Saudi Arabia	1970–1975	3.8	0.1 (2)	0.0 (0)	2.2 (59)	1.5 (39)	Singapore	1970–1975	4.0	0.5 (12)	0.2 (5)	2.6 (65)	0.7 (18)		
	1975–1980	−6.0	0.1 (−2)	0.1 (−1)	−1.5 (25)	−4.7 (78)		1975–1980	3.6	0.6 (18)	0.2 (4)	0.8 (23)	2.0 (55)		
	1980–1985	−12.8	0.2 (−2)	0.0 (0)	−3.5 (27)	−9.6 (75)		1980–1985	3.2	1.3 (40)	0.5 (16)	2.4 (73)	−1.0 (−30)		
	1985–1990	−2.5	0.4 (−15)	−0.1 (2)	−2.3 (92)	−0.5 (21)		1985–1990	2.9	0.7 (24)	0.6 (22)	−0.1 (−2)	1.6 (57)		
	1990–1995	0.4	0.5 (128)	0.0 (−9)	0.9 (217)	−1.0 (−237)		1990–1995	3.9	1.7 (43)	0.5 (13)	0.8 (21)	0.9 (23)		
	1995–2000	0.7	0.5 (74)	0.0 (0)	−1.2 (−180)	1.4 (205)		1995–2000	3.7	1.0 (26)	0.5 (13)	1.7 (46)	0.6 (15)		
	2000–2005	−0.5	0.3 (−67)	0.1 (−10)	−1.9 (387)	1.0 (−210)		2000–2005	3.7	1.0 (27)	0.5 (12)	1.0 (25)	1.3 (35)		
	2005–2010	−1.9	0.3 (−14)	0.2 (−9)	−0.9 (46)	−1.5 (77)		2005–2010	1.5	0.4 (26)	0.2 (12)	−1.1 (−73)	2.1 (134)		
	2010–2015	1.6	0.6 (39)	0.2 (9)	0.1 (5)	0.8 (47)		2010–2015	2.1	0.6 (26)	0.7 (31)	0.6 (29)	0.3 (14)		
	2015–2019	−0.5	−0.1 (11)	0.0 (1)	−0.9 (191)	0.5 (−103)		2015–2019	3.4	0.7 (20)	0.6 (17)	1.2 (35)	0.9 (28)		
2019–2024	−3.2	0.5 (−15)	0.0 (1)	−3.7 (114)	0.0 (0)	2019–2024	2.5	0.6 (25)	0.5 (20)	0.3 (11)	1.1 (45)				
1970–2024	−1.9	0.3 (−17)	0.0 (−2)	−1.1 (60)	−1.1 (59)	1970–2024	3.1	0.8 (26)	0.4 (14)	0.9 (29)	1.0 (33)				

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		Labor Productivity	Labor Quality	Capital deepening		TFP				Labor Productivity	Labor Quality	Capital deepening		TFP	
				ICT	Non-ICT							ICT	Non-ICT		
Sri Lanka	1970–1975	1.8	0.2 (13)	0.0 (1)	1.3 (69)	0.3 (17)		Thailand	1970–1975	3.0	1.4 (46)	0.0 (1)	1.2 (38)	0.4 (14)	
	1975–1980	3.1	0.2 (6)	0.0 (1)	1.7 (56)	1.2 (37)			1975–1980	0.9	1.1 (117)	0.1 (14)	–0.6 (–65)	0.3 (35)	
	1980–1985	4.2	1.1 (27)	0.1 (2)	2.8 (66)	0.2 (5)			1980–1985	3.1	1.9 (60)	0.3 (9)	1.9 (61)	–0.9 (–30)	
	1985–1990	0.6	0.5 (96)	0.0 (–5)	–0.7 (–117)	0.7 (127)			1985–1990	6.3	1.9 (30)	0.4 (6)	2.0 (32)	2.1 (33)	
	1990–1995	4.8	1.0 (21)	0.0 (1)	0.4 (9)	3.3 (69)			1990–1995	6.3	1.7 (28)	0.7 (11)	5.1 (82)	–1.3 (–20)	
	1995–2000	1.1	0.2 (16)	0.1 (7)	–0.4 (–35)	1.2 (112)			1995–2000	1.1	1.9 (170)	0.1 (9)	2.3 (203)	–3.2 (–283)	
	2000–2005	4.6	1.0 (21)	0.2 (5)	1.7 (37)	1.7 (37)			2000–2005	5.2	1.8 (35)	0.4 (7)	0.5 (10)	2.4 (47)	
	2005–2010	5.5	–0.1 (–2)	0.2 (3)	3.2 (57)	2.3 (42)			2005–2010	2.4	0.8 (34)	0.6 (26)	0.6 (25)	0.4 (15)	
	2010–2015	5.8	0.3 (5)	0.2 (3)	5.1 (87)	0.3 (5)			2010–2015	4.4	1.7 (39)	0.6 (14)	1.9 (43)	0.2 (4)	
	2015–2019	2.5	0.4 (17)	0.4 (16)	3.8 (152)	–2.1 (–85)			2015–2019	4.3	0.7 (16)	0.0 (0)	1.9 (45)	1.7 (39)	
Türkiye	1970–1975	0.1	0.3 (524)	0.4 (574)	2.2 (3411)	–2.9 (–4409)		Vietnam	1970–1975	0.6	0.5 (78)	0.0 (3)	1.1 (169)	–1.0 (–149)	
	1975–1980	3.1	0.5 (15)	0.1 (5)	1.9 (60)	0.6 (20)			1975–1980	3.4	1.4 (41)	0.3 (9)	1.6 (48)	0.1 (2)	
	1980–1985	1.9	0.2 (12)	0.0 (2)	2.6 (135)	–0.9 (–48)			1980–1985	–0.9	0.4 (–43)	0.0 (1)	–0.9 (91)	–0.5 (51)	
	1985–1990	0.6	0.4 (61)	0.0 (0)	1.9 (326)	–1.6 (–288)			1985–1990	1.5	0.7 (46)	0.0 (1)	2.3 (151)	–1.5 (–98)	
	1990–1995	2.5	0.1 (5)	0.1 (4)	0.7 (30)	1.6 (62)			1990–1995	–0.6	0.3 (–55)	0.0 (–2)	–0.1 (12)	–0.8 (146)	
	1995–2000	1.7	0.4 (23)	0.2 (10)	0.2 (13)	0.9 (54)			1995–2000	0.0	0.1 (962)	0.0 (54)	–0.2 (–2124)	0.1 (1208)	
	2000–2005	1.5	0.3 (24)	0.1 (6)	1.9 (131)	–0.9 (–61)			2000–2005	6.0	0.1 (2)	0.0 (0)	2.5 (41)	3.4 (56)	
	2005–2010	4.5	0.6 (13)	0.3 (7)	3.5 (78)	0.1 (3)			2005–2010	5.4	0.1 (2)	0.0 (1)	4.4 (81)	0.8 (16)	
	2010–2015	2.6	1.0 (36)	0.2 (7)	1.2 (45)	0.3 (12)			2010–2015	7.7	1.1 (14)	0.1 (1)	5.4 (71)	1.1 (14)	
	2015–2019	1.5	0.5 (31)	0.2 (15)	3.0 (193)	–2.1 (–139)			2015–2019	4.6	0.7 (16)	0.1 (2)	5.8 (125)	–2.0 (–44)	
US	1970–1975	4.1	0.7 (18)	0.2 (6)	1.9 (47)	1.2 (30)		APO21	1970–1975	4.9	0.4 (8)	0.2 (4)	4.5 (93)	–0.2 (–4)	
	1975–1980	3.6	0.6 (17)	0.3 (7)	3.1 (84)	–0.3 (–9)			1975–1980	6.1	1.1 (17)	0.2 (3)	2.9 (48)	2.0 (32)	
	1980–1985	3.0	0.4 (15)	0.2 (5)	1.6 (53)	0.8 (27)			1980–1985	4.5	0.4 (9)	0.1 (1)	2.7 (60)	1.3 (29)	
	1985–1990	2.5	0.5 (19)	0.2 (6)	1.9 (78)	–0.1 (–3)			1985–1990	3.5	0.5 (14)	0.1 (2)	2.7 (76)	0.3 (9)	
	1990–1995	1.8	0.1 (4)	0.1 (5)	1.0 (52)	0.7 (38)			1990–1995	2.3	0.6 (24)	0.1 (4)	1.4 (58)	0.3 (14)	
	1995–2000	1.1	0.1 (6)	0.2 (18)	0.1 (7)	0.7 (69)			1995–2000	1.7	0.8 (49)	0.1 (5)	0.7 (43)	0.1 (4)	
	2000–2005	1.8	0.2 (11)	0.3 (16)	0.2 (12)	1.1 (61)			2000–2005	2.4	0.9 (40)	0.2 (8)	0.7 (28)	0.6 (25)	
	2005–2010	1.2	0.2 (19)	0.3 (24)	0.1 (11)	0.5 (46)			2005–2010	3.6	1.3 (36)	0.3 (7)	0.5 (15)	1.5 (42)	
	2010–2015	1.4	0.3 (22)	0.2 (16)	0.2 (11)	0.7 (50)			2010–2015	2.6	1.1 (42)	0.2 (6)	0.8 (31)	0.5 (20)	
	2015–2019	2.1	0.3 (15)	0.6 (27)	0.3 (12)	1.0 (46)			2015–2019	1.8	1.1 (62)	0.2 (13)	0.5 (26)	0.0 (0)	
Asia28	1970–1975	2.5	0.7 (27)	0.1 (3)	1.5 (63)	0.2 (7)		East Asia	1970–1975	2.7	1.4 (50)	0.1 (5)	0.0 (1)	1.2 (44)	
	1975–1980	1.8	0.7 (36)	0.1 (4)	1.3 (70)	–0.2 (–10)			1975–1980	2.9	1.5 (50)	0.1 (3)	0.5 (18)	0.8 (28)	
	1980–1985	1.3	1.1 (84)	0.1 (12)	–0.1 (–5)	0.1 (10)			1980–1985	2.8	1.7 (59)	0.1 (4)	0.4 (12)	0.7 (25)	
	1985–1990	3.3	1.1 (32)	0.2 (6)	0.5 (17)	1.5 (45)			1985–1990	2.9	0.9 (32)	0.2 (6)	0.8 (29)	1.0 (33)	
	1990–1995	3.9	1.5 (39)	0.1 (3)	0.9 (24)	1.3 (35)			1990–1995	2.5	0.5 (20)	0.1 (5)	0.8 (34)	1.0 (41)	
	1995–2000	2.5	1.0 (41)	0.2 (8)	0.6 (24)	0.7 (27)			1995–2000	2.6	1.1 (42)	0.2 (6)	0.6 (25)	0.7 (27)	
	2000–2005	3.6	1.6 (43)	0.2 (4)	0.5 (14)	1.4 (39)			2000–2005	2.3	0.7 (31)	0.1 (5)	1.5 (65)	0.0 (–2)	
	2005–2010	5.7	1.5 (27)	0.2 (3)	1.9 (34)	2.1 (37)			2005–2010	2.5	0.6 (23)	0.1 (4)	0.8 (32)	1.1 (42)	
	2010–2015	4.9	1.4 (28)	0.2 (5)	2.1 (43)	1.2 (24)			2010–2015	2.6	0.9 (36)	0.2 (8)	0.2 (9)	1.2 (48)	
	2015–2019	4.0	–0.2 (–6)	0.3 (8)	2.3 (59)	1.5 (39)			2015–2019	3.5	0.8 (24)	0.3 (8)	0.9 (27)	1.5 (41)	
SAARC	1970–1975	3.7	0.4 (10)	0.4 (11)	2.0 (53)	1.0 (27)		ASEAN	1970–1975	4.4	–1.1 (–26)	0.4 (9)	3.2 (73)	1.9 (47)	
	1975–1980	3.4	1.0 (29)	0.2 (6)	1.2 (36)	1.0 (29)			1975–1980	4.8	0.5 (10)	0.6 (12)	2.7 (57)	1.0 (21)	
	1980–1985	–0.2	0.5 (–260)	0.0 (–19)	0.2 (–95)	–0.8 (474)			1980–1985	4.0	0.9 (23)	0.2 (6)	1.5 (38)	1.3 (33)	
	1985–1990	0.8	0.9 (110)	0.0 (5)	0.3 (42)	–0.5 (–57)			1985–1990	2.9	1.3 (45)	0.0 (1)	0.8 (27)	0.8 (27)	
	1990–1995	2.7	1.0 (38)	0.1 (3)	0.6 (23)	1.0 (36)			1990–1995	3.2	1.0 (32)	0.1 (2)	0.9 (28)	1.2 (38)	
	1995–2000	3.5	1.2 (35)	0.2 (5)	0.7 (19)	1.4 (40)			1995–2000	0.6	1.3 (242)	0.1 (24)	0.5 (83)	–1.4 (–249)	
	2000–2005	2.9	0.8 (26)	0.2 (5)	0.6 (20)	1.4 (49)			2000–2005	4.2	1.8 (44)	0.2 (4)	–0.2 (–4)	2.3 (56)	
	2005–2010	3.9	1.3 (33)	0.2 (5)	0.7 (19)	1.7 (43)			2005–2010	5.4	2.5 (46)	0.3 (5)	1.4 (26)	1.2 (23)	
	2010–2015	4.2	1.0 (23)	0.2 (5)	0.9 (21)	2.1 (51)			2010–2015	0.5	2.0 (424)	0.1 (22)	0.4 (86)	–2.0 (–432)	
	2015–2019	6.1	1.8 (29)	0.4 (6)	2.0 (32)	1.9 (32)			2015–2019	3.9	2.7 (71)	0.2 (5)	–0.6 (–15)	1.5 (39)	
ASEAN6	1970–1975	4.1	1.4 (33)	0.4 (8)	1.5 (37)	0.9 (21)		CLMV	1970–1975	2.6	1.7 (67)	0.2 (8)	–0.1 (–3)	0.7 (28)	
	1975–1980	4.5	0.8 (17)	0.4 (10)	1.6 (36)	1.6 (37)			1975–1980	3.9	2.9 (75)	0.2 (5)	0.5 (13)	0.2 (6)	
	1980–1985	3.7	0.5 (12)	0.2 (4)	1.3 (36)	1.8 (48)			1980–1985	3.6	1.8 (50)	0.1 (2)	0.9 (24)	0.9 (24)	
	1985–1990	3.3	1.0 (31)	0.2 (6)	0.9 (29)	1.1 (35)			1985–1990	2.3	0.7 (31)	0.1 (4)	1.3 (55)	0.2 (9)	
	1990–1995	3.6	1.7 (48)	0.0 (1)	0.7 (20)	1.1 (32)			1990–1995	3.0	1.8 (61)	0.1 (5)	0.5 (17)	0.5 (17)	
	1995–2000	3.0	1.4 (46)	0.1 (2)	0.3 (9)	1.3 (42)			1995–2000	–0.8	0.9 (–102)	0.0 (2)	–0.4 (42)	–1.3 (158)	
	2000–2005	0.6	1.8 (331)	0.1 (26)	0.2 (34)	–1.6 (–290)			2000–2005	1.5	1.4 (98)	0.0 (1)	1.5 (101)	–1.5 (–100)	
	2005–2010	4.6	2.9 (62)	0.2 (4)	–0.7 (–16)	2.3 (50)			2005–2010	0.3	0.8 (303)	0.0 (11)	–0.1 (–33)	–0.5 (–181)	
	2010–2015	5.6	3.9 (69)	0.3 (5)	0.7 (13)	0.8 (13)			2010–2015	–0.1	0.5 (–647)	0.0 (–21)	–0.4 (522)	–0.2 (245)	
	2015–2019	0.2	2.8 (1776)	0.1 (63)	0.0 (–29)	–2.7 (–1710)			2015–2019	4.6	0.2 (4)	0.0 (1)	1.9 (41)	2.5 (54)	

Unit: Percentage (average annual growth rate) and percentage points (contributions written in parentheses).

Source: APO Productivity Database 2026.

Table 9.15 Industry Value-added Share, 1980–2024

—Shares of industry GDP at current prices by Industry

	1980				1990				2000				2010				2024			
	Agriculture	Manufacturing	Service	Others	Agriculture	Manufacturing	Service	Others	Agriculture	Manufacturing	Service	Others	Agriculture	Manufacturing	Service	Others	Agriculture	Manufacturing	Service	Others
Afghanistan	47.5	19.8	18.1	14.6	34.3	19.0	18.2	28.5	55.7	16.1	21.9	6.2	30.7	6.5	56.1	6.7	36.5	9.0	48.1	6.5
Bahrain	0.7	10.9	45.6	42.8	0.7	11.1	58.0	30.2	0.6	11.4	55.1	32.9	0.3	14.7	55.3	29.6	0.3	20.8	55.7	23.3
Bangladesh	31.0	13.8	38.3	7.2	29.3	12.7	40.7	7.6	23.8	14.7	44.7	8.6	17.3	19.0	44.4	9.5	11.5	22.6	53.2	12.6
Bhutan	41.4	2.7	47.5	8.4	34.0	7.6	42.8	15.6	22.7	8.0	43.1	26.2	13.3	8.4	44.1	34.1	14.7	6.9	53.2	25.3
Brunei	0.2	19.4	9.3	71.1	0.9	13.8	35.8	49.5	1.0	18.3	34.3	46.4	0.7	14.6	31.9	52.7	1.2	18.3	38.1	42.5
Cambodia	43.8	10.0	40.7	5.5	49.9	8.6	37.5	4.0	37.8	16.9	39.1	6.2	29.8	21.0	42.4	6.7	17.8	29.1	38.2	15.0
China	26.0	32.4	32.0	9.5	24.3	28.1	38.4	9.2	13.7	29.7	44.5	12.1	9.0	30.2	47.2	13.6	7.0	24.5	57.7	10.9
ROC	7.8	34.4	46.2	11.6	4.2	32.3	55.0	8.4	2.1	25.8	66.3	5.8	1.6	29.1	64.5	4.8	1.5	36.8	56.8	4.9
Fiji	21.0	10.8	58.7	9.5	17.7	10.5	63.7	8.1	16.3	13.3	62.6	7.9	11.7	15.3	67.1	5.9	18.8	14.2	62.0	5.0
Hong Kong	0.8	20.5	70.5	8.2	0.2	14.9	77.3	7.6	0.1	4.8	87.3	7.8	0.1	1.8	93.0	5.2	0.0	1.0	93.6	5.4
India	37.8	15.7	39.1	7.4	31.1	15.4	44.2	9.3	24.8	13.7	51.7	9.8	18.0	14.9	54.4	12.7	19.4	14.5	52.9	13.3
Indonesia	19.2	10.8	46.0	24.1	15.1	16.7	54.9	13.4	12.2	21.2	51.9	14.7	14.2	22.4	42.4	21.1	13.2	19.8	45.7	21.2
Iran	13.1	12.3	49.5	25.2	15.1	18.5	49.0	17.4	10.7	15.4	46.7	27.2	5.9	14.1	45.0	35.0	7.4	18.3	42.2	32.1
Japan	3.5	27.4	57.7	11.4	2.4	26.5	59.4	11.6	1.5	22.2	67.1	9.1	1.2	20.7	71.6	6.5	1.1	19.1	73.3	6.5
Kazakhstan	23.7	7.4	32.5	36.4	33.6	5.2	34.6	26.5	8.6	17.5	51.3	22.6	4.7	11.7	53.4	30.3	4.1	13.2	61.7	21.0
Korea	15.7	24.5	48.9	10.9	8.1	27.8	52.1	12.0	4.1	29.4	57.9	8.6	2.2	30.8	60.1	6.9	1.6	28.7	61.9	7.8
Kuwait	0.3	5.6	27.1	67.0	1.6	11.2	49.1	38.1	0.6	6.5	44.2	48.7	0.4	5.3	41.4	52.9	0.5	7.4	46.3	45.9
Kyrgyzstan	27.8	26.4	32.3	13.5	33.6	25.9	28.8	11.7	36.6	19.4	32.1	11.9	18.8	18.1	53.0	10.1	10.1	14.8	61.1	14.0
Lao PDR	65.9	3.7	23.0	7.4	61.2	5.1	24.3	9.4	52.5	10.7	24.6	12.2	31.4	9.8	40.4	18.4	30.6	11.8	32.3	25.3
Malaysia	22.7	19.0	42.0	16.3	15.5	22.9	45.2	16.4	8.6	29.2	46.5	15.7	10.2	23.7	48.9	17.2	8.3	22.1	54.7	14.9
Maldives	19.7	5.0	67.7	7.6	10.0	4.4	80.5	5.1	6.1	5.0	82.4	6.6	6.1	2.5	83.8	7.7	4.5	1.9	84.7	8.9
Mongolia	8.1	16.6	56.7	18.7	9.6	19.4	50.6	20.3	24.7	7.4	52.6	15.3	13.1	7.6	50.0	29.4	8.1	6.2	49.4	36.3
Myanmar	46.5	9.5	40.8	3.1	54.4	7.6	35.4	2.5	53.4	8.4	31.2	7.0	24.7	5.4	19.5	50.4	26.4	12.2	35.5	25.8
Nepal	50.7	5.1	39.4	4.8	45.8	5.9	41.9	6.4	35.2	8.9	47.4	8.5	33.2	6.2	51.5	9.2	24.7	4.9	62.4	8.0
Oman	2.5	0.6	28.2	68.7	2.9	2.9	40.5	53.6	2.2	5.6	39.4	52.7	1.4	10.4	35.9	52.4	2.5	9.7	44.8	43.0
Pakistan	31.2	14.5	45.6	8.7	26.3	14.1	50.9	8.7	26.8	9.6	55.0	8.5	23.6	13.5	54.6	8.2	25.1	13.9	53.6	7.5
Philippines	21.7	28.3	36.0	13.9	19.0	27.5	43.0	10.5	13.9	25.3	51.1	9.7	13.7	21.9	53.9	10.4	9.1	15.7	63.2	12.0
Qatar	0.5	3.3	23.5	72.7	0.8	13.0	42.8	43.5	0.4	5.4	29.5	64.7	0.1	8.9	32.4	58.6	0.3	7.8	43.6	48.3
Saudi Arabia	1.0	4.0	27.5	67.5	5.7	8.4	44.9	40.9	5.0	9.4	40.8	44.8	2.6	10.9	38.9	47.6	2.7	17.0	49.6	30.7
Singapore	1.6	27.5	62.2	8.7	0.3	25.6	67.3	6.8	0.1	27.7	65.1	7.1	0.0	22.0	71.8	6.2	0.0	17.2	77.3	5.5
Sri Lanka	20.3	21.3	47.9	10.5	17.4	19.9	53.6	9.0	11.6	20.3	59.9	8.2	10.1	20.5	59.0	10.4	9.2	19.1	62.9	8.7
Tajikistan	31.7	28.5	26.1	13.7	29.0	23.7	31.7	15.6	21.0	27.7	26.3	25.0	20.1	17.1	44.6	18.2	24.9	16.3	37.3	21.5
Thailand	19.3	23.3	50.6	6.7	10.0	27.1	53.1	9.8	8.5	28.4	54.8	8.3	10.5	30.9	49.6	9.0	8.9	24.2	59.3	7.6
Türkiye	26.1	17.0	49.0	7.9	17.6	22.2	50.3	10.0	11.2	20.9	58.9	9.0	10.1	17.2	62.1	10.7	6.6	19.0	64.7	9.7
Turkmenistan	26.4	15.9	29.1	28.6	32.2	15.4	23.8	28.5	22.9	24.6	26.2	26.3	11.5	30.5	18.5	39.4	11.3	18.2	29.5	41.0
UAE	0.5	3.8	32.9	62.8	1.1	7.3	44.2	47.4	2.1	12.2	48.3	37.5	0.7	8.1	49.0	42.2	0.8	9.4	54.9	35.0
Uzbekistan	27.4	30.0	26.5	16.1	32.0	22.1	29.5	16.4	29.4	13.3	42.8	14.5	26.8	11.5	48.6	13.1	18.2	20.5	48.9	12.4
Vietnam	51.4	12.5	32.5	3.5	38.7	7.9	43.3	10.1	21.9	17.3	44.6	16.2	17.3	19.2	45.9	17.6	12.9	26.6	46.6	13.9
(region)																				
APO21	15.5	21.9	50.6	12.1	12.0	22.6	54.1	11.2	10.2	20.7	58.6	10.6	10.0	19.9	58.1	12.0	11.0	19.1	57.5	12.4
Asia28	15.7	21.4	45.2	17.7	14.0	22.8	50.8	12.4	11.0	22.6	54.0	12.4	9.5	23.6	53.2	13.8	9.0	21.4	57.3	12.2
Asia38	15.5	20.6	44.3	19.6	14.3	22.2	50.1	13.5	10.9	22.2	53.7	13.2	9.3	23.1	52.9	14.7	8.9	21.1	57.1	12.9
East Asia	10.2	28.7	50.3	10.8	9.5	27.1	52.7	10.7	7.4	26.2	56.2	10.3	6.5	27.7	54.6	11.2	5.6	24.2	60.2	9.9
SAARC	36.4	15.5	40.1	7.9	30.1	15.0	45.4	9.5	24.9	13.3	52.3	9.5	18.6	15.0	54.6	11.9	19.1	15.1	53.2	12.6
ASEAN	21.9	17.8	43.4	16.9	15.9	20.6	51.4	12.1	12.1	23.8	51.5	12.7	12.5	23.5	48.0	16.0	10.8	20.9	53.0	15.3
ASEAN6	18.6	18.6	44.4	18.4	13.4	21.7	52.4	12.4	10.1	24.7	52.7	12.5	11.4	24.5	48.9	15.3	9.9	20.1	54.7	15.2
CS	25.2	14.3	30.8	29.7	33.0	11.2	32.2	23.6	17.3	17.7	44.5	20.4	11.1	14.0	48.5	26.4	10.0	16.0	53.8	20.2
CLMV	50.6	11.4	34.3	3.8	43.5	7.8	40.5	8.3	29.2	15.6	41.3	13.9	19.5	17.3	42.2	20.9	15.0	25.0	44.5	15.4
GCC	0.9	4.1	28.3	66.8	4.3	8.3	45.0	42.4	3.7	9.4	42.1	44.8	1.8	9.8	40.7	47.8	1.9	13.8	50.0	34.4
IPEF	6.9	21.6	60.4	11.0	5.7	19.9	64.7	9.7	4.7	17.8	68.7	8.8	5.4	16.1	68.7	9.7	6.7	14.5	68.5	10.3
RCEP	12.6	25.4	49.2	12.8	10.9	24.8	52.9	11.5	8.5	25.1	55.1	11.2	7.7	26.4	53.2	12.7	6.6	22.9	59.1	11.3
(reference)																				
US	2.2	21.0	67.0	9.9	1.6	17.6	72.8	8.0	1.0	15.1	76.6	7.3	1.0	11.9	79.8	7.4	0.9	9.8	81.9	7.4
Australia	5.8	18.3	57.4	18.5	3.4	13.6	66.5	16.5	3.8	11.8	70.3	14.0	2.5	7.8	69.2	20.6	2.4	5.7	72.1	19.8
New Zealand	10.1	25.1	54.9	9.8	6.4	19.2	65.0	9.4	8.3	16.6	66.4	8.7	7.1	11.7	69.7	11.5	5.2	9.3	74.5	11.1

Unit: Percentage.

Source: Official national accounts in each country, including adjustments by APO-PDB.

Notes: Services are defined as the total of industries 6–9. Others are defined as the total of industries 2, 4, and 5 of nine industries, which consist of 1–agriculture; 2–mining; 3–manufacturing; 4–electricity, gas, and water supply; 5–construction; 6–wholesale and retail trade, hotels, and restaurants; 7–transport, storage, and communications; 8–finance, real estate, and business activities; and 9–community, social, and personal services. The ISIC Rev.3/Rev.4 concordance used for this classification is available from APO upon request.

Table 9.16 Industry Origins of Economic Growth, 2010–2024

—Contributions to economic growth by industry

	1. Agriculture	2. Mining	3. Manufacturing	4. Electricity, gas, and water supply	5. Construction	6. Wholesale and retail trade, hotels, and restaurants	7. Transport, storage, and communications	8. Finance, real estate, and business activities	9. Community, social, and personal services	Total economy
Afghanistan	2.4 (0.6)	7.8 (0.1)	1.8 (0.1)	2.8 (0.1)	−4.6 (−0.1)	0.6 (0.1)	−0.7 (−0.1)	−0.3 (−0.1)	−1.1 (−0.1)	0.6
Bahrain	2.9 (0.0)	0.5 (0.1)	3.2 (0.6)	1.4 (0.0)	2.3 (0.2)	1.4 (0.1)	4.8 (0.3)	3.0 (0.7)	3.5 (0.7)	2.7
Bangladesh	3.8 (0.5)	7.7 (0.1)	9.7 (2.0)	7.3 (0.1)	8.9 (0.7)	7.5 (1.2)	6.3 (0.6)	4.2 (0.5)	5.3 (0.8)	6.7
Bhutan	2.3 (0.3)	7.5 (0.2)	1.1 (0.1)	3.3 (0.5)	2.7 (0.5)	9.7 (1.0)	7.0 (0.8)	5.9 (0.7)	4.7 (0.7)	4.7
Brunei	1.9 (0.0)	−2.2 (−1.0)	2.6 (0.3)	3.1 (0.0)	1.2 (0.0)	1.5 (0.1)	1.1 (0.0)	3.1 (0.2)	1.3 (0.2)	−0.1
Cambodia	1.2 (0.3)	20.8 (0.3)	9.1 (2.3)	6.9 (0.1)	9.8 (0.7)	4.1 (0.7)	6.9 (0.3)	6.0 (0.6)	5.2 (0.5)	5.8
China	4.1 (0.3)	3.5 (0.1)	6.2 (1.7)	5.1 (0.1)	5.8 (0.4)	7.1 (0.8)	8.9 (0.6)	4.2 (0.8)	7.9 (1.4)	6.1
ROC	−0.9 (−0.0)	−1.4 (−0.0)	5.1 (1.7)	−1.4 (−0.0)	1.2 (0.0)	1.7 (0.3)	4.2 (0.3)	3.4 (0.6)	1.3 (0.2)	3.2
Fiji	3.3 (0.6)	−7.6 (−0.1)	0.4 (0.1)	7.9 (0.1)	0.3 (0.0)	0.8 (0.2)	3.2 (0.4)	2.2 (0.4)	2.3 (0.3)	2.0
Hong Kong	−3.0 (−0.0)	−3.0 (−0.0)	0.3 (0.0)	−0.7 (−0.0)	3.6 (0.1)	−0.2 (0.0)	2.3 (0.3)	1.9 (0.7)	2.3 (0.4)	1.6
India	5.3 (1.0)	3.7 (0.1)	6.7 (1.1)	10.3 (0.3)	5.9 (0.5)	3.9 (0.3)	5.0 (0.3)	9.5 (2.0)	5.7 (0.7)	6.3
Indonesia	3.0 (0.4)	2.0 (0.2)	3.9 (0.8)	4.4 (0.1)	5.0 (0.5)	4.4 (0.7)	7.5 (0.7)	4.4 (0.4)	4.7 (0.5)	4.3
Iran	1.0 (0.1)	0.1 (−0.2)	−1.0 (−0.1)	2.2 (0.1)	−1.7 (−0.1)	−0.9 (−0.1)	4.0 (0.3)	3.4 (0.5)	2.9 (0.3)	0.9
Japan	−1.5 (−0.0)	−1.9 (−0.0)	0.6 (0.1)	−0.5 (−0.0)	0.2 (0.0)	−0.7 (−0.1)	1.8 (0.1)	1.2 (0.2)	1.3 (0.4)	0.8
Kazakhstan	3.5 (0.2)	1.3 (0.2)	3.9 (0.5)	2.0 (0.0)	7.3 (0.4)	5.8 (1.0)	5.2 (0.5)	2.2 (0.4)	2.8 (0.4)	3.7
Korea	0.0 (0.0)	−3.2 (−0.0)	2.7 (0.8)	2.3 (0.1)	1.0 (0.1)	1.9 (0.2)	4.2 (0.4)	3.1 (0.6)	3.1 (0.6)	2.7
Kuwait	2.9 (0.0)	0.3 (0.4)	3.9 (0.3)	6.8 (0.1)	2.9 (0.1)	0.8 (0.0)	−0.6 (−0.1)	0.3 (0.0)	3.3 (0.6)	1.5
Kyrgyzstan	2.2 (0.3)	13.3 (0.1)	3.9 (0.6)	4.3 (0.1)	10.7 (0.8)	7.9 (1.6)	3.5 (0.3)	2.5 (0.3)	1.1 (0.2)	4.4
Lao PDR	2.6 (0.7)	2.4 (0.4)	7.8 (0.7)	14.7 (0.9)	8.3 (0.6)	4.1 (0.7)	8.4 (0.3)	7.2 (0.5)	4.0 (0.4)	5.2
Malaysia	1.3 (0.1)	0.1 (0.0)	4.4 (1.0)	3.6 (0.1)	4.9 (0.2)	5.4 (1.0)	6.3 (0.6)	4.3 (0.5)	5.3 (0.7)	4.2
Maldives	−0.3 (−0.0)	0.0 ()	3.1 (0.1)	9.9 (0.2)	3.0 (0.2)	5.2 (1.8)	6.3 (0.8)	5.4 (0.9)	5.6 (1.0)	5.0
Mongolia	3.4 (0.6)	5.1 (1.1)	4.4 (0.4)	5.3 (0.1)	6.6 (0.3)	6.6 (1.0)	7.3 (0.6)	6.3 (0.8)	3.1 (0.4)	5.2
Myanmar	2.2 (0.5)	−5.3 (−0.3)	5.9 (0.4)	4.4 (0.1)	5.1 (0.4)	2.7 (0.3)	3.1 (0.2)	15.8 (0.1)	6.9 (0.5)	2.0
Nepal	2.9 (0.8)	5.2 (0.0)	3.1 (0.2)	8.8 (0.2)	4.2 (0.3)	3.3 (0.6)	5.8 (0.5)	5.3 (0.8)	4.9 (0.8)	4.1
Oman	9.1 (0.2)	1.4 (0.5)	2.2 (0.2)	10.1 (0.2)	7.6 (0.5)	5.6 (0.5)	6.9 (0.4)	4.4 (0.4)	3.8 (0.6)	3.5
Pakistan	2.9 (0.7)	0.0 (0.0)	3.5 (0.5)	3.9 (0.1)	1.5 (0.0)	3.4 (0.7)	3.6 (0.4)	2.8 (0.2)	4.7 (0.8)	3.3
Philippines	1.2 (0.1)	1.2 (0.0)	4.1 (0.8)	5.1 (0.2)	6.7 (0.4)	5.1 (1.0)	6.1 (0.4)	6.6 (1.3)	4.9 (0.6)	4.9
Qatar	8.6 (0.0)	0.7 (0.5)	2.7 (0.3)	11.8 (0.1)	7.2 (0.5)	3.8 (0.2)	4.1 (0.2)	5.7 (0.8)	4.5 (0.5)	3.0
Saudi Arabia	3.5 (0.1)	0.9 (0.5)	5.1 (0.6)	4.7 (0.1)	6.3 (0.4)	6.1 (0.6)	5.6 (0.3)	4.8 (0.5)	3.8 (0.7)	3.8
Singapore	2.2 (0.0)	0.0 ()	3.4 (0.7)	1.4 (0.0)	2.4 (0.1)	3.4 (0.7)	4.7 (0.6)	4.2 (1.3)	2.5 (0.3)	3.7
Sri Lanka	1.5 (0.1)	1.6 (0.0)	1.7 (0.3)	1.6 (0.0)	3.3 (0.3)	3.5 (0.6)	4.4 (0.6)	4.3 (0.5)	2.9 (0.5)	2.9
Tajikistan	5.2 (1.2)	13.7 (0.4)	5.8 (0.9)	3.1 (0.2)	9.6 (1.3)	7.8 (1.0)	2.5 (0.2)	10.5 (0.5)	3.9 (0.5)	6.3
Thailand	1.2 (0.1)	−1.1 (−0.0)	0.7 (0.2)	2.7 (0.1)	1.9 (0.1)	3.6 (0.7)	3.9 (0.3)	4.4 (0.5)	2.0 (0.3)	2.2
Turkmenistan	7.7 (0.8)	5.5 (2.0)	2.3 (0.6)	3.5 (0.0)	3.1 (0.2)	6.0 (0.1)	4.8 (0.2)	4.8 (0.1)	4.3 (0.6)	4.6
US	2.0 (0.0)	4.3 (0.1)	1.4 (0.1)	1.4 (0.0)	2.0 (0.1)	2.2 (0.3)	5.2 (0.4)	2.9 (0.9)	1.3 (0.4)	2.4
UAE	3.3 (0.0)	2.1 (0.7)	4.9 (0.4)	3.5 (0.1)	2.0 (0.2)	3.4 (0.5)	3.4 (0.3)	4.1 (0.8)	4.8 (0.5)	3.4
Uzbekistan	4.2 (1.1)	2.1 (0.0)	7.1 (1.2)	3.9 (0.1)	11.3 (0.8)	9.2 (1.1)	8.3 (0.7)	6.5 (0.6)	5.5 (0.8)	6.4
Vietnam (region)	3.1 (0.5)	−1.9 (−0.0)	8.2 (2.0)	8.2 (0.3)	6.3 (0.4)	6.9 (0.9)	7.7 (0.7)	5.5 (0.7)	6.3 (0.7)	6.1
APO21	3.9 (0.4)	1.3 (0.0)	3.9 (0.8)	5.0 (0.1)	4.2 (0.3)	3.0 (0.4)	4.7 (0.4)	5.4 (0.9)	3.4 (0.6)	4.0
Asia28	3.9 (0.4)	2.0 (0.1)	5.1 (1.2)	5.1 (0.1)	4.9 (0.3)	4.5 (0.6)	6.3 (0.5)	4.9 (0.8)	5.2 (0.9)	4.8
Asia38	3.9 (0.3)	1.9 (0.1)	5.1 (1.1)	5.1 (0.1)	5.0 (0.3)	4.5 (0.6)	6.3 (0.5)	4.8 (0.8)	5.2 (0.9)	4.8
East Asia	3.8 (0.2)	3.4 (0.1)	5.2 (1.4)	4.0 (0.1)	4.7 (0.3)	4.9 (0.6)	7.1 (0.5)	3.5 (0.7)	5.4 (1.1)	4.9
SAARC	4.9 (0.9)	3.6 (0.1)	6.6 (1.1)	9.4 (0.2)	5.9 (0.5)	3.9 (0.4)	4.9 (0.3)	8.8 (1.7)	5.4 (0.8)	5.9
ASEAN	2.4 (0.3)	1.0 (0.1)	3.9 (0.9)	4.7 (0.1)	5.0 (0.3)	4.6 (0.8)	6.3 (0.5)	4.9 (0.6)	4.2 (0.5)	4.1
ASEAN6	2.2 (0.2)	1.3 (0.1)	3.1 (0.7)	3.7 (0.1)	4.8 (0.3)	4.4 (0.8)	6.1 (0.5)	4.8 (0.6)	3.9 (0.5)	3.8
C5	0.9 (0.1)	2.5 (0.4)	4.6 (0.7)	2.9 (0.1)	8.2 (0.6)	6.6 (1.0)	5.8 (0.5)	3.3 (0.4)	3.6 (0.5)	4.2
CLMV	2.8 (0.5)	−1.5 (−0.0)	8.2 (1.8)	8.4 (0.3)	6.2 (0.4)	6.2 (0.8)	7.3 (0.6)	5.6 (0.6)	6.1 (0.7)	5.6
GCC	3.9 (0.1)	1.0 (0.5)	4.7 (0.5)	5.0 (0.1)	5.0 (0.3)	4.9 (0.5)	4.5 (0.3)	4.3 (0.6)	3.9 (0.6)	3.4
IPEF	4.0 (0.2)	2.7 (0.1)	2.9 (0.4)	3.9 (0.1)	3.4 (0.2)	2.6 (0.3)	4.8 (0.4)	3.9 (1.0)	2.2 (0.5)	3.2
RCEP	3.4 (0.2)	2.5 (0.1)	4.9 (1.2)	4.1 (0.1)	4.6 (0.3)	4.9 (0.6)	6.9 (0.5)	3.7 (0.7)	5.3 (1.0)	4.7
(reference)										
US	2.0 (0.0)	4.3 (0.1)	1.3 (0.1)	1.4 (0.0)	2.0 (0.1)	2.2 (0.3)	5.2 (0.4)	2.9 (0.9)	1.3 (0.4)	2.4
Australia	1.6 (0.0)	3.4 (0.3)	3.3 (0.0)	0.9 (0.0)	1.3 (0.1)	2.1 (0.2)	3.1 (0.2)	2.5 (0.7)	3.3 (0.8)	2.4
New Zealand	2.2 (0.1)	−4.4 (−0.0)	2.4 (0.0)	0.8 (0.0)	3.6 (0.2)	2.4 (0.3)	3.0 (0.2)	3.2 (1.0)	2.4 (0.5)	2.4

Unit: Percentage (average annual growth rate) and percentage points (contributions written in parentheses).

Source: APO Productivity Database 2026.

Table 9.17 Industry Origins of Labor Productivity Growth, 2010–2024

—Contributions to labor productivity by industry

	1. Agriculture	2. Mining	3. Manufacturing	4. Electricity, gas, and water supply	5. Construction	6. Wholesale and retail trade, hotels, and restaurants	7. Transport, storage, and communications	8. Finance, real estate, and business activities	9. Community, social, and personal services	Total economy
Afghanistan	2.5 (−0.3)	6.9 (0.2)	1.5 (0.0)	3.0 (0.1)	−9.6 (−0.6)	−3.4 (−0.3)	−4.3 (−0.2)	−6.2 (0.1)	0.3 (0.2)	−0.9
Bahrain	1.4 (0.0)	−0.7 (0.2)	2.4 (0.5)	−1.0 (−0.0)	0.3 (−0.3)	−0.1 (−0.2)	2.1 (0.1)	0.1 (0.5)	1.8 (0.1)	0.9
Bangladesh	4.8 (0.1)	12.3 (0.1)	8.8 (1.9)	6.9 (0.1)	6.4 (0.6)	6.0 (1.0)	4.0 (0.4)	1.0 (0.4)	4.0 (0.7)	5.4
Brunei	−7.8 (−0.3)	−0.5 (−1.1)	−1.3 (−0.1)	5.0 (0.0)	−1.9 (−1.0)	−2.1 (−0.9)	−1.1 (−0.1)	−0.4 (0.1)	2.6 (0.6)	−2.9
Cambodia	4.2 (1.0)	25.8 (0.3)	7.9 (2.2)	2.4 (0.1)	1.9 (0.4)	−2.7 (−0.8)	1.3 (0.1)	−0.3 (0.5)	−1.9 (−0.6)	3.2
China	8.9 (1.4)	6.4 (0.1)	6.4 (1.7)	6.4 (0.1)	6.4 (0.4)	5.2 (0.5)	5.2 (0.5)	5.2 (0.8)	5.2 (0.7)	6.4
ROC	−0.3 (−0.0)	−1.4 (−0.0)	4.8 (1.6)	−0.9 (−0.0)	0.1 (0.0)	1.6 (0.3)	2.4 (0.2)	2.4 (0.5)	−0.3 (−0.1)	2.5
Fiji	0.8 (0.4)	−4.5 (−0.0)	4.0 (0.5)	7.4 (0.1)	−2.8 (−0.2)	−0.8 (−0.1)	1.5 (0.6)	−0.6 (0.2)	1.5 (0.1)	1.6
Hong Kong	−2.5 (−0.0)	0.0 ()	3.4 (0.1)	−1.0 (−0.0)	1.6 (0.0)	2.0 (0.6)	2.4 (0.3)	−0.1 (0.3)	0.5 (−0.1)	1.2
India	3.2 (1.6)	6.6 (0.1)	4.0 (0.8)	5.3 (0.2)	2.0 (0.2)	0.9 (−0.1)	1.6 (0.2)	3.4 (1.9)	3.1 (0.5)	5.5
Indonesia	6.1 (0.6)	0.1 (0.2)	1.6 (0.5)	2.1 (0.0)	1.3 (0.3)	1.8 (0.1)	7.9 (0.7)	−6.3 (0.1)	0.7 (−0.3)	2.3
Iran	0.6 (0.3)	−4.4 (−0.1)	−2.2 (−0.3)	−1.3 (0.1)	−2.8 (−0.2)	−2.8 (−0.5)	2.4 (0.2)	−1.6 (0.2)	1.1 (−0.1)	−0.4
Japan	−1.9 (0.1)	−0.9 (−0.0)	0.5 (0.1)	−0.8 (−0.0)	0.6 (0.0)	−0.2 (−0.0)	0.3 (0.0)	1.0 (0.2)	−0.2 (−0.2)	0.2
Kazakhstan	9.9 (0.9)	−2.9 (0.1)	1.8 (0.4)	−1.3 (−0.1)	4.7 (0.3)	2.3 (0.4)	1.5 (0.2)	−2.6 (0.1)	−2.0 (−1.1)	1.2
Korea	2.2 (0.0)	3.8 (0.0)	2.1 (0.7)	1.2 (0.0)	0.0 (0.0)	2.0 (0.2)	1.8 (0.1)	1.5 (0.4)	0.8 (0.0)	1.6
Kuwait	−2.0 (−0.1)	1.7 (0.6)	−1.9 (−0.0)	4.9 (0.1)	−1.6 (−0.5)	−7.0 (−1.2)	−4.3 (−0.2)	−1.9 (−0.1)	0.8 (−0.7)	−2.1
Kyrgyzstan	7.0 (1.0)	14.3 (0.2)	−0.1 (0.3)	2.3 (0.1)	8.3 (0.6)	5.2 (1.1)	−1.6 (−0.1)	2.0 (0.3)	−1.5 (−0.4)	3.0
Lao PDR	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0
Malaysia	2.2 (0.2)	−3.0 (−0.0)	2.7 (0.7)	1.3 (0.1)	3.1 (0.0)	1.6 (0.0)	3.8 (0.4)	0.2 (0.1)	3.6 (0.3)	1.9
Maldives	−0.3 (−0.3)	0.0 ()	0.3 (−0.2)	3.1 (0.1)	−0.1 (−0.0)	1.3 (1.4)	2.1 (0.5)	−1.2 (0.7)	2.8 (0.2)	2.4
Mongolia	9.8 (0.8)	−0.7 (0.8)	0.7 (0.0)	2.4 (0.0)	2.0 (0.0)	4.4 (0.6)	6.5 (0.5)	0.5 (0.7)	0.0 (−0.3)	3.1
Nepal	2.4 (0.3)	4.0 (0.0)	0.0 (−0.1)	6.4 (0.1)	0.5 (0.1)	0.7 (0.3)	2.8 (0.4)	1.2 (0.8)	1.5 (0.6)	2.7
Oman	4.4 (−0.1)	−8.7 (0.4)	−3.9 (−0.5)	−9.9 (0.1)	5.7 (−0.2)	−1.7 (−0.9)	−8.0 (−0.2)	−1.1 (0.1)	−1.3 (−0.9)	−2.3
Pakistan	2.2 (0.7)	−10.5 (−0.0)	0.8 (0.1)	3.5 (0.1)	−3.1 (−0.3)	0.8 (0.3)	0.1 (0.2)	3.0 (0.2)	0.8 (−0.4)	0.7
Philippines	4.8 (0.6)	1.4 (0.0)	3.2 (0.7)	5.3 (0.2)	0.9 (0.0)	2.5 (0.3)	3.4 (0.2)	1.4 (1.0)	1.0 (−0.2)	2.9
Qatar	7.0 (−0.1)	7.2 (0.7)	2.4 (0.2)	−3.8 (−0.1)	5.4 (−0.1)	−2.8 (−0.7)	−2.2 (−0.3)	0.3 (0.6)	−2.0 (−1.3)	−1.0
Saudi Arabia	4.8 (−0.1)	0.7 (0.6)	−2.9 (0.1)	5.1 (0.0)	7.7 (0.4)	1.2 (−0.1)	3.6 (0.2)	−1.1 (−0.0)	−2.8 (−2.7)	−1.6
Singapore	−6.5 (−0.0)	0.0 ()	4.0 (0.8)	5.8 (0.0)	0.0 (−0.2)	2.6 (0.6)	2.1 (0.4)	2.1 (1.1)	−0.3 (−0.7)	2.0
Sri Lanka	6.0 (0.6)	4.0 (0.1)	2.0 (0.3)	−0.1 (−0.0)	1.6 (0.3)	2.5 (0.4)	3.3 (0.5)	5.4 (0.5)	2.1 (0.3)	3.0
Tajikistan	5.8 (0.8)	11.8 (0.5)	3.7 (0.9)	1.0 (0.2)	7.8 (1.3)	5.0 (0.8)	−1.4 (0.2)	6.5 (0.5)	1.7 (0.2)	5.3
Thailand	3.9 (0.7)	−4.2 (−0.0)	−0.3 (−0.0)	0.4 (0.1)	2.2 (0.1)	2.6 (0.5)	0.9 (0.2)	0.3 (0.4)	0.4 (0.1)	1.9
Turkiye	3.0 (0.3)	0.0 (0.0)	3.3 (0.7)	−0.1 (0.1)	1.5 (0.2)	3.6 (0.5)	2.0 (0.5)	−0.5 (0.5)	0.9 (−0.1)	2.7
Turkmenistan	11.8 (1.4)	4.2 (2.0)	2.1 (0.6)	2.5 (0.0)	0.0 (−0.1)	4.7 (−0.1)	2.5 (0.0)	1.0 (0.1)	2.9 (0.5)	4.3
UAE	−11.1 (−0.3)	−2.5 (0.2)	1.2 (0.1)	−1.4 (0.1)	−2.8 (−0.5)	−2.5 (−0.9)	−1.5 (−0.2)	1.8 (0.5)	4.0 (0.1)	−0.9
Uzbekistan	11.8 (1.9)	−1.4 (−0.0)	5.6 (1.1)	1.2 (0.0)	9.4 (0.7)	6.5 (0.6)	5.2 (0.4)	2.4 (0.4)	1.4 (−0.4)	4.7
Vietnam (region)	5.3 (1.7)	0.8 (0.0)	3.4 (1.1)	5.8 (0.3)	3.0 (0.1)	3.6 (0.3)	4.6 (0.6)	−1.0 (0.6)	4.2 (0.5)	5.2
APO21	3.3 (0.8)	1.4 (0.0)	1.8 (0.5)	1.7 (0.1)	1.0 (0.1)	0.7 (0.0)	2.2 (0.2)	0.6 (0.8)	0.7 (0.2)	2.8
Asia28	5.1 (1.1)	3.8 (0.1)	4.1 (1.0)	3.7 (0.1)	3.5 (0.2)	2.2 (0.2)	3.4 (0.3)	1.1 (0.8)	2.5 (0.4)	4.2
Asia38	5.1 (1.0)	3.5 (0.1)	4.1 (1.0)	3.6 (0.1)	3.5 (0.2)	2.2 (0.2)	3.3 (0.3)	1.1 (0.7)	2.4 (0.4)	4.1
East Asia	8.5 (1.2)	6.3 (0.1)	5.4 (1.4)	5.1 (0.1)	5.2 (0.3)	3.4 (0.4)	3.8 (0.3)	3.4 (0.7)	2.9 (0.5)	5.0
SAARC	3.2 (1.3)	5.6 (0.1)	4.1 (0.8)	5.3 (0.2)	2.1 (0.2)	1.1 (0.1)	1.7 (0.2)	3.4 (1.5)	2.9 (0.5)	5.0
ASEAN	4.8 (0.7)	−0.2 (0.1)	1.5 (0.5)	2.8 (0.1)	1.7 (0.1)	1.8 (0.2)	4.5 (0.5)	−0.9 (0.4)	0.9 (0.0)	2.6
ASEAN6	5.2 (0.6)	−0.5 (0.1)	1.3 (0.5)	2.3 (0.1)	1.6 (0.1)	2.0 (0.2)	4.9 (0.5)	−1.8 (0.4)	0.4 (−0.2)	2.2
C5	5.5 (0.8)	−1.0 (0.3)	2.9 (0.6)	0.2 (0.0)	6.0 (0.4)	3.7 (0.5)	2.3 (0.2)	−0.8 (0.2)	−0.4 (−0.6)	2.4
CLMV	4.0 (1.2)	−0.1 (−0.0)	4.7 (1.3)	5.6 (0.3)	2.7 (0.2)	2.2 (0.1)	3.8 (0.5)	4.8 (0.6)	3.5 (0.4)	4.5
GCC	0.4 (−0.1)	−0.6 (0.5)	0.4 (0.2)	−1.2 (−0.0)	3.2 (0.0)	0.8 (−0.2)	−0.5 (−0.0)	2.9 (0.5)	−2.0 (−2.0)	−1.1
IPEF	3.2 (0.7)	3.2 (0.1)	0.8 (0.2)	0.7 (0.1)	0.3 (0.0)	0.4 (−0.1)	2.4 (0.3)	0.5 (0.8)	0.2 (0.1)	2.1
RCEP (reference)	7.3 (1.1)	4.4 (0.1)	4.5 (1.1)	4.5 (0.1)	4.3 (0.3)	2.9 (0.3)	4.0 (0.4)	1.4 (0.6)	2.7 (0.4)	4.4
US	0.9 (0.0)	5.1 (0.1)	0.8 (0.1)	1.1 (0.0)	−0.6 (0.0)	1.3 (0.1)	2.9 (0.3)	1.1 (0.6)	0.4 (0.0)	1.2
Australia	−0.6 (0.1)	0.7 (0.2)	0.2 (0.0)	−1.1 (−0.0)	−0.6 (−0.1)	1.1 (0.0)	0.9 (0.1)	0.3 (0.4)	0.4 (−0.3)	0.4
New Zealand	2.4 (0.1)	−5.8 (−0.1)	0.0 (0.0)	−4.3 (−0.0)	−0.5 (−0.1)	1.2 (0.1)	1.8 (0.2)	−0.3 (0.4)	0.1 (−0.2)	0.3

Unit: Percentage (average annual growth rate) and percentage points (contributions written in parentheses).

Source: APO Productivity Database 2026.

Table 9.18 Real Income and Terms of Trade, 2000–2024

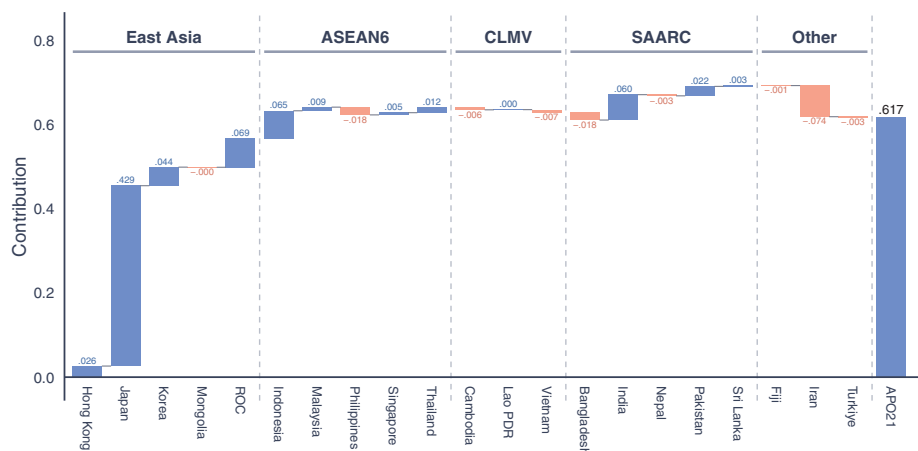
—Growth in real income, real GDP, trading gain, and net primary income transfer from abroad

2000–2005					2005–2010					2010–2015					2015–2019					2019–2024					2023–2024				
	Real income	Real GDP	Trading gain	Net primary income from abroad		Real income	Real GDP	Trading gain	Net primary income from abroad		Real income	Real GDP	Trading gain	Net primary income from abroad		Real income	Real GDP	Trading gain	Net primary income from abroad		Real income	Real GDP	Trading gain	Net primary income from abroad		Real income	Real GDP	Trading gain	Net primary income from abroad
Turkmenistan	17.1	6.1	11.5	–0.5	Qatar	14.8	13.3	1.0	0.6	Mongolia	10.7	9.9	0.8	–0.1	Vietnam	7.6	7.0	0.5	0.0	Kyrgyzstan	9.3	4.6	3.3	1.4	Singapore	11.0	7.1	1.4	2.6
Tajikistan	13.4	12.1	0.5	0.8	Myanmar	11.9	4.7	7.3	0.0	Turkmenistan	10.2	5.2	4.4	0.5	Mongolia	7.1	4.8	3.1	–0.8	Tajikistan	7.2	8.2	–3.3	2.3	Kyrgyzstan	10.6	6.8	3.8	0.0
Uzbekistan	12.4	6.9	4.9	0.6	China	11.3	11.1	0.2	0.1	Uzbekistan	8.8	8.4	0.6	–0.1	Bangladesh	6.9	7.2	0.1	–0.3	Uzbekistan	6.4	5.0	1.5	0.0	Vietnam	10.5	7.0	1.6	2.0
Qatar	12.0	9.1	5.2	–2.3	Bahrain	11.1	8.6	3.8	–1.3	Lao PDR	8.6	8.0	0.2	0.4	Nepal	6.1	5.4	0.7	–0.1	Mongolia	6.2	2.8	3.3	0.1	Tajikistan	9.8	10.9	–5.4	4.2
Kuwait	12.0	12.8	0.3	–1.2	Turkmenistan	11.0	11.7	–0.4	–0.3	Cambodia	7.7	7.2	0.7	–0.2	Uzbekistan	5.9	6.9	–0.9	–0.1	Vietnam	5.8	5.4	0.0	0.4	ROC	9.2	7.7	1.2	0.4
Afghanistan	11.3	12.5	–1.7	0.5	Uzbekistan	10.7	9.4	0.8	0.5	Maldives	7.6	5.5	1.2	0.9	Kyrgyzstan	5.8	4.1	2.9	–1.2	Turkiye	5.5	5.2	0.2	0.1	Uzbekistan	8.9	5.6	3.4	0.0
Iran	10.9	8.6	2.6	–0.3	Kazakhstan	9.1	7.6	2.4	–0.8	China	7.3	7.1	0.2	0.0	China	5.7	6.0	–0.4	0.0	Bangladesh	5.3	5.0	0.0	0.0	Sri Lanka	8.3	6.4	1.4	0.6
Kazakhstan	10.7	12.0	–0.6	–0.7	Afghanistan	8.9	7.4	0.8	0.7	Afghanistan	7.2	5.2	1.1	0.9	Tajikistan	5.4	6.7	–0.8	–0.5	UAE	5.0	2.4	2.5	0.1	Philippines	7.6	6.0	–0.2	1.8
Mongolia	10.6	6.3	4.5	–0.2	India	8.6	8.4	0.3	–0.1	Myanmar	7.0	6.1	1.0	–0.1	Cambodia	5.4	7.3	0.9	–2.9	India	4.7	5.5	–0.7	–0.1	Mongolia	6.3	4.9	0.1	1.4
Bahrain	9.9	8.4	1.5	0.0	Vietnam	8.6	8.0	0.9	–0.3	Bangladesh	6.8	7.3	–0.1	–0.3	Pakistan	5.4	4.8	0.5	0.1	ROC	4.7	3.9	0.6	0.2	UAE	6.0	4.5	1.4	0.0
China	9.3	8.3	0.9	0.1	Cambodia	8.3	7.0	1.2	0.1	Turkiye	6.3	6.7	–0.4	–0.1	Philippines	5.4	6.5	–0.7	–0.3	Turkmenistan	4.5	3.8	0.7	0.1	Kazakhstan	6.0	5.6	0.4	0.0
Vietnam	8.8	8.4	0.5	–0.1	Bhutan	7.6	9.7	–1.3	–0.8	Sri Lanka	6.2	5.9	0.6	–0.3	India	5.3	4.8	0.5	0.0	Qatar	4.4	0.1	4.4	–0.2	India	5.9	6.2	–0.4	0.1
Saudi Arabia	8.6	4.2	5.4	–1.0	Singapore	7.5	7.3	–1.0	1.3	Kazakhstan	6.2	4.5	0.1	1.6	Bahrain	4.9	4.9	0.3	–0.3	China	4.2	4.4	–0.1	–0.1	Turkmenistan	5.7	3.3	2.5	–0.1
Cambodia	8.4	8.6	–0.1	0.0	Bangladesh	7.3	7.2	–0.5	0.6	India	5.9	6.3	–0.4	0.0	Indonesia	4.7	5.0	–0.4	0.1	Kazakhstan	4.0	2.9	0.9	0.3	Bhutan	5.4	3.6	2.2	–0.4
Myanmar	8.3	5.5	2.8	0.0	Lao PDR	7.2	5.8	2.2	–0.8	Philippines	5.5	5.7	–0.3	0.0	Lao PDR	4.4	6.0	–1.3	–0.3	Oman	3.9	3.2	0.7	0.0	Hong Kong	5.1	2.4	1.3	1.4
Oman	8.2	3.7	4.3	0.2	Maldives	7.0	7.6	2.6	–3.1	Vietnam	5.4	5.2	0.6	–0.4	Bhutan	4.4	5.3	–0.5	–0.4	Saudi Arabia	3.6	4.0	–0.3	0.0	Iran	5.0	3.1	1.8	0.1
Bhutan	7.8	7.1	1.0	–0.3	Sri Lanka	6.8	6.6	0.2	0.0	Qatar	5.3	6.4	–2.8	1.7	Kuwait	4.4	1.7	2.2	0.4	Singapore	3.5	3.4	1.4	–1.2	Bangladesh	4.8	4.5	0.0	0.3
Malaysia	7.2	5.2	1.2	0.8	Oman	6.6	3.5	3.6	–0.5	Kyrgyzstan	5.2	4.8	–0.4	0.7	Malaysia	4.3	4.2	0.1	0.0	Pakistan	3.5	2.4	1.0	0.1	Indonesia	4.7	4.8	–0.1	0.0
India	6.8	7.0	–0.3	0.1	Tajikistan	6.5	7.3	–0.5	–0.3	Malaysia	5.0	5.1	–0.2	0.1	Maldives	4.1	7.7	–3.1	–0.5	Indonesia	3.5	3.3	0.1	0.1	Maldives	4.4	1.8	1.9	0.6
UAE	6.5	4.9	1.6	–0.1	Mongolia	5.8	6.3	0.9	–1.4	Indonesia	5.0	5.4	–0.3	–0.1	Thailand	3.5	3.3	–0.2	0.4	Malaysia	3.3	3.3	0.2	–0.2	Kazakhstan	4.1	3.7	0.7	–0.2
Bangladesh	6.3	6.2	–0.1	0.2	Saudi Arabia	5.7	2.8	2.7	0.2	Bhutan	4.6	5.8	–0.8	–0.3	Sri Lanka	3.5	3.6	0.0	–0.1	Philippines	3.0	3.0	–0.5	0.5	Turkiye	4.2	3.4	1.0	–0.2
Brunei	6.0	1.0	5.0	0.0	Nepal	5.5	4.3	1.1	0.1	Nepal	4.5	4.1	0.3	0.2	Turkmenistan	3.5	2.3	0.0	1.1	Nepal	2.8	2.5	0.2	0.1	Malaysia	4.1	4.2	0.3	–0.4
Lao PDR	5.9	5.7	–0.1	0.3	Indonesia	5.3	5.6	–0.7	0.4	UAE	4.0	5.3	–1.4	0.1	Saudi Arabia	3.4	2.2	1.9	–0.7	Iran	2.7	3.3	–0.7	0.0	Nepal	4.1	3.3	0.3	0.4
Sri Lanka	5.6	4.9	0.6	0.1	Malaysia	5.2	3.8	1.1	0.3	Thailand	3.7	3.3	0.6	–0.2	Lao PDR	3.4	2.4	0.9	0.0	Bhutan	2.6	1.8	0.2	0.6	Brunei	3.9	0.2	1.9	1.8
Maldives	5.4	4.3	0.4	0.6	Philippines	5.2	4.9	0.1	0.3	Pakistan	3.6	3.4	–0.2	0.4	Turkiye	3.3	3.9	–0.5	–0.1	Bahrain	2.5	0.8	2.0	–0.3	Korea	3.8	1.9	1.9	0.0
Pakistan	4.9	5.1	–0.7	0.4	Iran	4.5	4.2	0.2	0.1	ROC	3.4	2.9	0.6	–0.1	Singapore	3.2	3.7	0.9	–1.4	Cambodia	2.3	3.6	–1.1	–0.1	Oman	3.8	4.0	0.0	–0.3
Thailand	4.7	5.2	0.0	–0.5	Korea	3.9	4.4	–0.6	0.2	Fiji	3.1	3.7	0.0	–0.6	Kazakhstan	3.1	3.5	1.4	–1.8	Lao PDR	2.0	3.2	–1.0	–0.1	China	3.8	4.2	–0.4	0.0
Turkiye	4.6	4.9	0.2	–0.6	Thailand	3.9	3.9	0.0	0.1	Korea	3.1	2.7	0.3	0.0	UAE	2.9	2.7	0.3	–0.1	Korea	1.8	1.9	–0.3	0.1	Fiji	3.4	3.4	0.0	0.0
Korea	4.5	5.2	–0.6	0.0	UAE	3.7	3.6	0.5	–0.3	Hong Kong	2.9	2.9	0.1	–0.1	Iran	2.7	2.8	–0.1	0.0	Kuwait	1.7	0.4	0.5	0.8	Pakistan	3.3	2.4	1.5	–0.6
Indonesia	4.0	4.6	–1.0	0.4	Kuwait	3.4	1.4	2.5	–0.5	Oman	2.8	4.4	–2.1	0.5	Korea	2.6	3.1	–0.6	0.1	Hong Kong	1.6	0.4	0.3	0.9	Qatar	1.9	–1.3	3.2	0.0
Kyrgyzstan	4.0	3.8	–0.3	0.5	Hong Kong	3.3	3.8	–0.8	0.3	Saudi Arabia	2.4	4.9	–2.9	0.5	Hong Kong	2.6	1.7	0.1	0.8	Brunei	1.5	–0.6	2.0	0.1	Thailand	1.8	2.4	0.1	–0.7
Philippines	4.0	4.7	–0.8	0.1	Turkiye	2.9	3.2	–0.4	0.1	Singapore	2.4	4.6	–0.9	–1.3	ROC	2.0	2.9	–1.0	0.1	Fiji	1.2	1.2	0.0	0.1	Japan	1.3	0.4	0.6	0.3
Singapore	3.9	5.1	0.0	–1.2	Pakistan	2.7	3.4	–1.0	0.3	Bahrain	2.3	3.0	–1.7	0.9	Oman	1.6	1.1	1.3	–0.8	Japan	0.6	0.3	–0.2	0.4	Saudi Arabia	1.1	3.2	–2.2	0.1
Hong Kong	3.0	4.1	–1.0	–0.1	Kyrgyzstan	2.2	4.6	–1.6	–0.8	Tajikistan	1.5	4.4	–1.7	–1.2	Brunei	1.4	2.3	–0.3	–0.6	Thailand	0.5	1.4	–0.9	0.1	Bahrain	–0.1	1.4	–0.1	–1.5
ROC	2.7	4.1	–1.6	0.2	ROC	1.9	4.2	–2.3	0.1	Japan	1.4	1.2	–0.1	0.2	Qatar	1.0	0.8	0.3	–0.1	Maldives	0.0	2.2	–1.9	–0.3	Cambodia	–0.3	6.6	–6.1	–0.7
Nepal	2.4	2.4	0.0	0.0	Brunei	1.0	0.0	1.2	–0.1	Brunei	0.5	0.4	–1.0	1.1	Japan	0.7	0.8	–0.1	0.0	Sri Lanka	–0.2	–0.5	0.2	0.1	Myanmar	–1.0	–0.8	0.5	–0.7
Fiji	1.4	2.0	0.0	–0.6	Fiji	0.4	0.6	0.0	–0.2	Iran	–1.0	0.2	–1.2	0.0	Afghanistan	0.4	2.8	–0.1	–2.3	Afghanistan	–5.9	–5.5	–0.2	–0.2	Afghanistan	–1.2	1.7	–2.9	0.0
Japan	1.0	1.1	–0.3	0.2	Japan	–0.3	0.0	–0.4	0.1	Kuwait	–1.3	3.6	–5.4	0.5	Myanmar	–3.6	4.1	–7.7	0.0	Myanmar	–6.4	–3.3	–2.9	–0.1	Kuwait	–4.2	–0.6	–3.5	–0.1
(region)					(region)					(region)				(region)					(region)					(region)					(region)
AP021	3.2	4.5	–0.2	–0.1	AP021	3.4	4.5	–0.4	0.2	AP021	2.7	4.2	–0.2	–0.6	AP021	2.9	3.9	–0.1	–0.2	AP021	1.6	3.5	–0.2	0.1	AP021	4.6	4.2	0.5	0.7
France	1.7	1.7	0.0	0.0	France	1.1	0.9	0.0	0.1	France	1.1	1.0	0.2	–0.1	France	1.8	1.6	–0.1	0.2	France	0.4	0.9	–0.2	–0.2	France	1.0	1.3	0.1	–0.4
Germany	0.9	0.6	0.0	0.3	Germany	1.3	1.2	–0.1	0.2	Germany	1.8	1.7	0.1	0.0	Germany	2.2	1.7	0.0	0.4	Germany	0.1	0.0	0.1	0.0	Germany	0.2	–0.5	0.5	0.2
Italy	0.9	0.8	0.0	0.1	Italy	–0.6	–0.4	–0.1	–0.1	Italy	–0.6	–0.6	0.1	–0.1	Italy	1.4	1.0	0.1	0.4	Italy	0.7	0.9	0.0	–0.2	Italy	0.9	0.2	0.5	0.2
New Zealand	4.3	3.9	0.6	–0.2	New Zealand	2.2	1.5	0.4	0.3	New Zealand	3.7	3.1	0.2	0.3	New Zealand	4.2	3.5	0.4	0.2	New Zealand	1.7	1.8	–0.2	0.0	New Zealand	0.9	–0.4	0.9	0.4
UK	2.9	2.4	0.3	0.2	UK	0.4	0.5	0.0	–0.2	UK	1.8	1.9	0.4	–0.4	UK	2.4	2.0	–0.1	0.5	UK	0.7	0.8	0.1	–0.1	UK	2.3	0.4	0.9	0.9
US	2.5	2.5	0.0	0.0	US	1.1	1.0	–0.1	0.2	US	2.4	2.2	0.2	0.0	US	2.6	2.4	0.2	0.0	US	2.3	2.4	0.2	–0.3	US	2.5	2.7	0.1	–0.3
EU15	1.9	1.7	0.1	0.1	EU15	0.7	0.8	0.0	0.0	EU15	0.9	0.9	0.1	–0.1	EU15	2.2	2.0	0.0	0.3	EU15	0.9	1.0	0.0	–0.1	EU15	1.6	1.0	0.5	0.1
					EU27	0.9	1.0	0.0	0.0	EU27	1.2	1.1	0.0	0.0	EU27	2.1	2.1	0.0	0.0	EU27	1.1	1.1	0.0	0.1	EU27	1.7	1.2	0.5	0.0

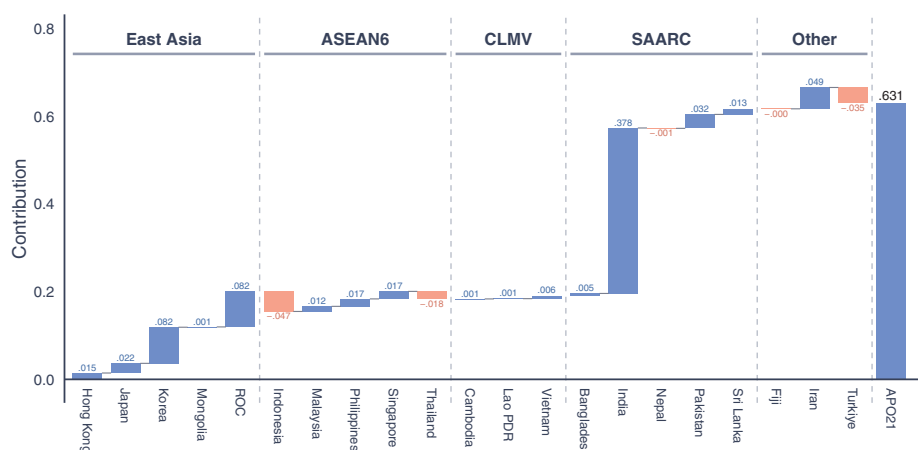
Unit: Percentage (average annual growth rate).

Source: Official national accounts in each country, including

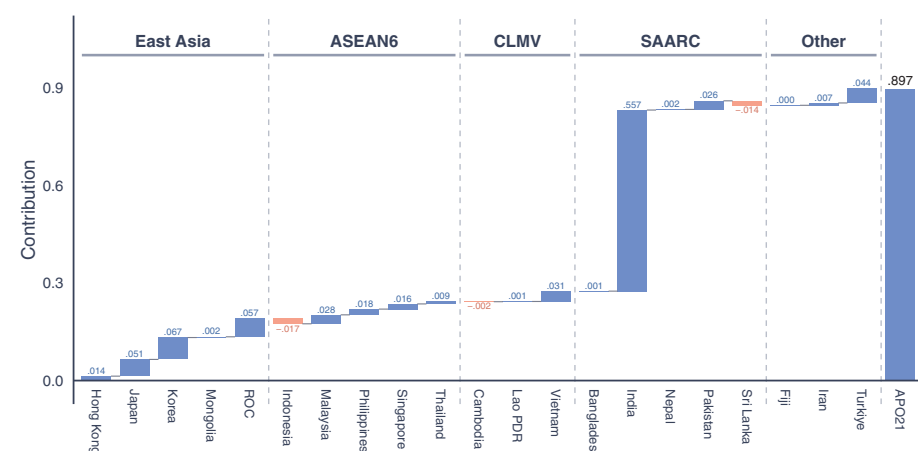
10 APO21 Economy Profiles



Panel a: 1970–1990



Panel b: 1990–2010



Panel c: 2010–2024

Figure 10.1 Country Contributions to APO21 TFP Growth, 1970–2024

Unit: Percentage points (average annual growth rate). Source: APO Productivity Database 2026.

Bangladesh

Key Indicators

GDP in 2024	1,659	Billion USD (as of 2024)	Number of employment in 2024	69,510	Thousands persons
(exchange rate based)	433	Billion USD (as of 2024)	Employment rate in 2024	40.5	%
Per capita GDP in 2024	9.7	Thousand USD (as of 2024)	Female employment share in 2024	30.1	%
(exchange rate based)	2.5	Thousand USD (as of 2024)	Average schooling years of workers in 2024	6.3	Years
Per-worker labor productivity level in 2024	23.0	Thousand USD per worker (as of 2024)	Investment share in 2024	30.7	%
Per-hour labor productivity level in 2024	9.8	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	4.0	%
Capital stock per hour worked in 2024	27.2	USD(as of 2024)	Agriculture share in GDP in 2024	11.5	%
Energy productivity levels in 2024	44.8	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	22.6	%
Carbon intensity of GDP in 2024	69.3	g-CO2 per USD (as of 2024)	Agriculture share in employment in 2024	44.7	%

(%: average annual growth rate)	1970-80	1980-90	1990-2000	2000-10	2010-20	2020-24	2019-20	2020-21	2021-22	2022-23	2023-24	projection		
GDP growth	0.1	4.0	4.1	6.7	6.8	5.4	2.6	5.5	6.8	4.3	4.5	2024-30	2030-35	2024-35
Labor input growth	3.8	3.4	2.4	3.3	3.5	1.8	1.2	1.0	2.8	1.6	1.6	3.4	3.2	3.2
Labor quality growth	1.0	0.8	0.6	0.8	1.6	0.5	0.4	0.4	1.0	0.4	0.4	1.6	1.7	1.6
Hours worked growth	2.8	2.6	1.8	2.5	1.9	1.2	0.8	0.7	1.8	1.2	1.2	1.7	1.5	1.6
College labor input growth	9.8	9.0	5.5	4.1	6.3	2.0	2.1	2.1	2.0	1.3	2.4	4.7	5.0	4.6
Non-college labor input growth	3.5	2.9	2.1	3.1	3.1	1.7	1.0	1.0	0.8	3.1	1.4	3.0	2.7	2.8
ICT capital input growth	11.4	18.9	15.9	27.6	13.6	1.8	3.3	5.7	5.2	-0.6	-3.2	3.9	10.5	6.1
Non-ICT capital input growth	0.4	4.4	5.8	7.0	7.9	7.3	7.7	7.1	7.4	7.4	7.3	7.1	6.1	6.7
Per-worker labor productivity growth	-2.6	2.0	1.9	4.1	5.6	4.2	2.6	5.5	4.8	3.2	3.3	3.4	4.2	3.7
Per-hour labor productivity growth	-2.7	1.4	2.3	4.2	4.9	4.2	2.5	5.5	5.0	3.1	3.3	3.4	4.3	3.8
Capital productivity growth	-0.4	-4.5	-6.0	-7.7	-8.1	-7.0	-7.5	-7.0	-7.2	-7.1	-6.9	-1.8	-0.5	-1.7
TFP growth	-1.9	0.0	-0.2	0.8	0.2	-0.3	-2.4	0.8	0.7	-1.4	-1.1	-0.8	0.3	-0.4

Production

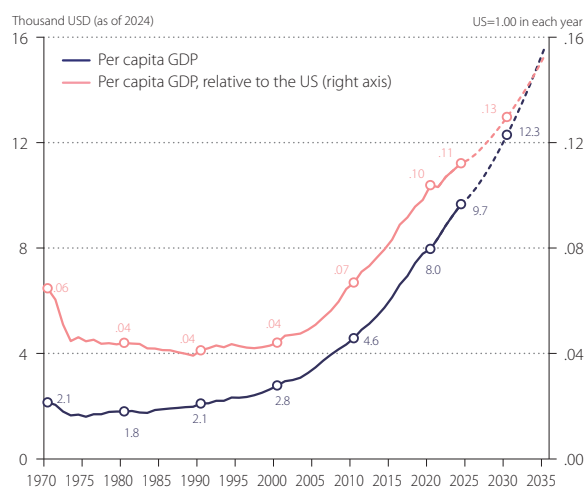


Figure 1 Per Capita GDP

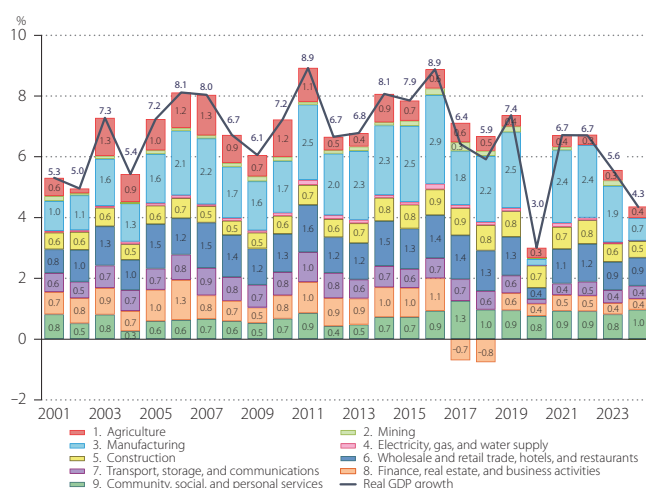


Figure 2 Industry Origins of Economic Growth

Labor

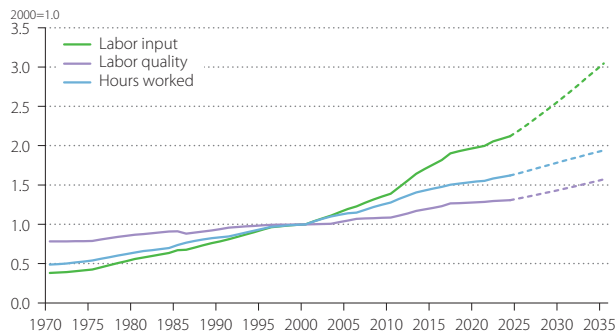


Figure 3 Labor Inputs

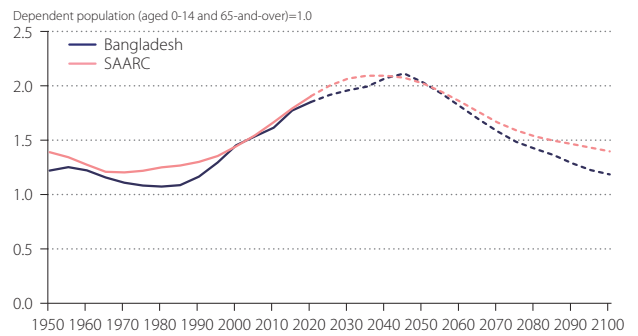


Figure 4 Demographic Dividend

Productivity

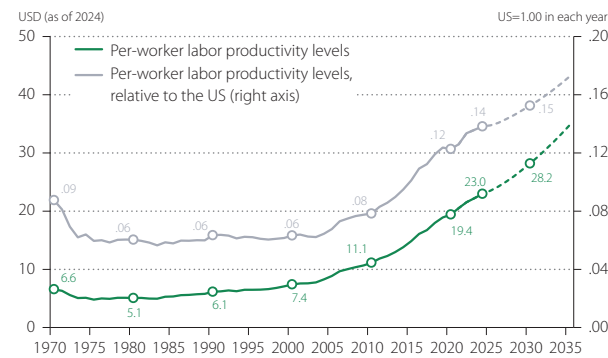


Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

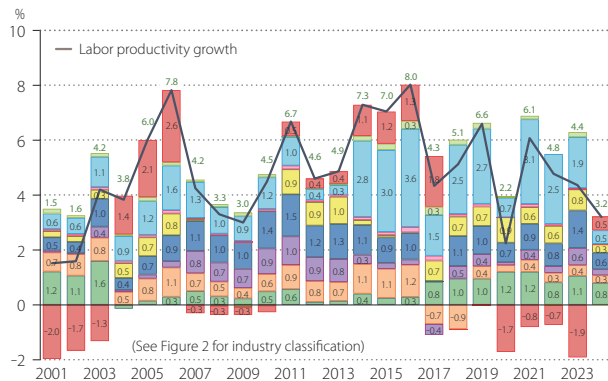


Figure 7 Industry Origins of Labor Productivity Growth

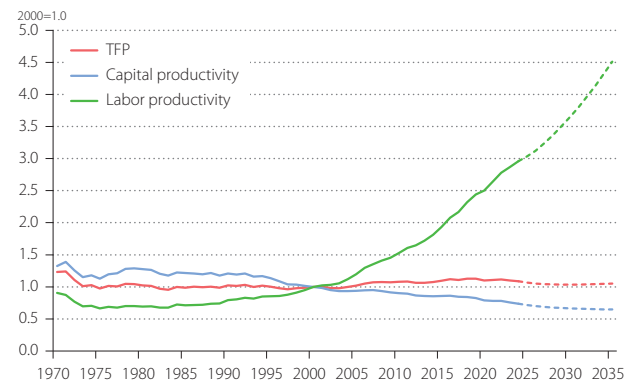


Figure 8 Productivity Indicators

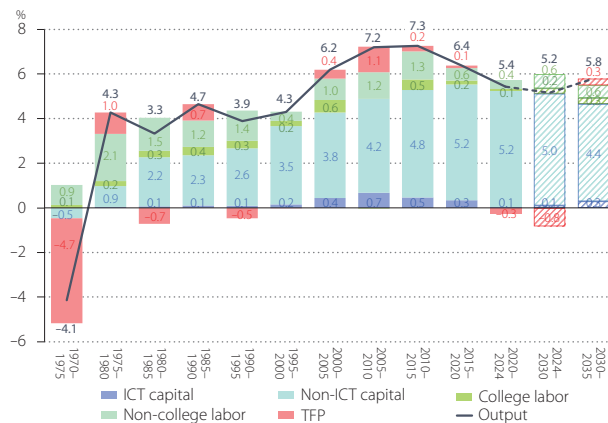


Figure 9 Decomposition of Economic Growth

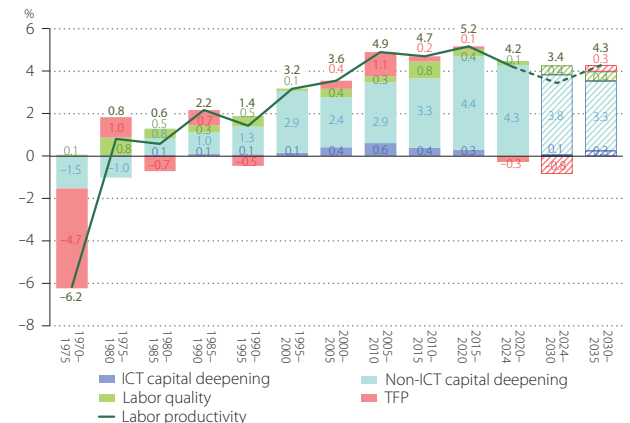


Figure 10 Decomposition of Labor Productivity Growth

Cambodia

Key Indicators

GDP in 2024	140	Billion USD (as of 2024)	Number of employment in 2024	10,987	Thousands persons
(exchange rate based)	44	Billion USD (as of 2024)	Employment rate in 2024	66.0	%
Per capita GDP in 2024	8.4	Thousand USD (as of 2024)	Female employment share in 2024	50.5	%
(exchange rate based)	2.7	Thousand USD (as of 2024)	Average schooling years of workers in 2024	5.3	Years
Per-worker labor productivity level in 2024	11.7	Thousand USD per worker (as of 2024)	Investment share in 2024	33.9	%
Per-hour labor productivity level in 2024	4.7	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	0.9	%
Capital stock per hour worked in 2024	14.5	USD (as of 2024)	Agriculture share in GDP in 2024	17.8	%
Energy productivity levels in 2024	15.3	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	29.1	%
Carbon intensity of GDP in 2024	170.9	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	32.4	%

(%: average annual growth rate)	1970 –80	1980 –90	1990 –2000	2000 –10	2010 –20	2020 –24	2019 –20	2020 –21	2021 –22	2022 –23	2023 –24	projection		
GDP growth	–6.4	4.3	5.8	7.7	6.2	5.3	–1.9	3.0	6.5	3.5	6.5	2024–30	2030–35	2024–35
Labor input growth	–2.3	4.1	7.4	4.6	4.3	3.6	–1.0	4.1	1.9	1.4	7.1	3.1	2.9	3.3
Labor quality growth	0.3	0.8	1.4	0.9	1.8	0.3	–1.5	1.8	0.1	0.0	–0.6	2.4	2.0	2.0
Hours worked growth	–2.7	3.4	5.9	3.6	2.5	3.3	0.5	2.3	1.8	1.5	7.7	0.7	0.8	1.3
College labor input growth	1.8	7.6	8.3	14.0	8.1	3.9	0.5	0.5	4.1	2.3	1.7	3.8	4.8	4.5
Non-college labor input growth	–2.4	4.1	7.3	4.2	4.0	3.6	–1.2	–1.2	4.1	1.9	1.4	3.0	2.7	3.2
ICT capital input growth	–12.4	6.7	25.0	14.9	19.3	7.9	8.0	2.0	6.4	13.0	10.2	9.0	10.4	9.7
Non-ICT capital input growth	2.4	1.1	4.4	8.9	8.9	7.5	10.0	8.5	7.9	7.3	6.4	6.3	6.2	6.2
Per-worker labor productivity growth	–3.9	0.7	0.5	4.5	4.0	2.3	–1.9	3.0	4.9	2.3	–1.0	3.4	3.8	3.2
Per-hour labor productivity growth	–3.8	1.0	–0.1	4.1	3.7	2.0	–3.9	2.5	4.7	2.1	–1.1	4.1	4.1	3.7
Capital productivity growth	–0.1	0.0	–3.7	–8.8	–8.9	–7.5	–10.1	–8.4	–7.9	–7.3	–6.3	–1.5	–1.2	–1.8
TFP growth	–7.2	2.3	0.3	0.7	–0.8	–0.4	–8.6	–1.7	1.3	–1.2	–0.2	–0.1	0.3	0.1

Production

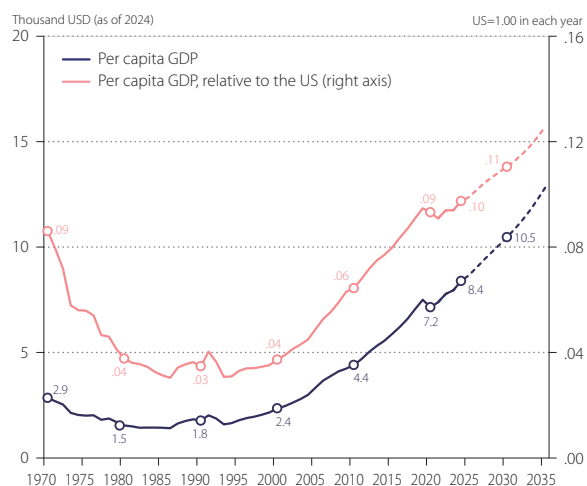


Figure 1 Per Capita GDP

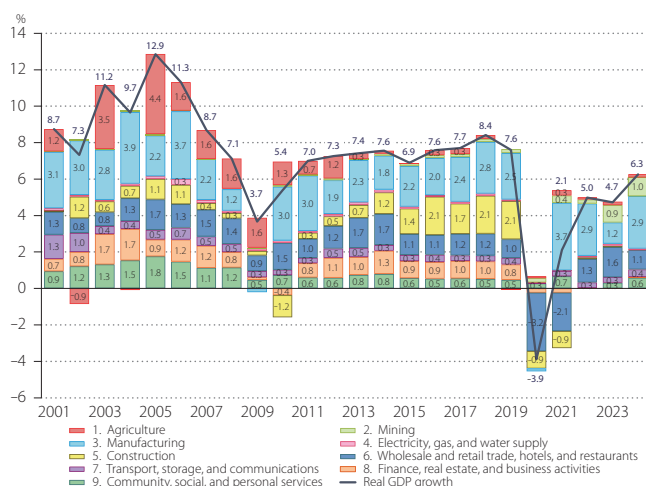


Figure 2 Industry Origins of Economic Growth

Labor

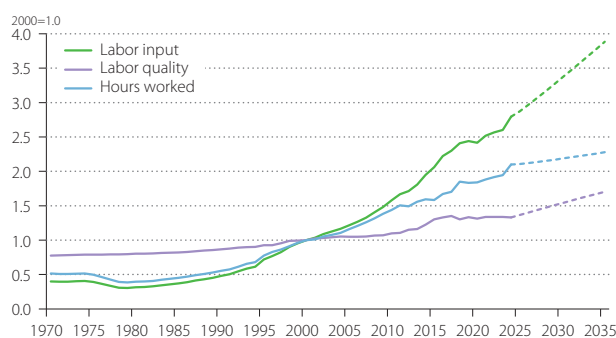


Figure 3 Labor Inputs

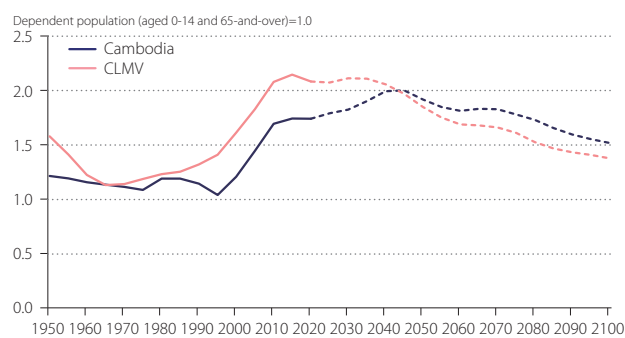


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

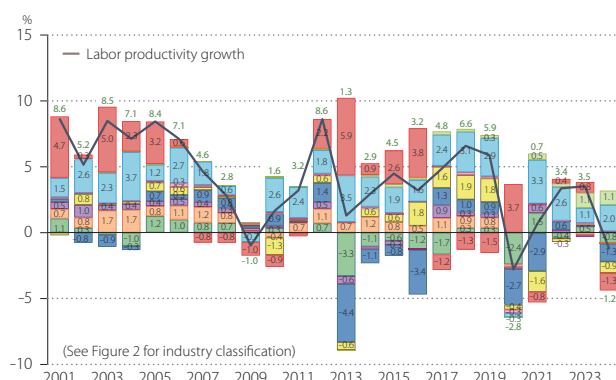


Figure 7 Industry Origins of Labor Productivity Growth

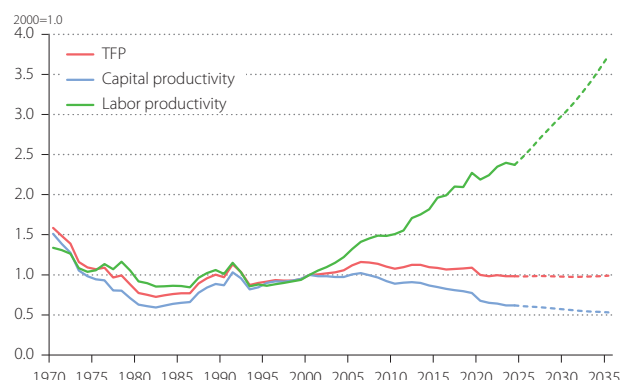


Figure 8 Productivity Indicators

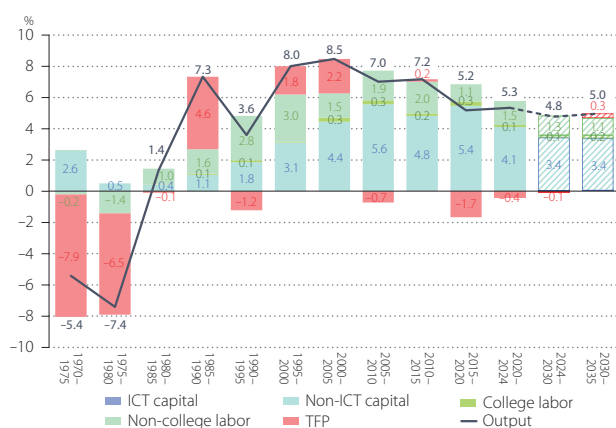


Figure 9 Decomposition of Economic Growth

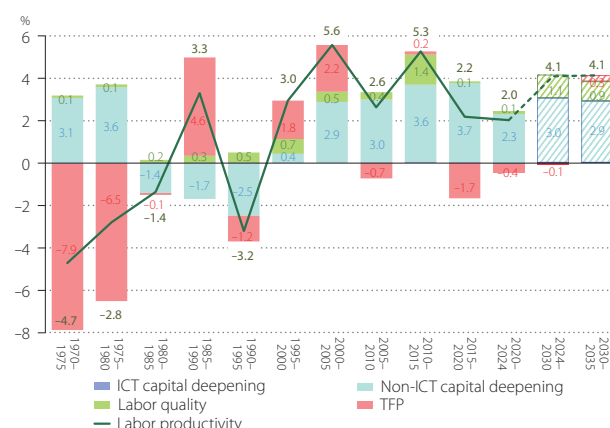


Figure 10 Decomposition of Labor Productivity Growth

ROC

Key Indicators

GDP in 2024	1,875	Billion USD (as of 2024)	Number of employment in 2024	11,885	Thousands persons
(exchange rate based)	802	Billion USD (as of 2024)	Employment rate in 2024	50.8	%
Per capita GDP in 2024	80.1	Thousand USD (as of 2024)	Female employment share in 2024	45.4	%
(exchange rate based)	34.3	Thousand USD (as of 2024)	Average schooling years of workers in 2024	13.7	Years
Per-worker labor productivity level in 2024	154.0	Thousand USD per worker (as of 2024)	Investment share in 2024	26.9	%
Per-hour labor productivity level in 2024	78.1	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	7.3	%
Capital stock per hour worked in 2024	159.3	USD (as of 2024)	Agriculture share in GDP in 2024	1.5	%
Energy productivity levels in 2024	25.7	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	36.8	%
Carbon intensity of GDP in 2024	144.7	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	4.3	%

(%: average annual growth rate)	1970 -80	1980 -90	1990 -2000	2000 -10	2010 -20	2020 -24	2019 -20	2020 -21	2021 -22	2022 -23	2023 -24	projection		
GDP growth	10.5	8.7	6.8	4.1	2.9	3.8	2.9	7.1	2.5	0.5	5.6	2024-30	2030-35	2024-35
Labor input growth	4.4	2.9	2.2	2.1	1.5	1.9	-0.7	0.6	2.5	0.7	3.8	-1.6	-1.7	-1.2
Labor quality growth	1.1	0.9	1.1	1.7	1.2	1.4	1.5	1.5	1.7	1.1	1.4	0.6	0.6	0.6
Hours worked growth	3.3	2.0	1.1	0.3	0.3	0.5	-2.1	-0.9	0.8	-0.4	2.4	-2.2	-2.2	-1.8
College labor input growth	6.9	5.8	6.6	6.3	4.7	5.0	5.5	5.5	3.5	5.7	4.3	-0.4	-0.6	0.1
Non-college labor input growth	4.1	2.4	1.1	0.2	-0.9	-1.4	-6.3	-6.3	-2.4	-0.7	-3.3	-3.2	-3.3	-2.9
ICT capital input growth	18.0	19.1	20.7	4.5	2.9	2.7	3.5	3.6	4.4	2.2	0.6	7.7	7.1	6.9
Non-ICT capital input growth	7.9	6.1	5.4	2.4	1.6	2.8	2.0	2.8	3.6	2.6	2.2	2.3	1.5	1.9
Per-worker labor productivity growth	7.3	6.4	5.5	3.2	2.0	3.6	2.9	7.1	2.8	-0.5	5.0	5.6	3.2	4.5
Per-hour labor productivity growth	7.2	6.8	5.7	3.8	2.6	3.3	5.0	7.5	1.7	0.9	3.2	6.0	3.5	4.7
Capital productivity growth	-8.1	-6.4	-6.1	-2.5	-1.6	-2.8	-2.0	-2.7	-3.6	-2.6	-2.1	1.3	-0.5	0.3
TFP growth	4.4	4.3	2.9	1.9	1.3	1.4	2.2	4.8	-0.6	-1.2	2.7	3.2	1.1	2.3

Production

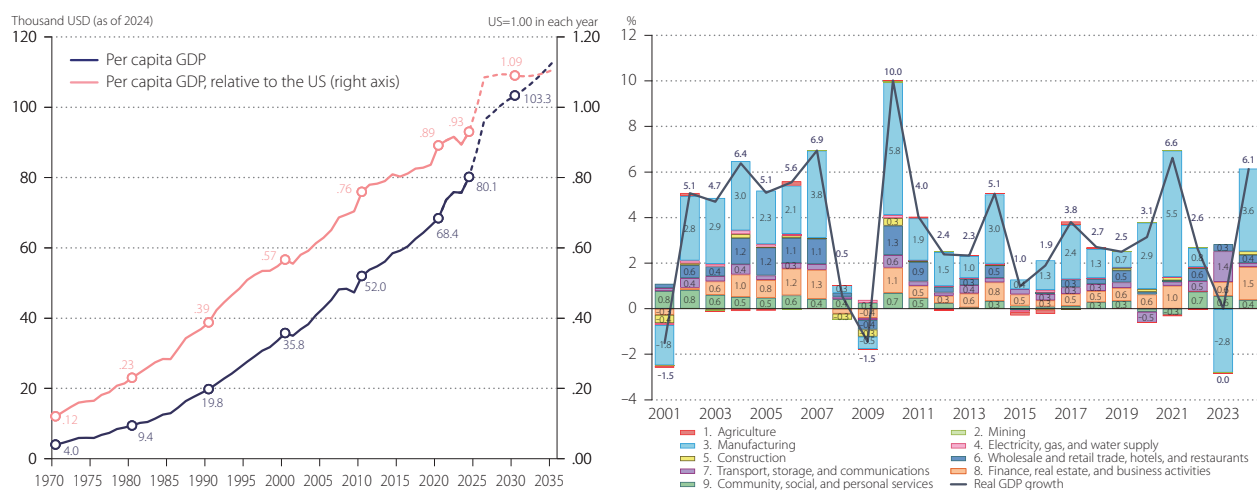


Figure 1 Per Capita GDP

Figure 2 Industry Origins of Economic Growth

Labor

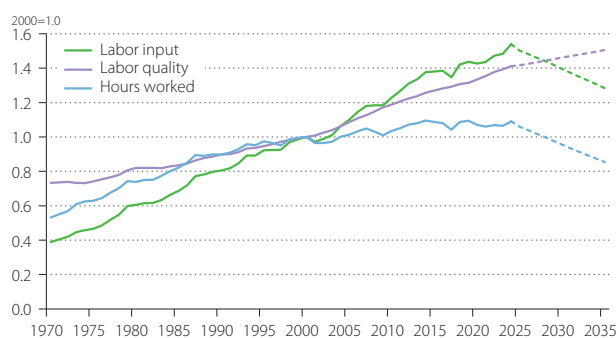


Figure 3 Labor Inputs

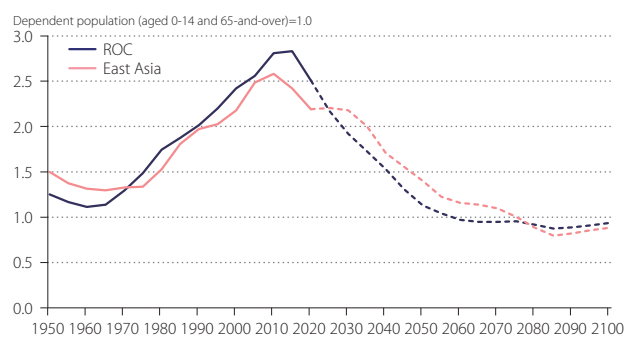


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

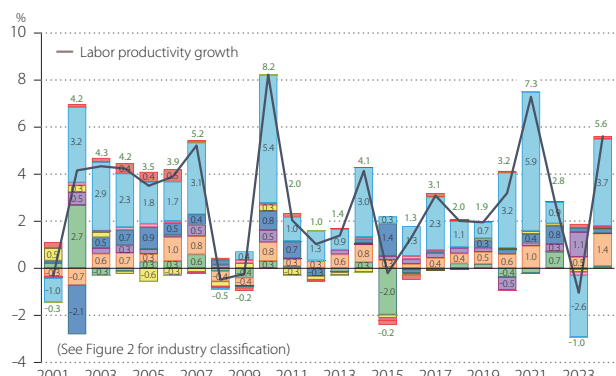


Figure 7 Industry Origins of Labor Productivity Growth

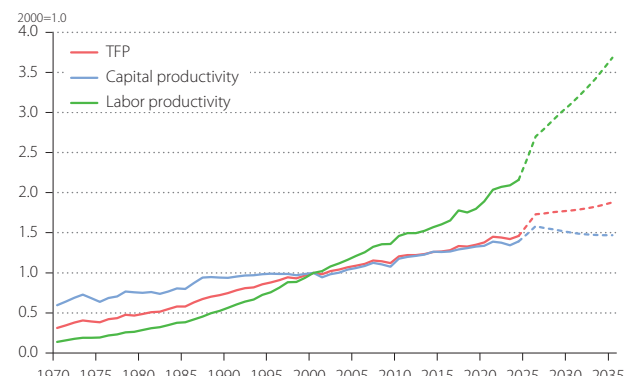


Figure 8 Productivity Indicators

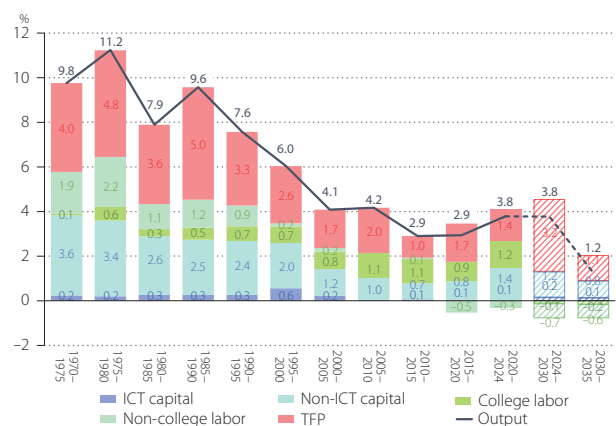


Figure 9 Decomposition of Economic Growth

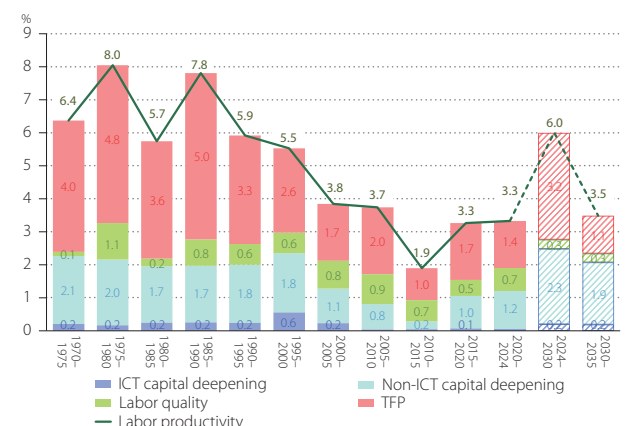


Figure 10 Decomposition of Labor Productivity Growth

Fiji

Key Indicators

GDP in 2024	14	Billion USD (as of 2024)	Number of employment in 2024	374	Thousands persons
(exchange rate based)	6	Billion USD (as of 2024)	Employment rate in 2024	40.2	%
Per capita GDP in 2024	15.5	Thousand USD (as of 2024)	Female employment share in 2024	32.9	%
(exchange rate based)	6.4	Thousand USD (as of 2024)	Average schooling years of workers in 2024	12.3	Years
Per-worker labor productivity level in 2024	34.0	Thousand USD per worker (as of 2024)	Investment share in 2024	20.9	%
Per-hour labor productivity level in 2024	18.0	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	11.4	%
Capital stock per hour worked in 2024	63.3	USD (as of 2024)	Agriculture share in GDP in 2024	18.8	%
Energy productivity levels in 2024	n.a.	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	14.2	%
Carbon intensity of GDP in 2024	n.a.	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	11.7	%

(%: average annual growth rate)	1970 –80	1980 –90	1990 –2000	2000 –10	2010 –20	2020 –24	2019 –20	2020 –21	2021 –22	2022 –23	2023 –24	projection		
GDP growth	4.7	2.2	2.3	1.3	1.0	6.1	–12.6	–5.3	16.3	9.0	3.5	3.0	3.2	3.2
Labor input growth	5.7	4.6	4.0	2.1	0.6	3.7	–6.2	1.0	10.5	4.9	–1.5	1.2	0.7	0.8
Labor quality growth	2.3	2.3	2.1	1.0	0.4	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.4	0.4
Hours worked growth	3.4	2.3	1.9	1.2	0.2	3.6	–6.3	0.9	10.5	4.8	–1.6	0.8	0.4	0.4
College labor input growth	6.4	7.8	5.3	4.1	–0.3	3.6	–6.4	–6.4	0.8	10.3	4.7	1.6	1.5	1.3
Non–college labor input growth	5.5	3.5	3.5	0.9	1.1	3.8	–6.1	–6.1	1.1	10.6	4.9	0.9	0.3	0.5
ICT capital input growth	1.3	17.1	6.2	3.8	7.3	5.9	1.9	0.1	4.0	8.1	11.4	10.9	9.0	10.2
Non–ICT capital input growth	5.9	2.8	2.1	0.3	0.9	0.8	0.0	–1.5	0.0	2.3	2.5	1.3	1.4	1.4
Per-worker labor productivity growth	1.4	–0.4	0.6	–0.1	1.3	2.5	–12.6	–5.3	5.9	4.2	5.0	2.6	3.1	3.0
Per-hour labor productivity growth	1.3	–0.1	0.4	0.2	0.9	2.4	–12.5	–5.4	5.9	4.2	5.1	2.3	2.9	2.8
Capital productivity growth	–5.8	–3.0	–2.1	–0.4	–1.2	–1.0	–0.3	1.4	0.0	–2.5	–2.9	1.2	1.5	1.0
TFP growth	–1.1	–1.6	–0.7	0.2	0.2	3.8	–16.0	–4.2	11.3	5.4	2.6	1.5	2.0	1.8

Production

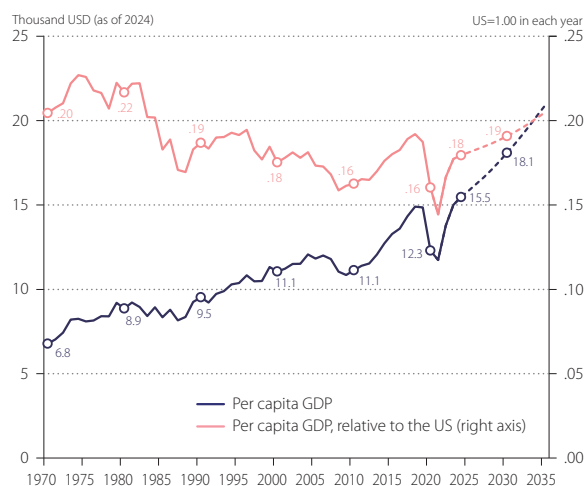


Figure 1 Per Capita GDP

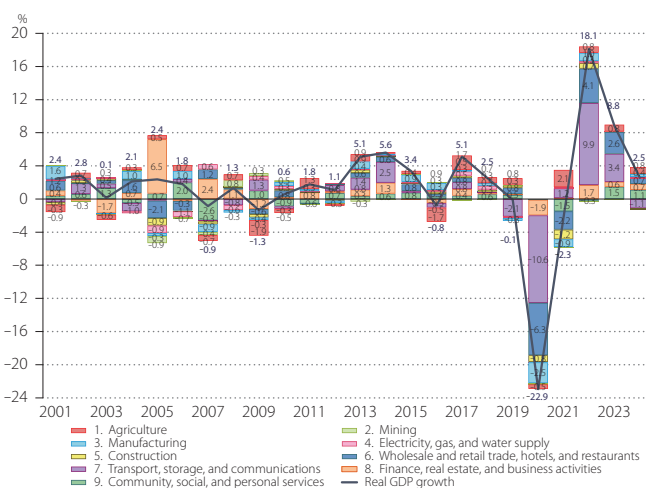


Figure 2 Industry Origins of Economic Growth

Labor

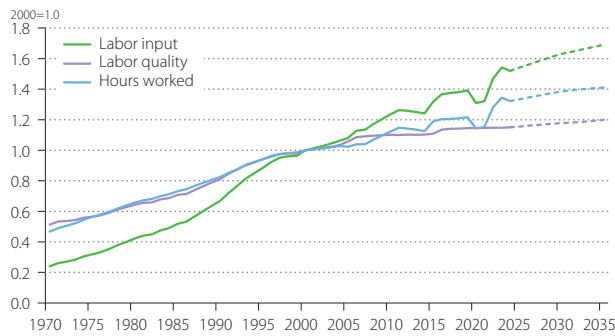


Figure 3 Labor Inputs

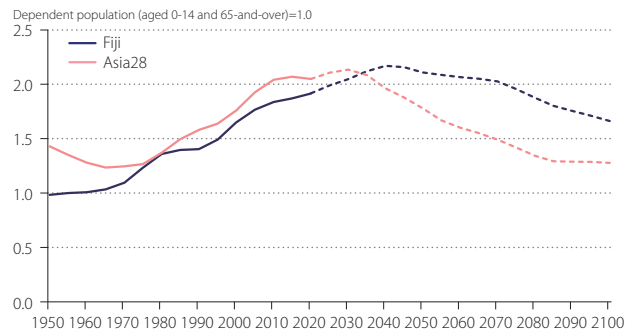


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level

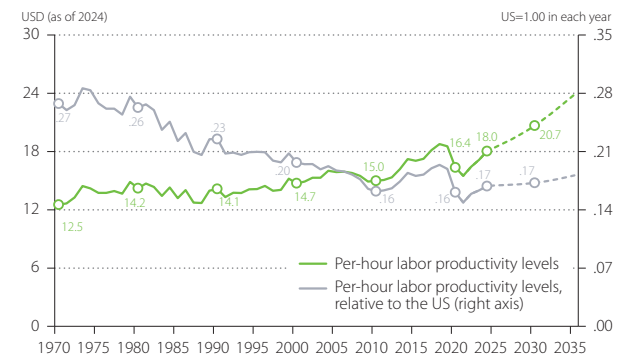


Figure 6 Per-Hour Labor Productivity Level

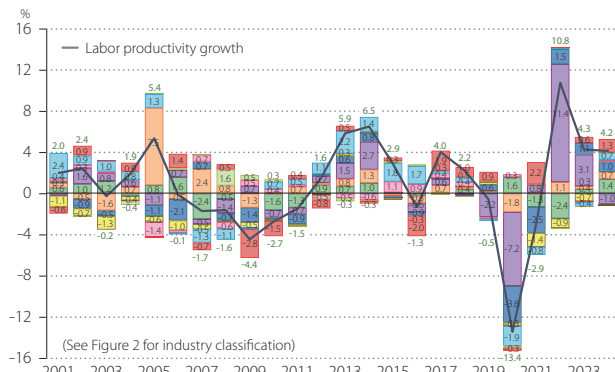


Figure 7 Industry Origins of Labor Productivity Growth

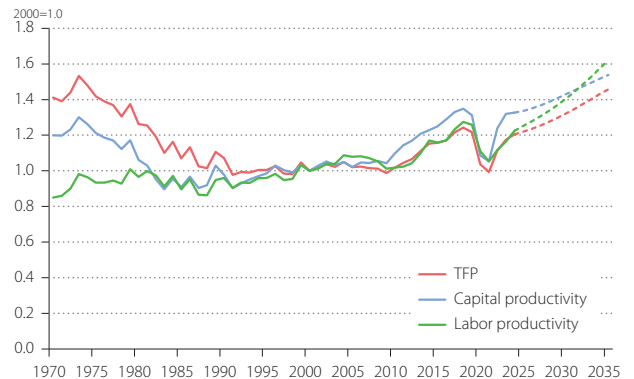


Figure 8 Productivity Indicators

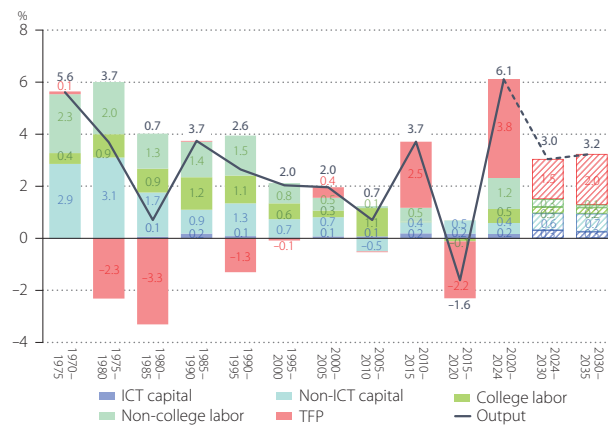


Figure 9 Decomposition of Economic Growth

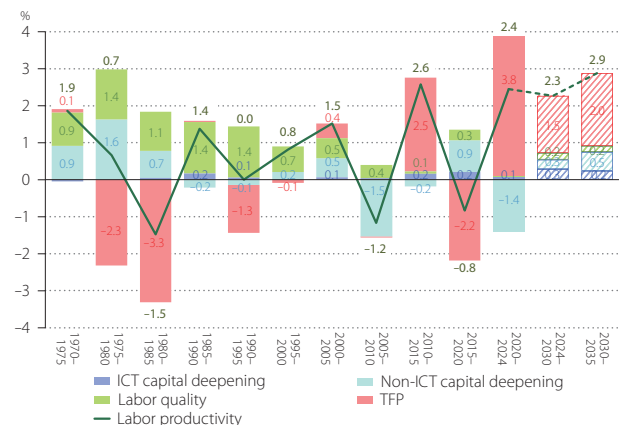


Figure 10 Decomposition of Labor Productivity Growth

Hong Kong

Key Indicators

GDP in 2024	568	Billion USD (as of 2024)	Number of employment in 2024	3,668	Thousands persons
(exchange rate based)	407	Billion USD (as of 2024)	Employment rate in 2024	48.7	%
Per capita GDP in 2024	75.4	Thousand USD (as of 2024)	Female employment share in 2024	51.9	%
(exchange rate based)	54.1	Thousand USD (as of 2024)	Average schooling years of workers in 2024	12.7	Years
Per-worker labor productivity level in 2024	146.9	Thousand USD per worker (as of 2024)	Investment share in 2024	15.8	%
Per-hour labor productivity level in 2024	69.1	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	17.8	%
Capital stock per hour worked in 2024	169.9	USD (as of 2024)	Agriculture share in GDP in 2024	0.0	%
Energy productivity levels in 2024	75.6	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	1.0	%
Carbon intensity of GDP in 2024	57.1	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	0.2	%

(%: average annual growth rate)	1970 –80	1980 –90	1990 –2000	2000 –10	2010 –20	2020 –24	2019 –20	2020 –21	2021 –22	2022 –23	2023 –24	projection		
												2024–30	2030–35	2024–35
GDP growth	8.9	6.7	4.3	4.0	1.5	2.1	–1.3	6.3	–3.5	3.1	2.5	2.5	2.2	2.4
Labor input growth	4.2	2.0	2.9	1.2	0.7	0.8	–6.0	1.6	–1.8	1.8	1.5	–1.7	–2.1	–1.6
Labor quality growth	0.5	1.0	0.9	0.5	1.0	0.5	1.9	0.0	0.9	0.7	0.6	0.5	0.4	0.4
Hours worked growth	3.7	1.0	2.0	0.7	–0.3	0.3	–7.9	1.6	–2.6	1.1	0.9	–2.2	–2.5	–2.0
College labor input growth	8.8	6.7	10.6	4.0	3.8	1.7	–1.1	–1.1	0.9	–0.7	4.2	–0.5	–1.1	–0.5
Non-college labor input growth	4.0	1.5	1.1	–0.1	–1.7	–0.1	–10.3	–10.3	2.2	–2.7	–0.4	–3.0	–3.2	–2.8
ICT capital input growth	16.3	19.5	18.8	9.6	6.3	3.1	1.9	3.2	4.5	3.6	1.1	4.8	7.6	5.7
Non-ICT capital input growth	7.2	5.8	4.9	2.2	0.8	–0.6	–1.0	–0.9	–1.0	–0.1	–0.4	1.6	2.4	1.8
Per-worker labor productivity growth	4.9	4.8	2.6	3.2	1.0	1.7	–1.3	6.3	–2.7	1.1	2.1	4.4	4.3	4.2
Per-hour labor productivity growth	5.2	5.7	2.4	3.3	1.8	1.8	1.4	4.6	–0.9	2.0	1.6	4.7	4.6	4.4
Capital productivity growth	–7.4	–6.2	–5.6	–2.8	–1.2	0.4	0.7	0.7	0.6	–0.1	0.3	0.7	–0.6	0.1
TFP growth	3.2	2.6	0.1	2.0	0.6	1.8	–2.8	5.6	–2.3	2.1	1.8	2.6	2.0	2.3

Production

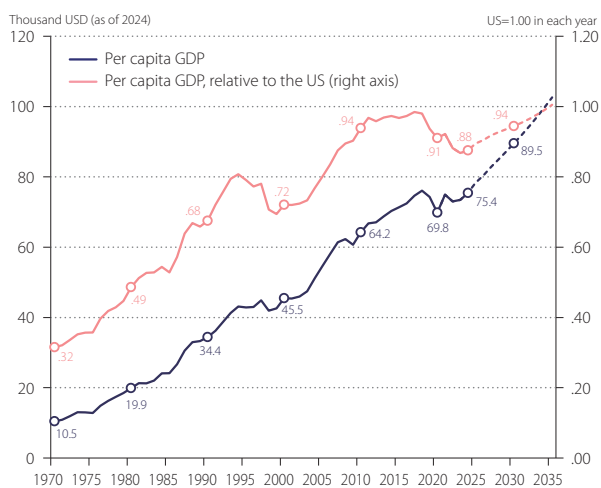


Figure 1 Per Capita GDP

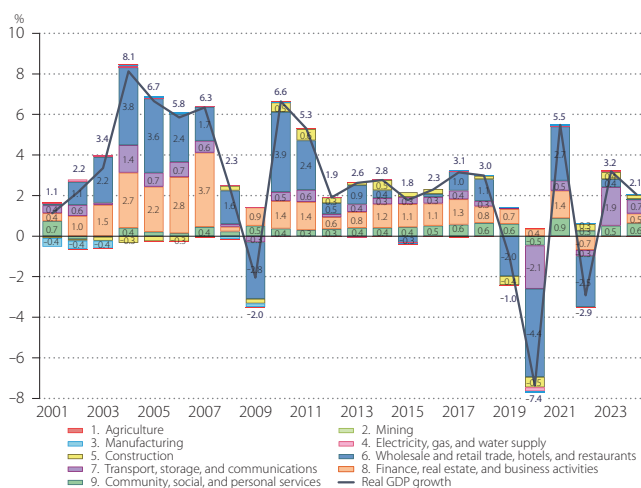


Figure 2 Industry Origins of Economic Growth

Labor

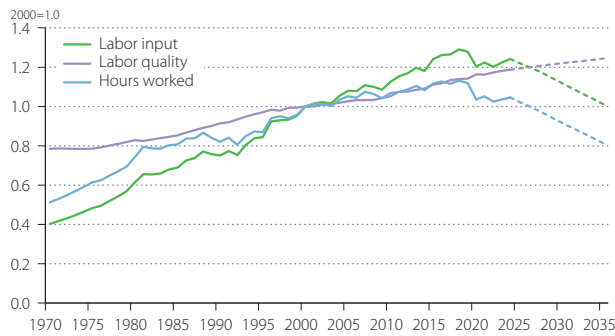


Figure 3 Labor Inputs

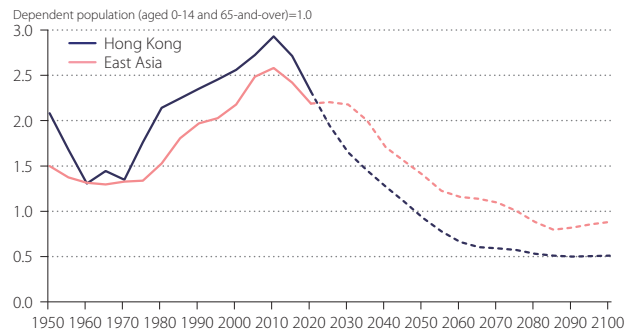


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

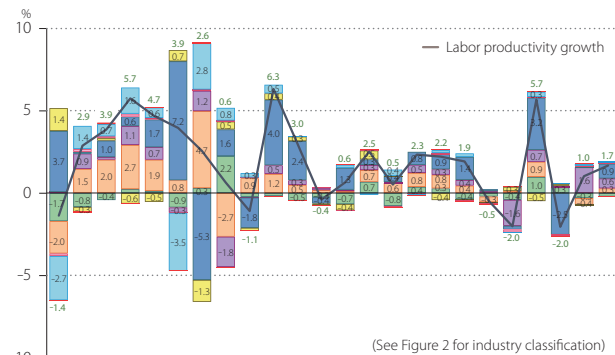


Figure 7 Industry Origins of Labor Productivity Growth

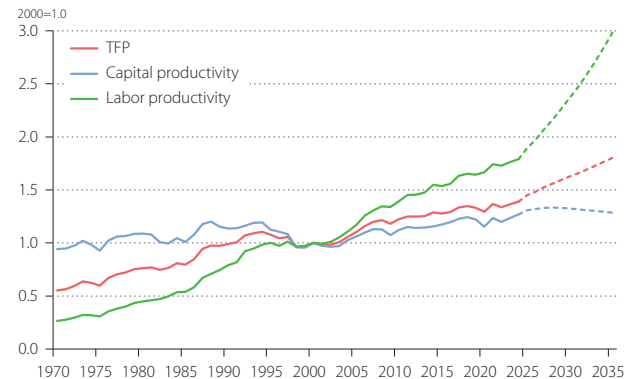


Figure 8 Productivity Indicators

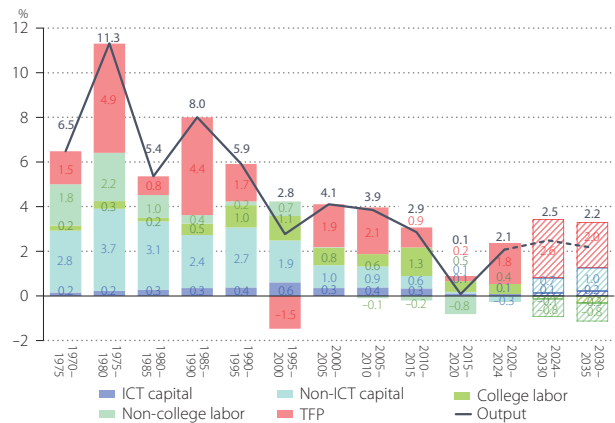


Figure 9 Decomposition of Economic Growth

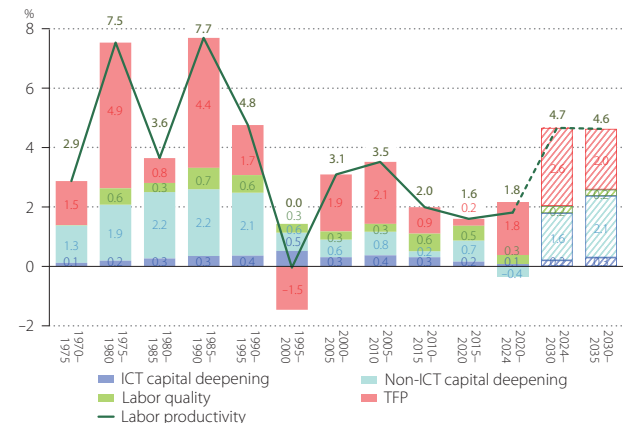


Figure 10 Decomposition of Labor Productivity Growth

India

Key Indicators

GDP in 2024	15,223	Billion USD (as of 2024)	Number of employment in 2024	548,041	Thousands persons
(exchange rate based)	3,838	Billion USD (as of 2024)	Employment rate in 2024	37.8 %	
Per capita GDP in 2024	10.5	Thousand USD (as of 2024)	Female employment share in 2024	25.7 %	
(exchange rate based)	2.6	Thousand USD (as of 2024)	Average schooling years of workers in 2024	6.3 Years	
Per-worker labor productivity level in 2024	26.1	Thousand USD per worker (as of 2024)	Investment share in 2024	33.5 %	
Per-hour labor productivity level in 2024	12.3	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	11.7 %	
Capital stock per hour worked in 2024	41.8	USD (as of 2024)	Agriculture share in GDP in 2024	19.4 %	
Energy productivity levels in 2024	18.7	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	14.5 %	
Carbon intensity of GDP in 2024	199.3	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	42.7 %	

(%: average annual growth rate)	1970 -80	1980 -90	1990 -2000	2000 -10	2010 -20	2020 -24	2019 -20	2020 -21	2021 -22	2022 -23	2023 -24	projection		
GDP growth	3.1	5.0	5.0	7.7	4.5	8.3	-7.3	7.6	8.4	6.6	6.2	2024-30	2030-35	2024-35
Labor input growth	3.0	3.2	2.8	3.0	2.0	1.3	1.4	1.2	1.2	1.4	1.4	2.8	2.4	2.5
Labor quality growth	0.6	1.2	1.0	1.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	2.0	1.9	1.8
Hours worked growth	2.4	2.0	1.8	1.5	1.0	0.8	0.9	0.8	0.7	0.9	0.9	0.8	0.5	0.7
College labor input growth	10.7	7.6	5.6	5.9	2.6	2.1	2.2	2.2	2.0	2.0	2.1	4.2	3.7	3.8
Non-college labor input growth	2.4	2.5	2.1	1.9	1.7	0.9	1.1	1.1	0.9	0.9	1.0	2.1	1.6	1.8
ICT capital input growth	15.5	21.6	14.9	14.7	14.9	5.6	7.4	6.1	5.0	4.7	6.6	10.8	11.3	10.7
Non-ICT capital input growth	4.1	5.1	4.5	6.6	6.0	5.0	4.9	4.0	4.9	5.4	5.7	4.9	4.6	4.8
Per-worker labor productivity growth	0.4	3.4	3.6	5.9	3.4	7.4	-7.3	7.6	9.7	6.1	6.0	5.6	4.8	5.3
Per-hour labor productivity growth	0.5	3.4	3.6	5.8	3.3	7.3	-7.3	7.6	9.7	6.1	6.0	5.5	4.8	5.3
Capital productivity growth	-4.2	-5.6	-5.0	-7.0	-6.7	-5.0	-5.2	-4.1	-4.8	-5.3	-5.7	0.8	0.0	-0.1
TFP growth	-0.4	1.5	1.8	2.5	0.4	5.4	-9.3	6.0	7.7	4.0	3.8	2.5	1.8	2.3

Production

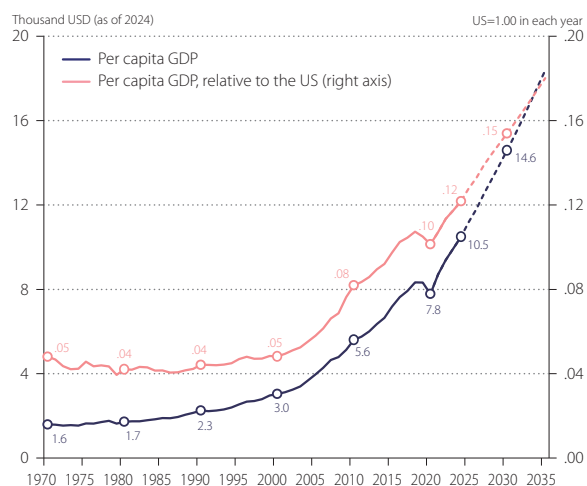


Figure 1 Per Capita GDP

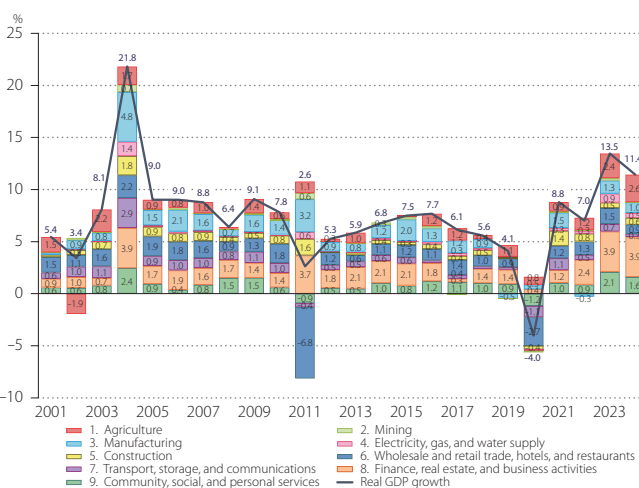


Figure 2 Industry Origins of Economic Growth

Labor

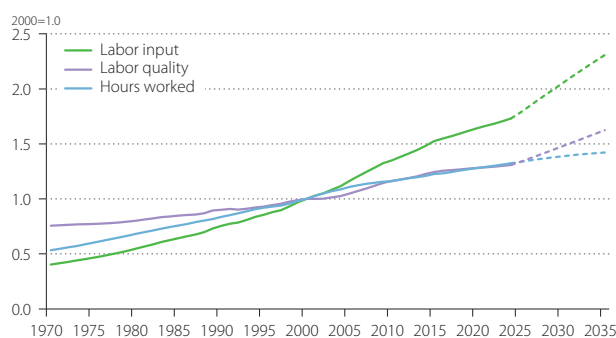


Figure 3 Labor Inputs

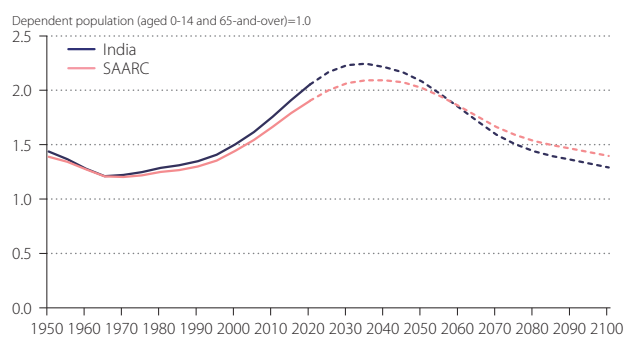


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

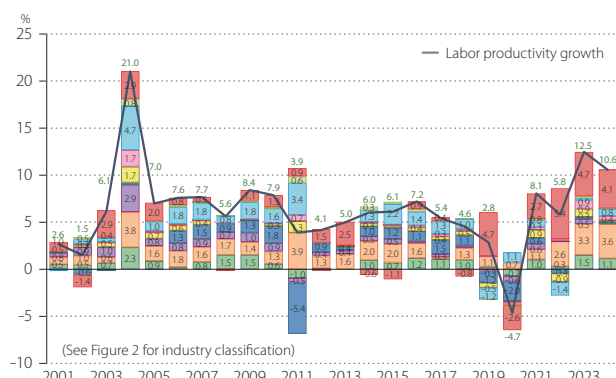


Figure 7 Industry Origins of Labor Productivity Growth

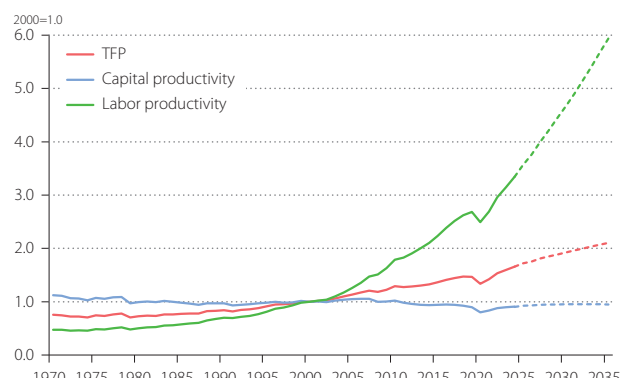


Figure 8 Productivity Indicators

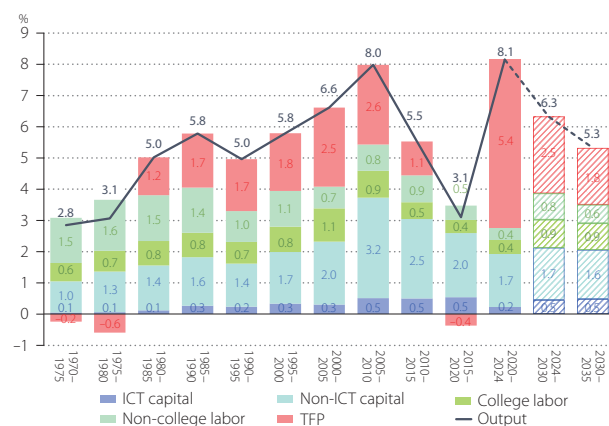


Figure 9 Decomposition of Economic Growth

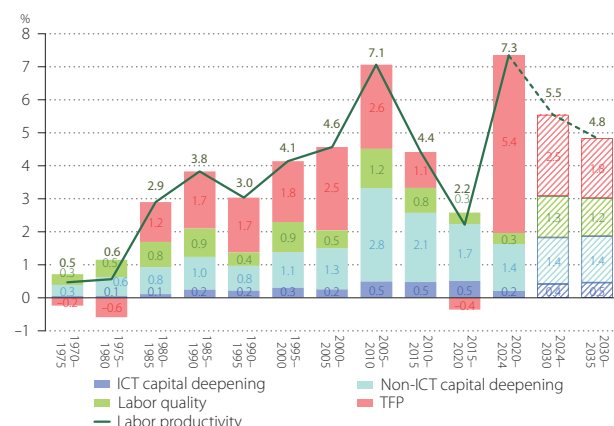


Figure 10 Decomposition of Labor Productivity Growth

Indonesia

Key Indicators

GDP in 2024	4,692	Billion USD (as of 2024)	Number of employment in 2024	139,242	Thousands persons
(exchange rate based)	1,403	Billion USD (as of 2024)	Employment rate in 2024	50.9 %	
Per capita GDP in 2024	17.2	Thousand USD (as of 2024)	Female employment share in 2024	39.2 %	
(exchange rate based)	5.1	Thousand USD (as of 2024)	Average schooling years of workers in 2024	9.3 Years	
Per-worker labor productivity level in 2024	32.3	Thousand USD per worker (as of 2024)	Investment share in 2024	31.7 %	
Per-hour labor productivity level in 2024	16.5	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	3.7 %	
Capital stock per hour worked in 2024	88.9	USD (as of 2024)	Agriculture share in GDP in 2024	13.2 %	
Energy productivity levels in 2024	26.3	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	19.8 %	
Carbon intensity of GDP in 2024	173.0	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	27.1 %	

(%: average annual growth rate)	1970-80	1980-90	1990-2000	2000-10	2010-20	2020-24	2019-20	2020-21	2021-22	2022-23	2023-24	projection		
GDP growth	8.0	6.1	4.1	5.1	4.5	4.7	-1.5	4.1	5.2	4.9	4.9	2024-30	2030-35	2034-35
Labor input growth	5.9	5.8	6.4	5.0	6.0	0.6	4.0	-8.8	3.1	5.1	3.1	3.0	2.4	2.7
Labor quality growth	1.9	2.4	4.3	2.8	4.2	-0.1	3.7	-2.3	-0.6	-0.5	3.1	2.8	2.3	2.6
Hours worked growth	4.0	3.4	2.1	2.2	1.8	0.7	0.3	-6.5	3.6	5.7	0.0	0.2	0.1	0.1
College labor input growth	14.4	-1.7	12.7	10.2	11.1	0.6	7.5	7.5	-14.2	5.1	3.7	3.7	3.7	4.1
Non-college labor input growth	5.7	6.1	5.9	4.1	4.1	0.7	2.6	2.6	-6.6	2.3	5.7	2.7	1.8	2.2
ICT capital input growth	22.5	21.5	14.0	13.2	9.3	5.9	5.7	5.3	7.2	6.0	5.1	8.6	9.8	8.8
Non-ICT capital input growth	6.4	4.6	5.2	4.0	5.2	4.2	4.8	4.0	4.2	4.2	4.4	3.8	4.5	4.2
Per-worker labor productivity growth	4.2	2.9	2.4	3.3	2.5	3.2	-1.5	4.1	1.6	2.0	4.9	4.3	3.8	4.2
Per-hour labor productivity growth	4.0	2.7	2.0	2.9	2.7	4.0	-2.4	10.1	1.5	-0.8	4.9	4.6	3.9	4.3
Capital productivity growth	-6.4	-4.7	-5.3	-4.1	-5.2	-4.2	-4.8	-4.0	-4.2	-4.2	-4.4	0.9	-0.6	-0.2
TFP growth	1.8	1.0	-1.7	0.6	-1.1	2.0	-6.5	5.4	1.4	0.4	0.9	1.2	0.3	0.8

Production

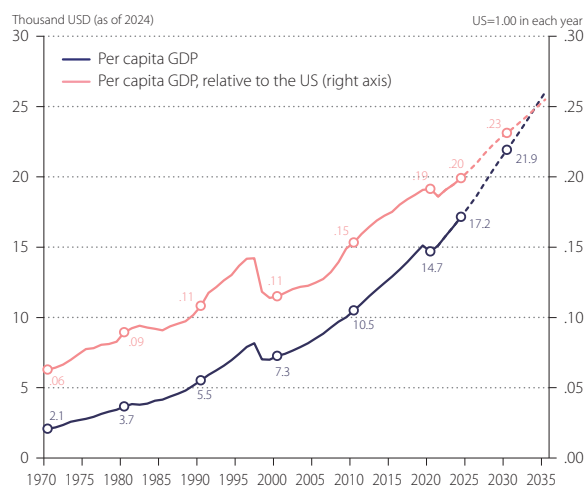


Figure 1 Per Capita GDP

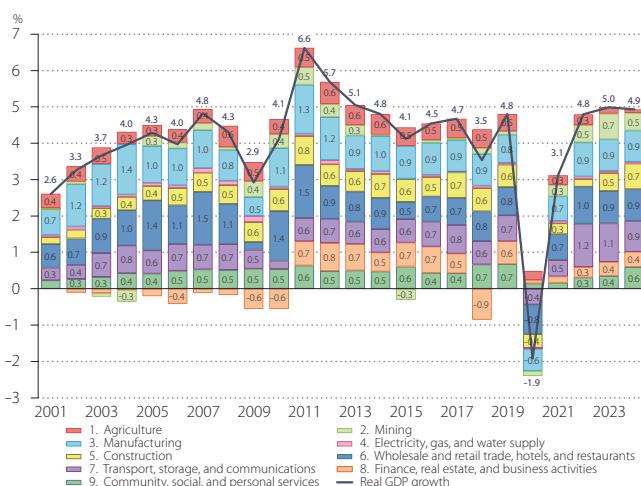


Figure 2 Industry Origins of Economic Growth

Labor

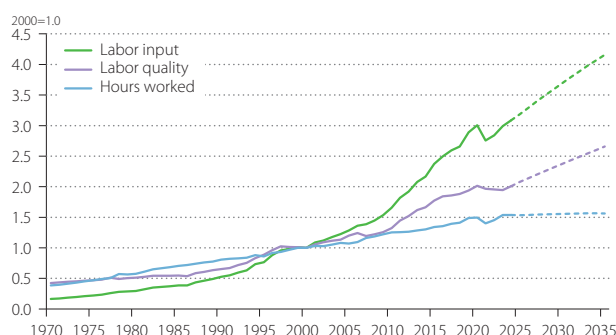


Figure 3 Labor Inputs

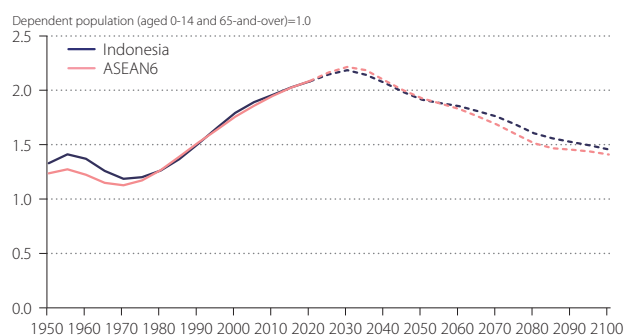


Figure 4 Demographic Dividend

Productivity

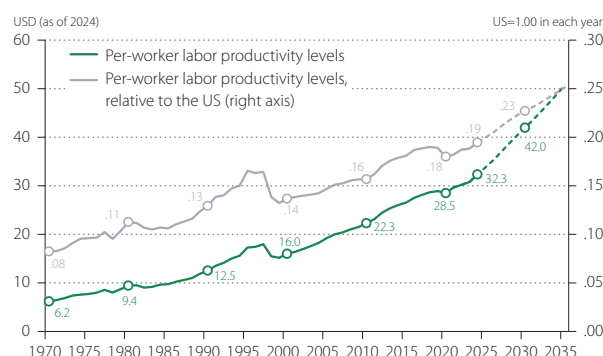


Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

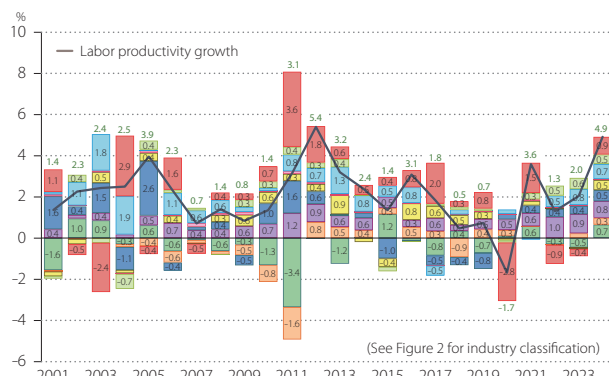


Figure 7 Industry Origins of Labor Productivity Growth

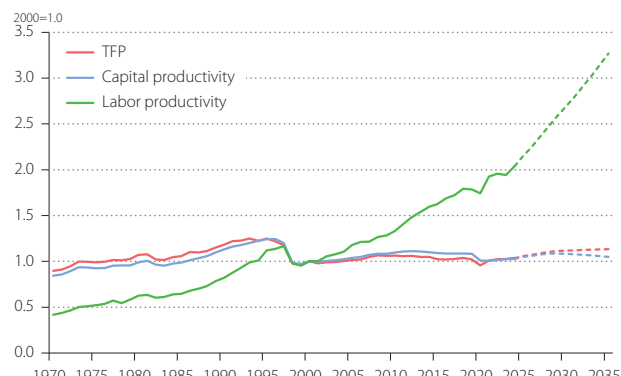


Figure 8 Productivity Indicators

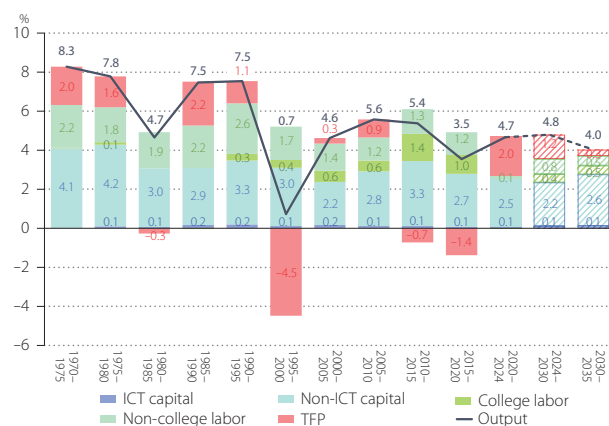


Figure 9 Decomposition of Economic Growth

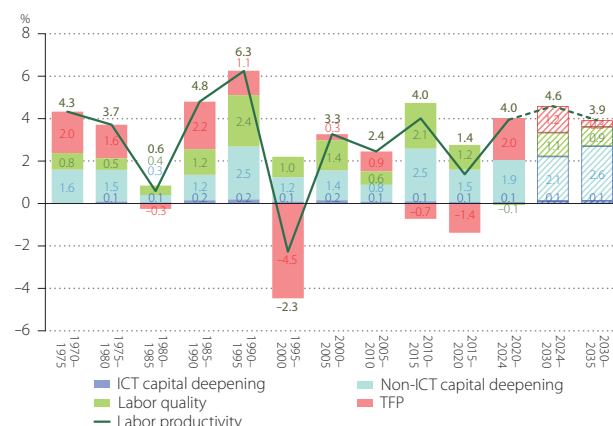


Figure 10 Decomposition of Labor Productivity Growth

Iran

Key Indicators

GDP in 2024	2,099	Billion USD (as of 2024)	Number of employment in 2024	24,795	Thousands persons
(exchange rate based)	564	Billion USD (as of 2024)	Employment rate in 2024	28.2	%
Per capita GDP in 2024	23.9	Thousand USD (as of 2024)	Female employment share in 2024	13.8	%
(exchange rate based)	6.4	Thousand USD (as of 2024)	Average schooling years of workers in 2024	9.7	Years
Per-worker labor productivity level in 2024	83.3	Thousand USD per worker (as of 2024)	Investment share in 2024	38.3	%
Per-hour labor productivity level in 2024	36.3	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	5.9	%
Capital stock per hour worked in 2024	190.7	USD (as of 2024)	Agriculture share in GDP in 2024	7.4	%
Energy productivity levels in 2024	8.7	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	18.3	%
Carbon intensity of GDP in 2024	352.5	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	13.4	%

(%: average annual growth rate)	1970-80	1980-90	1990-2000	2000-10	2010-20	2020-24	2019-20	2020-21	2021-22	2022-23	2023-24	projection		
GDP growth	1.7	2.6	4.8	6.1	1.5	2.9	4.3	4.9	2.9	3.4	1.8	0.4	1.7	1.0
Labor input growth	3.6	3.8	4.5	3.3	2.0	1.4	-0.1	0.0	1.2	2.8	1.5	1.7	1.4	1.6
Labor quality growth	1.2	1.2	1.7	1.9	1.0	0.4	1.0	1.1	0.2	-0.2	0.3	1.4	1.3	1.3
Hours worked growth	2.4	2.7	2.8	1.4	1.1	1.0	-1.1	-1.1	0.9	3.0	1.2	0.3	0.2	0.3
College labor input growth	4.7	7.4	10.0	6.5	3.1	1.3	-1.4	-1.4	-1.1	1.5	3.3	2.5	2.2	2.3
Non-college labor input growth	3.4	3.1	2.5	1.1	0.9	1.5	1.5	1.5	1.3	0.8	2.2	0.8	0.4	0.7
ICT capital input growth	7.1	11.0	14.4	14.4	4.0	0.2	-4.0	-3.1	2.0	1.9	0.1	2.7	6.8	4.2
Non-ICT capital input growth	4.3	3.0	2.9	5.5	2.0	0.8	0.1	-0.3	0.9	1.3	1.2	0.1	0.7	0.5
Per-worker labor productivity growth	-0.7	0.0	1.9	4.2	0.1	1.9	4.3	4.9	1.8	0.2	0.6	-0.1	1.3	0.5
Per-hour labor productivity growth	-0.7	-0.1	2.0	4.7	0.4	1.9	3.9	4.5	1.9	0.4	0.6	0.1	1.5	0.7
Capital productivity growth	-4.3	-3.1	-3.0	-5.5	-2.0	-0.7	-0.1	0.4	-0.9	-1.2	-1.2	0.2	0.9	0.4
TFP growth	-2.4	-0.8	1.4	1.0	-0.5	2.0	2.8	3.7	1.9	1.7	0.5	-0.1	0.7	0.3

Production

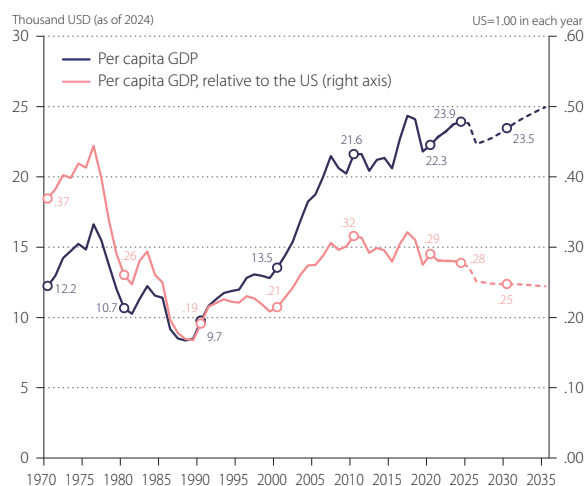


Figure 1 Per Capita GDP

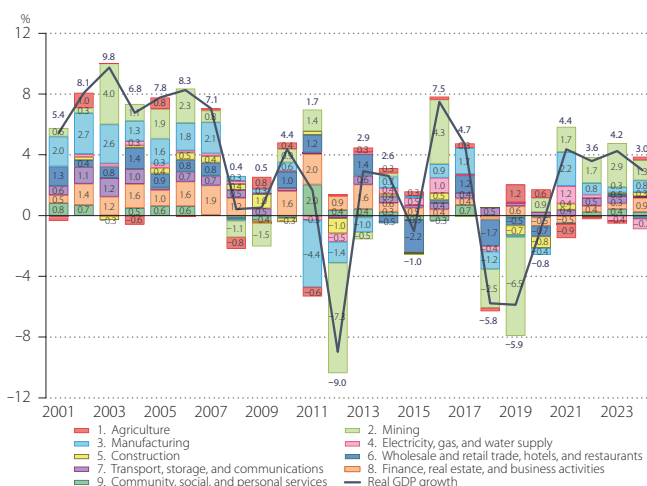


Figure 2 Industry Origins of Economic Growth

Labor

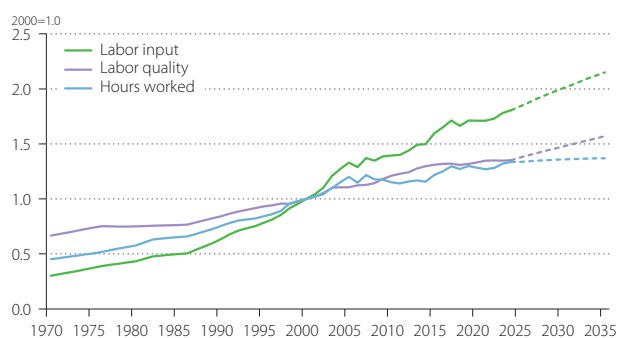


Figure 3 Labor Inputs

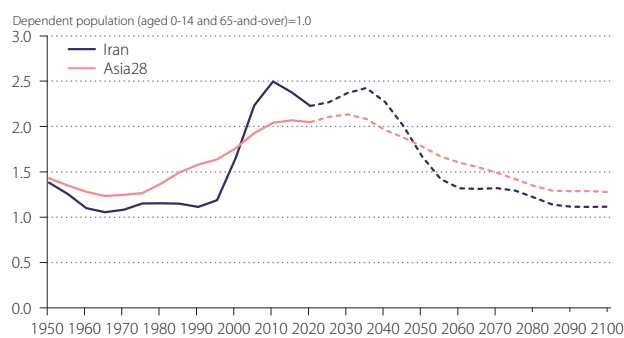


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level

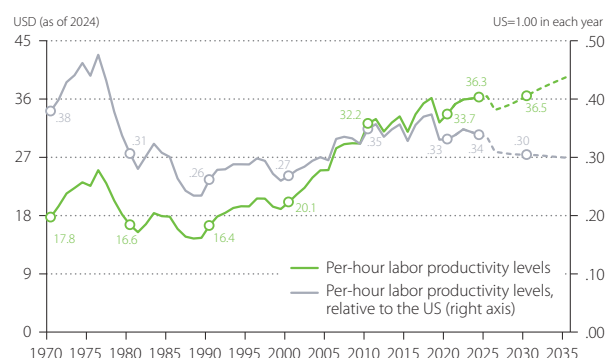


Figure 6 Per-Hour Labor Productivity Level

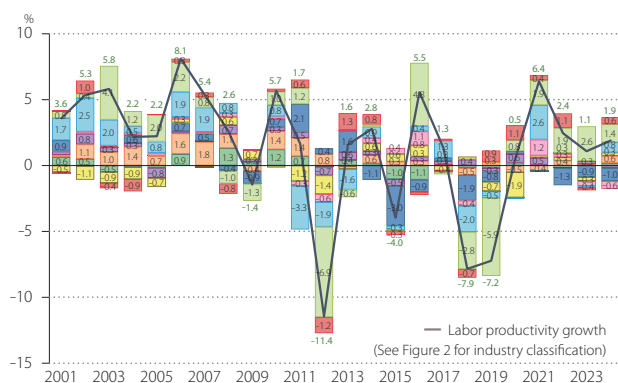


Figure 7 Industry Origins of Labor Productivity Growth

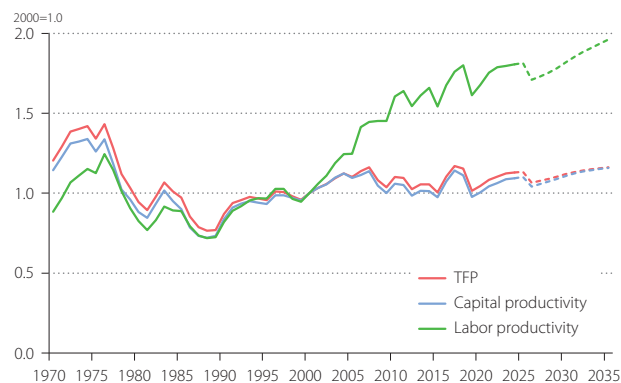


Figure 8 Productivity Indicators

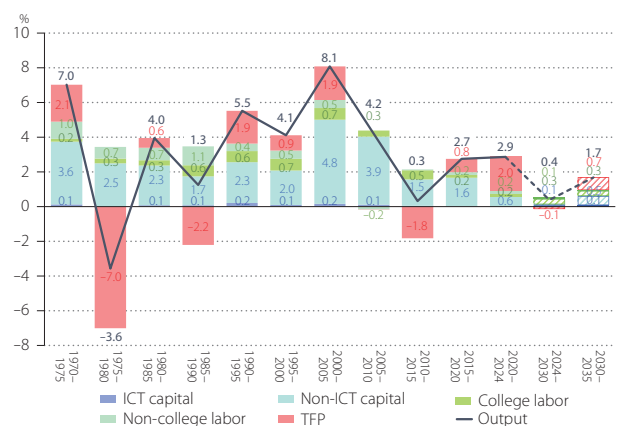


Figure 9 Decomposition of Economic Growth

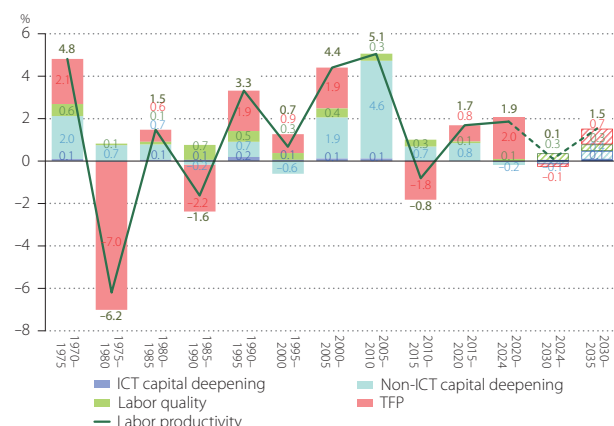


Figure 10 Decomposition of Labor Productivity Growth

Japan

Key Indicators

GDP in 2024	6,744	Billion USD (as of 2024)	Number of employment in 2024	67,792	Thousands persons
(exchange rate based)	4,190	Billion USD (as of 2024)	Employment rate in 2024	54.8	%
Per capita GDP in 2024	54.5	Thousand USD (as of 2024)	Female employment share in 2024	45.2	%
(exchange rate based)	33.8	Thousand USD (as of 2024)	Average schooling years of workers in 2024	13.5	Years
Per-worker labor productivity level in 2024	93.1	Thousand USD per worker (as of 2024)	Investment share in 2024	27.7	%
Per-hour labor productivity level in 2024	55.5	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	19.2	%
Capital stock per hour worked in 2024	179.0	USD (as of 2024)	Agriculture share in GDP in 2024	1.1	%
Energy productivity levels in 2024	26.0	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	19.1	%
Carbon intensity of GDP in 2024	141.3	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	3.1	%

(%: average annual growth rate)	1970 -80	1980 -90	1990 -2000	2000 -10	2010 -20	2020 -24	2019 -20	2020 -21	2021 -22	2022 -23	2023 -24	projection		
GDP growth	4.9	4.6	1.4	0.6	0.5	1.5	-3.8	3.1	1.3	0.8	0.4	2024-30	2030-35	2024-35
Labor input growth	1.8	1.8	0.0	0.2	0.4	0.5	0.4	1.3	2.1	0.2	-1.8	-1.1	-1.7	-1.4
Labor quality growth	1.6	1.1	0.7	0.8	0.4	0.3	1.2	0.5	0.2	0.5	0.0	0.3	0.0	0.2
Hours worked growth	0.2	0.7	-0.7	-0.6	0.0	0.2	-0.7	0.8	1.9	-0.2	-1.7	-1.5	-1.7	-1.6
College labor input growth	6.4	4.7	2.4	2.2	1.6	1.6	3.2	3.2	2.0	2.9	1.6	0.4	-0.4	0.0
Non-college labor input growth	0.9	1.0	-0.9	-0.9	-0.5	-0.3	-1.5	-1.5	0.7	1.5	-0.8	-2.4	-2.9	-2.7
ICT capital input growth	11.3	17.9	9.2	4.7	5.3	4.9	6.4	5.2	5.1	4.9	4.5	6.2	6.2	6.1
Non-ICT capital input growth	5.2	3.8	1.9	0.4	0.1	0.0	0.3	-0.1	-0.1	0.0	0.0	1.0	1.4	1.1
Per-worker labor productivity growth	3.9	3.6	0.8	0.7	-0.1	0.7	-3.8	3.1	0.4	0.6	-1.3	2.2	2.2	1.9
Per-hour labor productivity growth	4.4	3.8	1.8	1.2	0.4	1.1	-3.7	2.7	-0.6	0.9	1.5	2.1	2.4	2.2
Capital productivity growth	-5.4	-4.5	-2.4	-0.7	-0.5	-0.5	-1.0	-0.4	-0.5	-0.5	-0.5	-0.9	-1.3	-1.1
TFP growth	1.2	1.6	0.0	0.1	0.0	0.8	-5.0	2.6	-0.1	0.4	0.5	0.6	0.7	0.6

Production

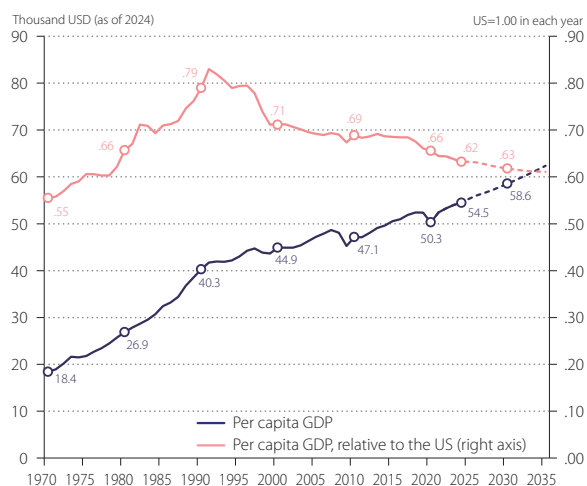


Figure 1 Per Capita GDP

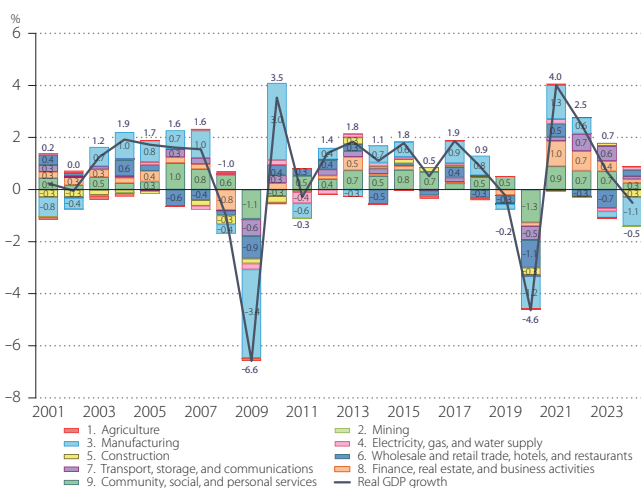


Figure 2 Industry Origins of Economic Growth

Labor

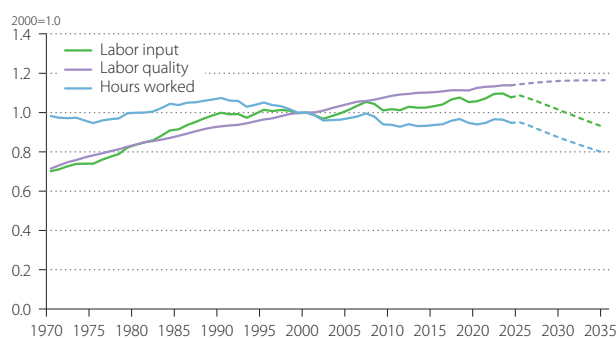


Figure 3 Labor Inputs

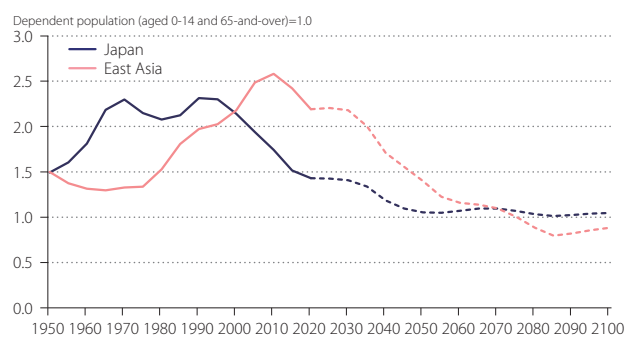


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level

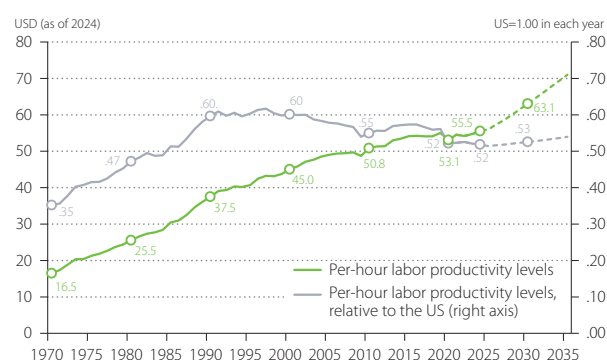


Figure 6 Per-Hour Labor Productivity Level

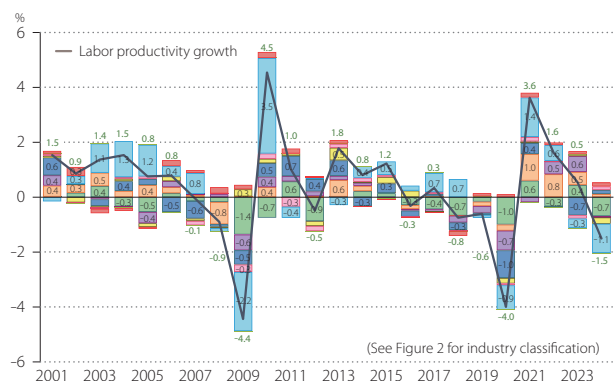


Figure 7 Industry Origins of Labor Productivity Growth

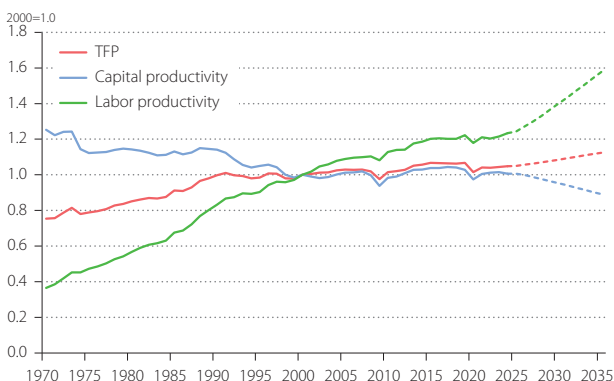


Figure 8 Productivity Indicators

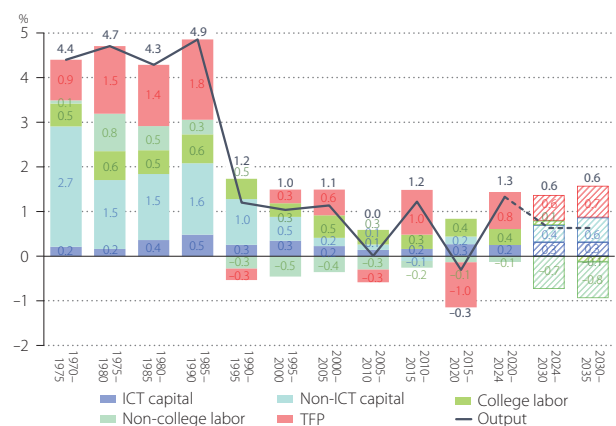


Figure 9 Decomposition of Economic Growth

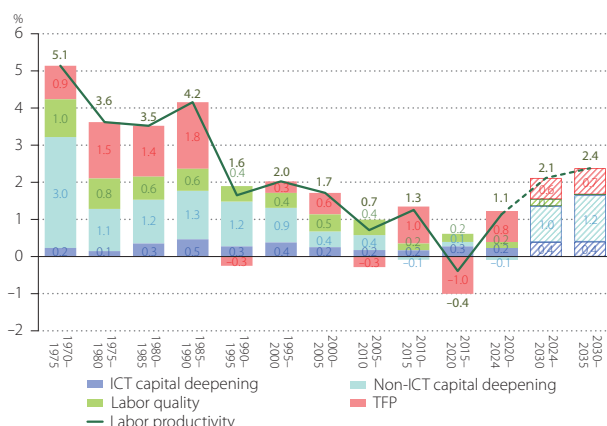


Figure 10 Decomposition of Labor Productivity Growth

Korea

Key Indicators

GDP in 2024	3,219	Billion USD (as of 2024)	Number of employment in 2024	29,078	Thousands persons
(exchange rate based)	1,875	Billion USD (as of 2024)	Employment rate in 2024	56.2	%
Per capita GDP in 2024	62.2	Thousand USD (as of 2024)	Female employment share in 2024	43.5	%
(exchange rate based)	36.2	Thousand USD (as of 2024)	Average schooling years of workers in 2024	13.6	Years
Per-worker labor productivity level in 2024	103.2	Thousand USD per worker (as of 2024)	Investment share in 2024	29.9	%
Per-hour labor productivity level in 2024	55.6	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	8.2	%
Capital stock per hour worked in 2024	247.6	USD (as of 2024)	Agriculture share in GDP in 2024	1.6	%
Energy productivity levels in 2024	17.0	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	28.7	%
Carbon intensity of GDP in 2024	180.4	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	5.2	%

(%: average annual growth rate)	1970-80	1980-90	1990-2000	2000-10	2010-20	2020-24	2019-20	2020-21	2021-22	2022-23	2023-24	projection		
GDP growth	9.2	10.0	6.9	4.8	2.5	2.6	0.0	3.1	3.0	0.6	2.0	2024-30	2030-35	2024-35
Labor input growth	4.1	5.8	3.1	2.2	0.5	1.2	-4.7	0.3	2.3	3.8	-1.7	-0.6	-1.1	-0.9
Labor quality growth	0.9	3.1	2.1	2.2	1.0	0.8	0.6	0.3	0.4	1.1	1.3	0.6	0.6	0.7
Hours worked growth	3.3	2.7	0.9	0.1	-0.4	0.4	-5.2	0.0	1.9	2.7	-3.0	-1.2	-1.7	-1.6
College labor input growth	3.6	10.9	7.2	5.6	2.5	2.6	-2.4	-2.4	1.6	2.7	6.2	0.7	-0.1	0.3
Non-college labor input growth	4.3	4.1	1.0	-0.9	-2.3	-1.3	-8.4	-8.4	-1.8	1.5	-0.5	-3.5	-3.8	-3.7
ICT capital input growth	22.5	23.1	18.6	6.8	3.3	3.5	4.4	4.1	3.8	3.4	2.7	5.3	7.1	5.8
Non-ICT capital input growth	9.7	8.8	7.3	5.2	3.3	2.5	2.8	2.8	2.8	2.5	2.1	1.6	1.4	1.6
Per-worker labor productivity growth	5.4	6.8	5.5	3.5	1.6	1.5	0.0	3.1	0.4	0.9	1.7	3.1	2.9	2.9
Per-hour labor productivity growth	5.4	6.9	6.1	4.6	3.1	2.5	4.4	4.5	1.3	-0.7	5.0	2.9	3.0	3.1
Capital productivity growth	-9.8	-9.2	-7.8	-5.3	-3.3	-2.6	-2.9	-2.8	-2.9	-2.5	-2.1	-0.2	-0.4	-0.4
TFP growth	1.4	2.1	1.7	0.9	0.8	1.1	0.3	3.0	0.6	-1.2	2.0	1.2	1.1	1.2

Production

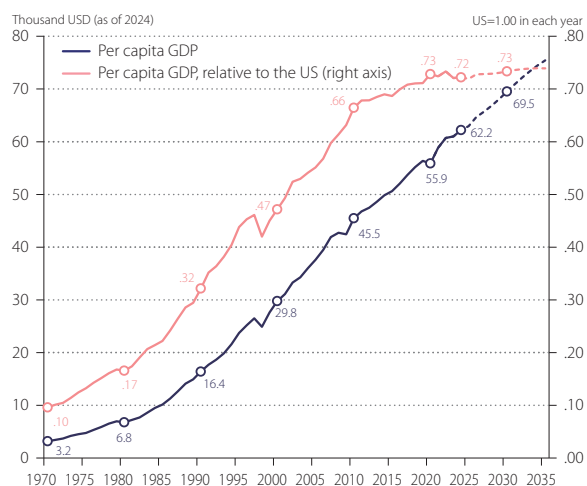


Figure 1 Per Capita GDP

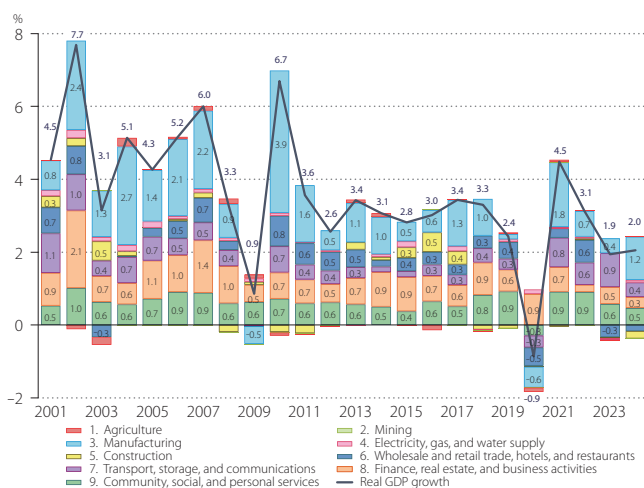


Figure 2 Industry Origins of Economic Growth

Labor

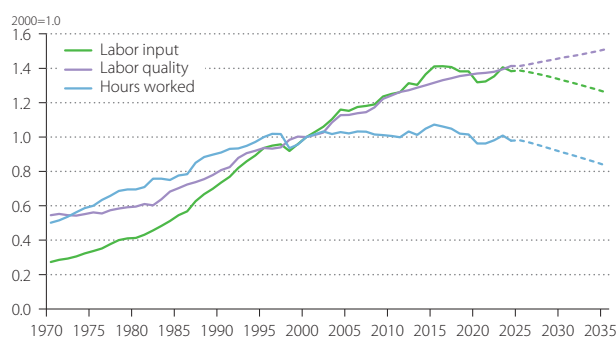


Figure 3 Labor Inputs

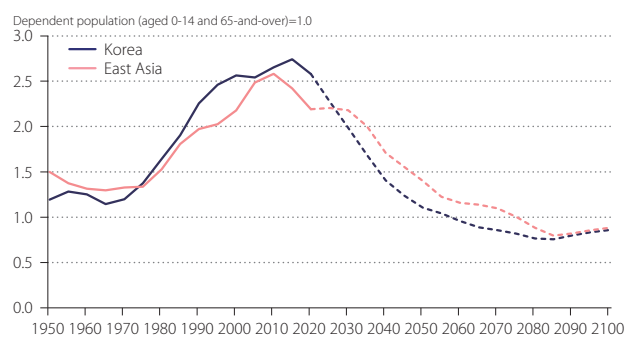


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

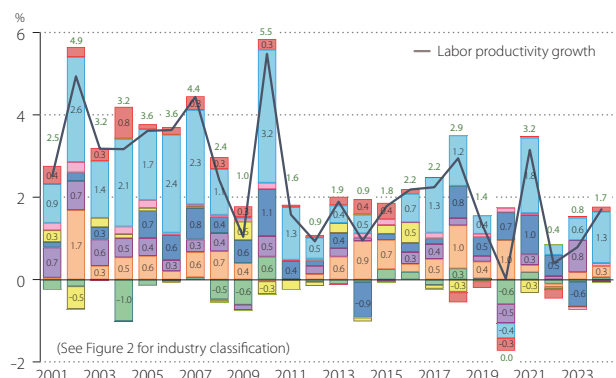


Figure 7 Industry Origins of Labor Productivity Growth

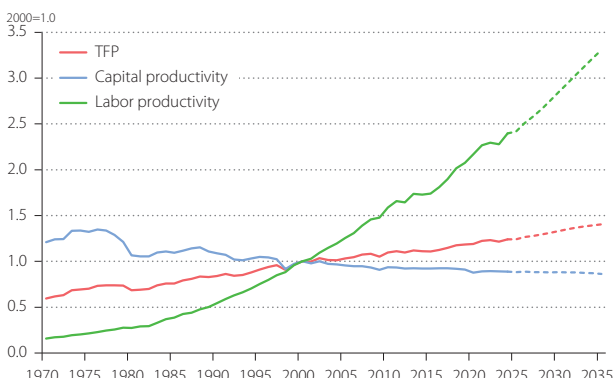


Figure 8 Productivity Indicators

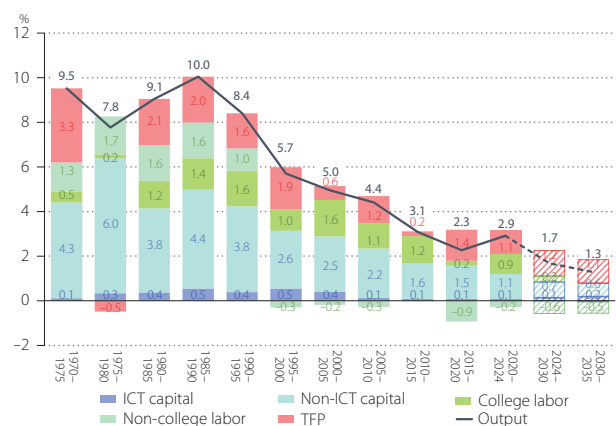


Figure 9 Decomposition of Economic Growth

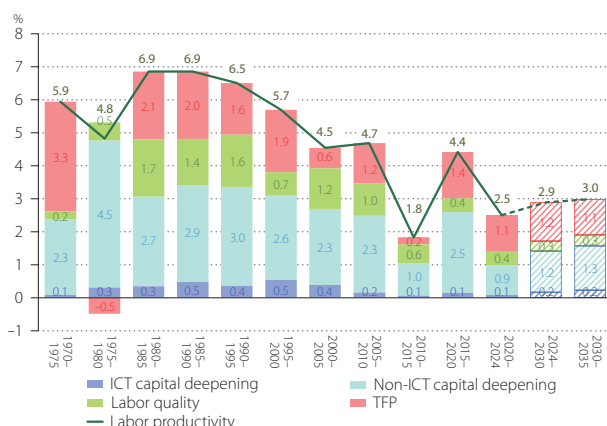


Figure 10 Decomposition of Labor Productivity Growth

Lao PDR

Key Indicators

GDP in 2024	80	Billion USD (as of 2024)	Number of employment in 2024	4,081	Thousands persons
(exchange rate based)	16	Billion USD (as of 2024)	Employment rate in 2024	52.6	%
Per capita GDP in 2024	10.3	Thousand USD (as of 2024)	Female employment share in 2024	47.8	%
(exchange rate based)	2.1	Thousand USD (as of 2024)	Average schooling years of workers in 2024	0.0	Years
Per-worker labor productivity level in 2024	17.2	Thousand USD per worker (as of 2024)	Investment share in 2024	47.5	%
Per-hour labor productivity level in 2024	7.1	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	2.3	%
Capital stock per hour worked in 2024	31.1	USD (as of 2024)	Agriculture share in GDP in 2024	30.6	%
Energy productivity levels in 2024	17.1	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	11.8	%
Carbon intensity of GDP in 2024	316.9	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	68.2	%

(%: average annual growth rate)	1970 –80	1980 –90	1990 –2000	2000 –10	2010 –20	2020 –24	2019 –20	2020 –21	2021 –22	2022 –23	2023 –24	projection		
GDP growth	3.0	5.1	5.4	5.8	6.5	3.8	–1.5	0.8	3.5	5.0	3.7	2024–30	2030–35	2024–35
Labor input growth	1.3	2.8	3.7	3.9	2.7	2.1	2.3	2.2	2.1	2.1	2.1	1.8	1.5	1.7
Labor quality growth	0.3	0.3	0.7	1.5	0.8	0.1	0.1	0.1	0.1	0.1	0.2	1.0	0.9	0.9
Hours worked growth	1.1	2.5	3.0	2.4	1.9	2.0	2.2	2.1	2.0	2.0	2.0	0.8	0.5	0.8
College labor input growth	8.8	7.4	8.6	8.7	1.3	2.1	2.2	2.2	2.2	2.1	2.0	4.8	4.4	4.4
Non-college labor input growth	1.1	2.6	3.2	3.0	3.0	2.2	2.3	2.3	2.2	2.2	2.1	1.0	0.5	0.9
ICT capital input growth	–1.0	20.6	13.1	8.5	5.6	1.7	–3.0	–2.9	10.2	3.3	–4.0	9.1	8.8	7.9
Non-ICT capital input growth	4.0	5.5	6.9	4.5	6.8	6.8	6.5	5.9	6.4	7.5	7.4	6.0	5.1	5.7
Per-worker labor productivity growth	1.9	2.7	2.4	3.4	4.6	1.7	–1.5	0.8	1.5	2.9	1.8	2.8	2.3	2.5
Per-hour labor productivity growth	1.9	2.7	2.4	3.4	4.6	1.8	–1.4	0.8	1.5	2.9	1.8	3.0	2.5	2.7
Capital productivity growth	–4.0	–5.5	–6.9	–4.6	–6.7	–6.7	–6.3	–5.7	–6.5	–7.4	–7.1	–2.3	–2.1	–2.6
TFP growth	0.4	0.9	–0.1	1.4	1.2	–1.1	–4.1	–1.5	–1.3	–0.3	–1.2	–0.5	–0.6	–0.6

Production

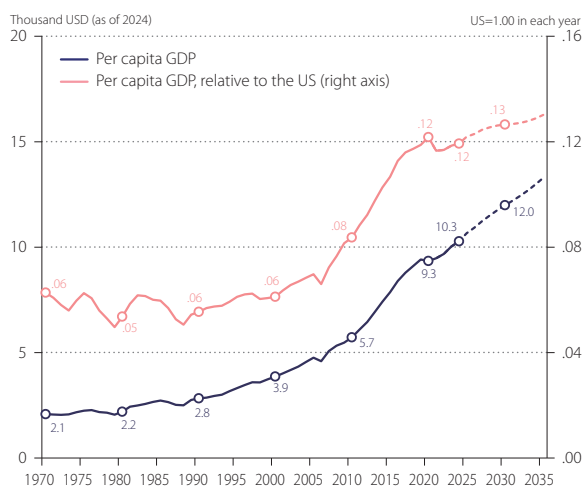


Figure 1 Per Capita GDP

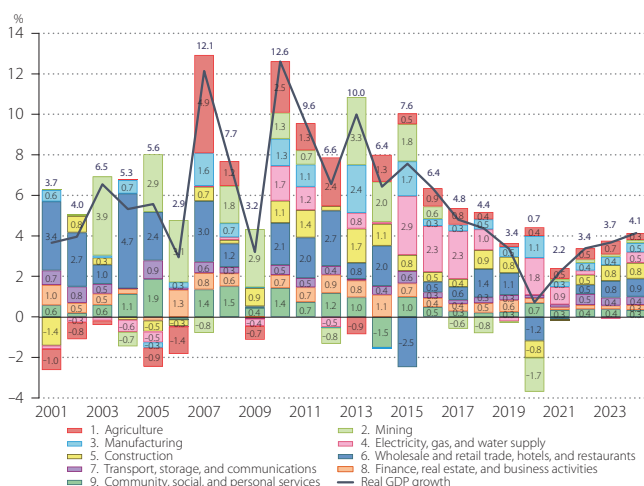


Figure 2 Industry Origins of Economic Growth

Labor

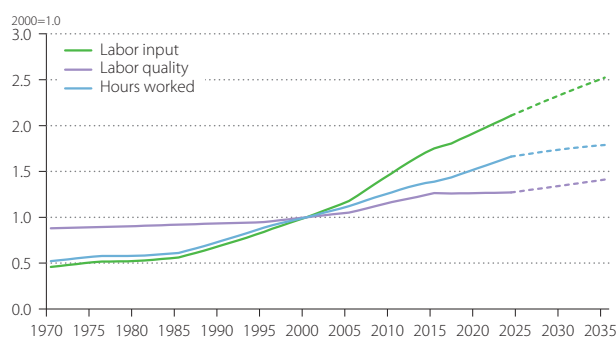


Figure 3 Labor Inputs

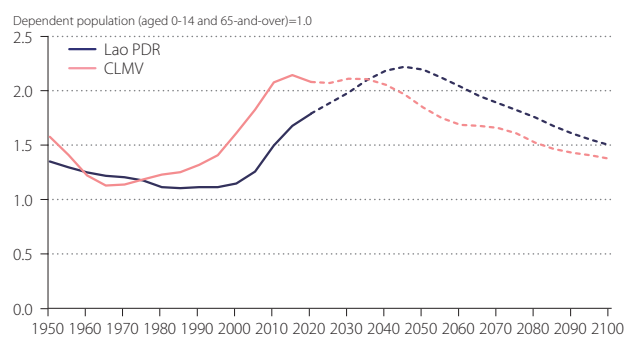


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

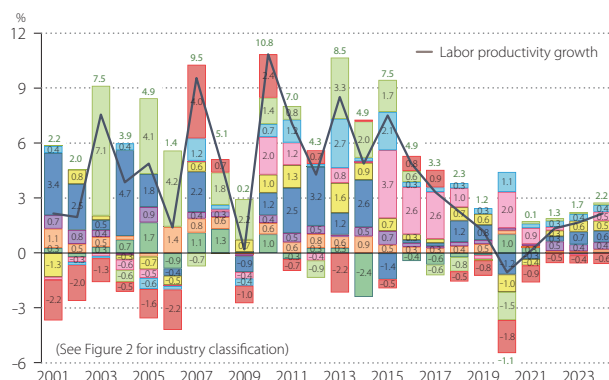


Figure 7 Industry Origins of Labor Productivity Growth

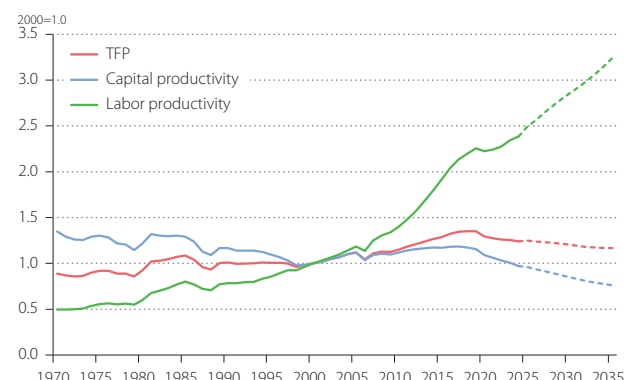


Figure 8 Productivity Indicators

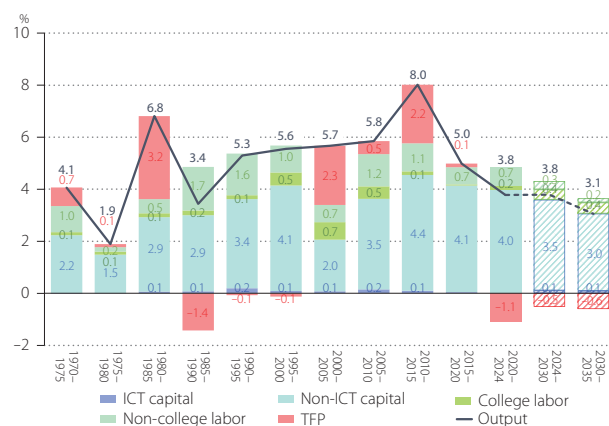


Figure 9 Decomposition of Economic Growth

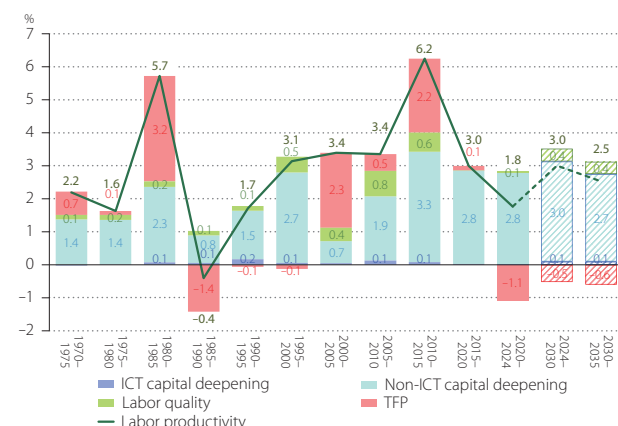


Figure 10 Decomposition of Labor Productivity Growth

Malaysia

Key Indicators

GDP in 2024	1,370	Billion USD (as of 2024)	Number of employment in 2024	16,913	Thousands persons
(exchange rate based)	422	Billion USD (as of 2024)	Employment rate in 2024	49.7	%
Per capita GDP in 2024	40.2	Thousand USD (as of 2024)	Female employment share in 2024	37.1	%
(exchange rate based)	12.4	Thousand USD (as of 2024)	Average schooling years of workers in 2024	11.9	Years
Per-worker labor productivity level in 2024	78.4	Thousand USD per worker (as of 2024)	Investment share in 2024	21.9	%
Per-hour labor productivity level in 2024	36.4	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	20.9	%
Capital stock per hour worked in 2024	95.0	USD (as of 2024)	Agriculture share in GDP in 2024	8.3	%
Energy productivity levels in 2024	20.5	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	22.1	%
Carbon intensity of GDP in 2024	194.4	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	8.5	%

(%: average annual growth rate)	1970 –80	1980 –90	1990 –2000	2000 –10	2010 –20	2020 –24	2019 –20	2020 –21	2021 –22	2022 –23	2023 –24	projection		
GDP growth	7.6	5.8	7.1	4.5	3.8	5.3	–4.4	4.5	10.6	1.7	4.0	2024–30	2030–35	2024–35
Labor input growth	4.8	5.3	5.7	4.4	3.1	4.0	0.4	1.4	7.1	5.6	2.0	2.6	2.0	2.3
Labor quality growth	1.5	2.0	2.4	1.9	1.4	1.0	5.4	–0.1	2.4	3.1	–1.1	1.1	0.9	0.8
Hours worked growth	3.3	3.3	3.3	2.4	1.7	3.0	–5.0	1.6	4.7	2.5	3.2	1.5	1.1	1.4
College labor input growth	8.6	11.5	8.7	7.8	4.9	5.7	4.2	4.2	4.4	9.6	7.5	3.7	3.0	3.2
Non-college labor input growth	4.3	4.0	4.5	2.2	1.4	2.3	–3.3	–3.3	–1.6	4.4	3.5	1.2	0.7	1.1
ICT capital input growth	16.0	22.5	23.6	16.3	8.4	5.8	2.7	2.7	3.8	4.6	12.2	13.8	10.2	12.1
Non-ICT capital input growth	6.3	6.0	7.4	2.3	3.1	2.6	2.1	1.8	2.8	3.3	2.6	2.0	2.9	2.4
Per-worker labor productivity growth	4.3	2.4	3.9	2.0	1.4	3.1	–4.4	4.5	8.3	–1.0	0.5	2.7	2.8	2.6
Per-hour labor productivity growth	4.2	2.4	3.8	2.1	2.1	2.3	0.5	3.3	5.9	–0.8	0.9	2.9	3.0	2.8
Capital productivity growth	–6.3	–6.2	–7.8	–3.1	–3.4	–2.8	–2.2	–1.8	–2.8	–3.4	–3.2	1.6	0.7	0.8
TFP growth	1.8	–0.1	0.0	1.0	0.5	2.0	–6.0	3.2	6.2	–2.5	1.2	1.7	1.2	1.4

Production

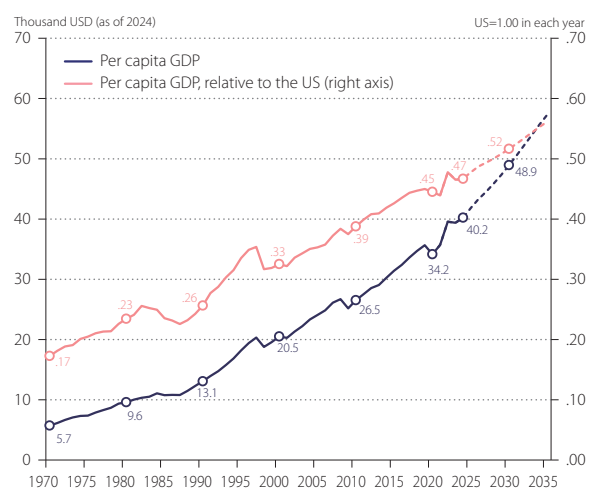


Figure 1 Per Capita GDP

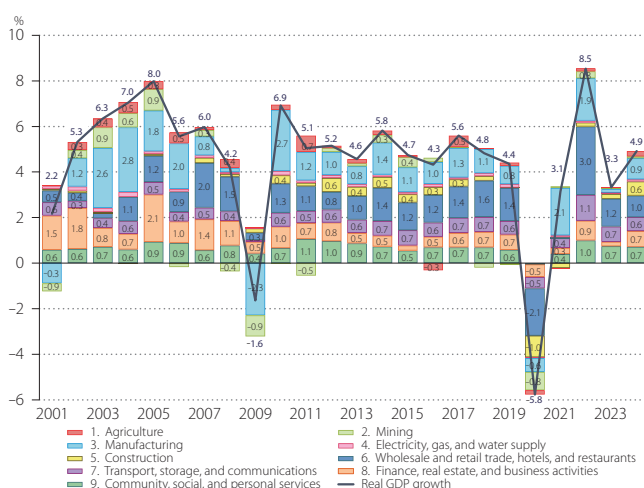


Figure 2 Industry Origins of Economic Growth

Labor

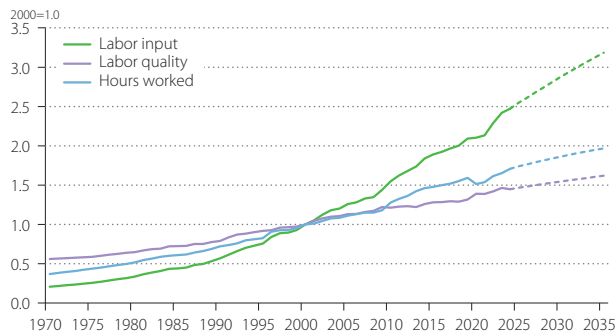


Figure 3 Labor Inputs

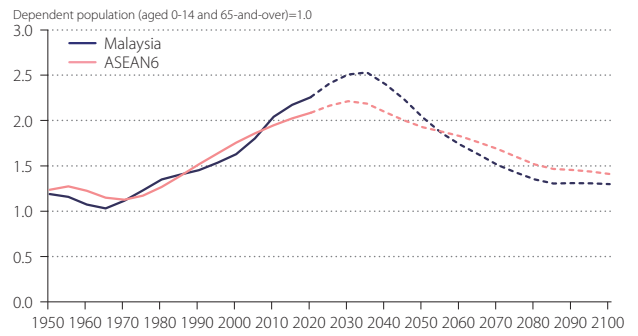


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level

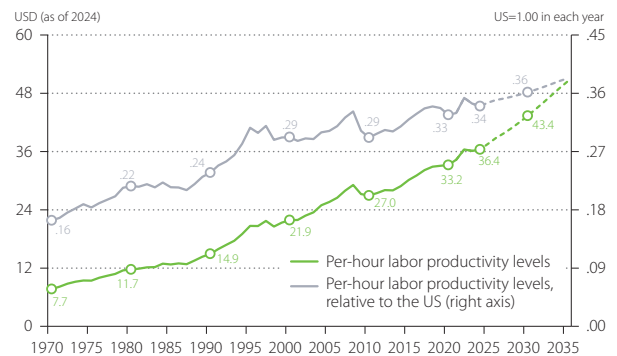


Figure 6 Per-Hour Labor Productivity Level

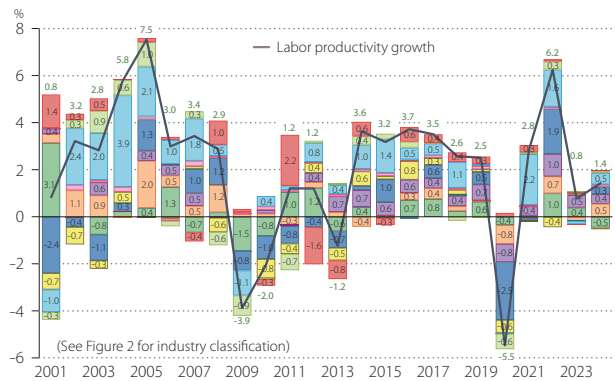


Figure 7 Industry Origins of Labor Productivity Growth

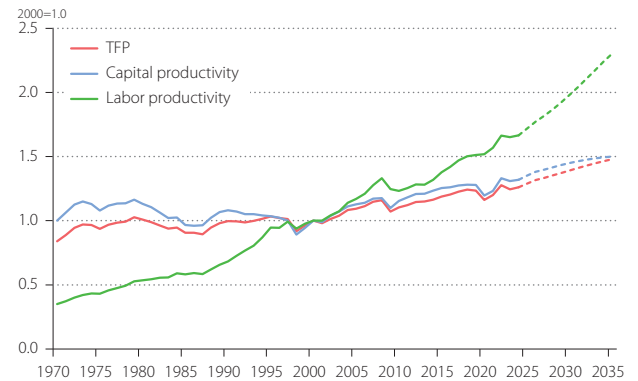


Figure 8 Productivity Indicators

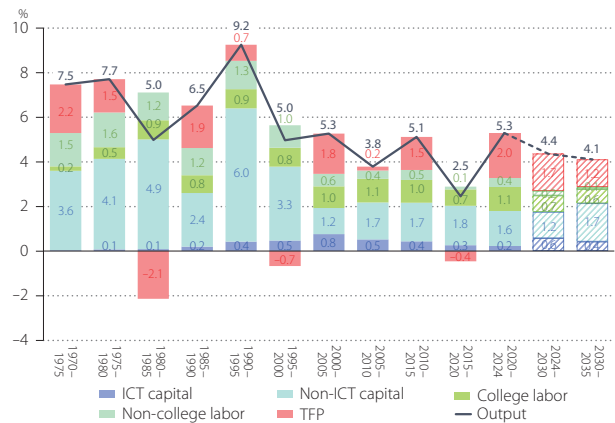


Figure 9 Decomposition of Economic Growth

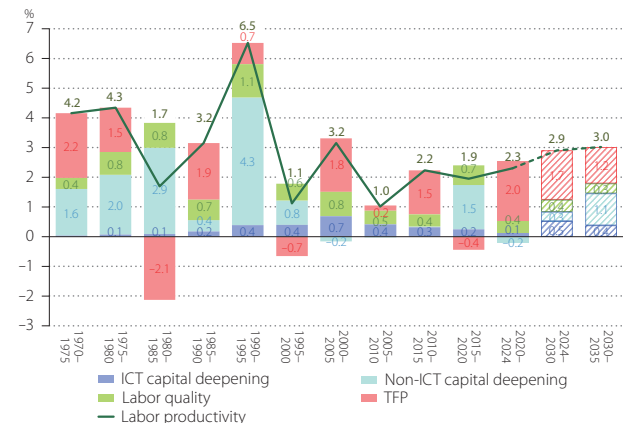


Figure 10 Decomposition of Labor Productivity Growth

Mongolia

Key Indicators

GDP in 2024	69	Billion USD (as of 2024)	Number of employment in 2024	1,356	Thousands persons
(exchange rate based)	24	Billion USD (as of 2024)	Employment rate in 2024	38.1	%
Per capita GDP in 2024	19.4	Thousand USD (as of 2024)	Female employment share in 2024	45.6	%
(exchange rate based)	6.7	Thousand USD (as of 2024)	Average schooling years of workers in 2024	12.2	Years
Per-worker labor productivity level in 2024	45.9	Thousand USD per worker (as of 2024)	Investment share in 2024	35.7	%
Per-hour labor productivity level in 2024	24.8	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	6.2	%
Capital stock per hour worked in 2024	88.8	USD (as of 2024)	Agriculture share in GDP in 2024	8.1	%
Energy productivity levels in 2024	12.2	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	6.2	%
Carbon intensity of GDP in 2024	338.9	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	23.0	%

(%: average annual growth rate)	1970-80	1980-90	1990-2000	2000-10	2010-20	2020-24	2019-20	2020-21	2021-22	2022-23	2023-24	projection		
GDP growth	5.9	5.2	0.9	6.3	6.4	4.6	-6.2	5.0	4.8	7.0	4.9	2024-30	2030-35	2024-35
Labor input growth	6.0	4.8	-2.2	4.3	5.9	2.0	-2.0	-10.2	14.1	0.9	3.2	2.3	2.6	2.5
Labor quality growth	4.2	1.2	-1.7	3.0	2.5	1.4	-1.3	-3.6	8.5	1.1	-0.3	1.1	0.6	0.8
Hours worked growth	1.8	3.6	-0.5	1.3	3.5	0.6	-0.6	-6.6	5.7	-0.2	3.5	1.2	2.1	1.8
College labor input growth	9.2	5.1	0.3	11.3	8.3	1.5	-2.0	-2.0	-24.4	25.9	1.3	2.8	3.3	3.0
Non-college labor input growth	5.4	4.7	-2.9	0.5	3.4	2.6	-2.0	-2.0	6.7	0.2	0.2	1.6	1.6	1.8
ICT capital input growth	25.4	14.8	10.2	18.1	9.8	8.9	6.2	7.2	10.8	9.1	8.5	10.8	11.0	10.7
Non-ICT capital input growth	6.3	5.8	-0.1	5.8	4.1	3.3	3.5	2.9	3.2	3.3	3.9	2.8	3.6	3.2
Per-worker labor productivity growth	4.1	1.6	0.6	3.9	4.5	2.5	-6.2	5.0	-1.2	6.1	0.3	4.8	3.9	4.0
Per-hour labor productivity growth	4.1	1.6	1.4	5.0	3.0	4.0	-3.8	8.2	-0.8	7.2	1.4	4.2	3.6	3.7
Capital productivity growth	-6.4	-5.8	-0.1	-6.0	-4.1	-3.5	-3.6	-3.0	-3.4	-3.4	-4.0	2.3	1.8	1.6
TFP growth	-0.3	-0.3	1.5	0.8	1.7	1.6	-6.2	3.0	-2.0	4.3	1.1	2.6	2.2	2.3

Production

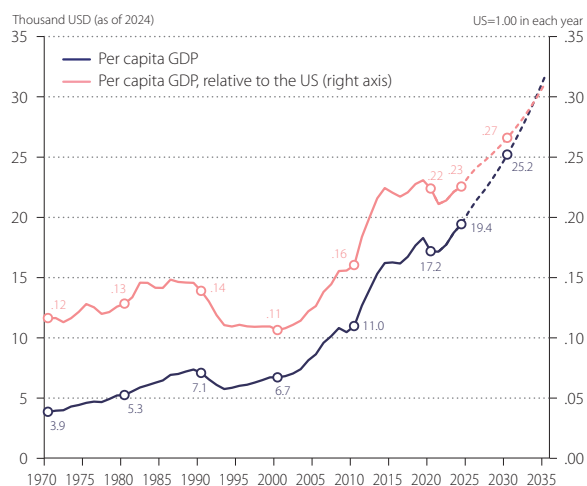


Figure 1 Per Capita GDP

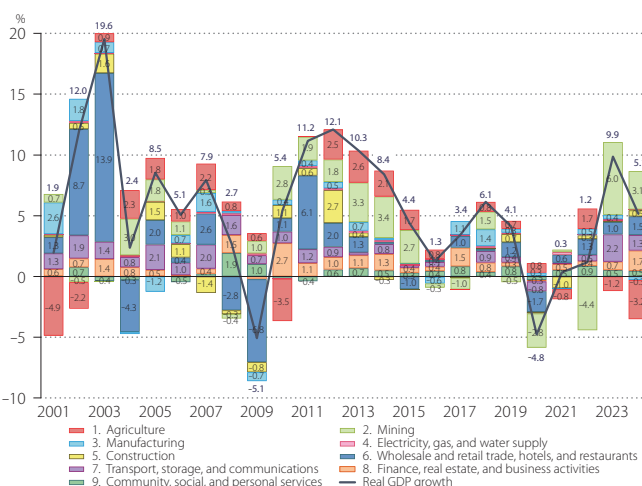


Figure 2 Industry Origins of Economic Growth

Labor

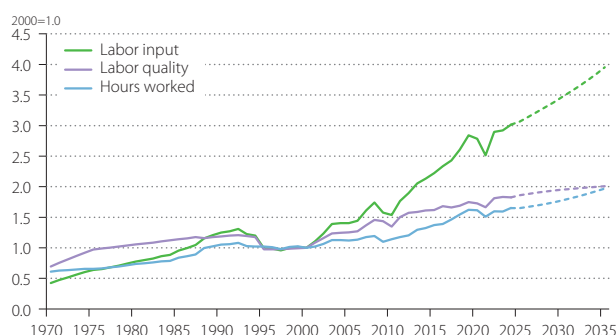


Figure 3 Labor Inputs

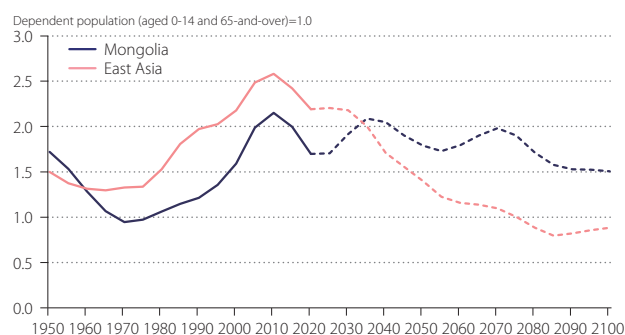


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

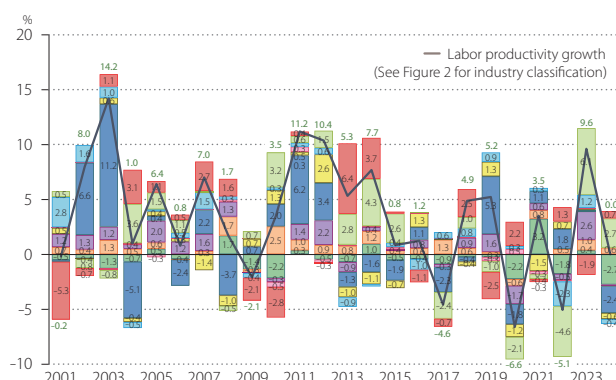


Figure 7 Industry Origins of Labor Productivity Growth

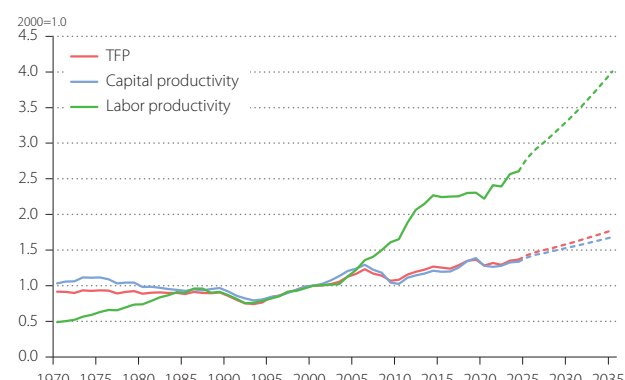


Figure 8 Productivity Indicators

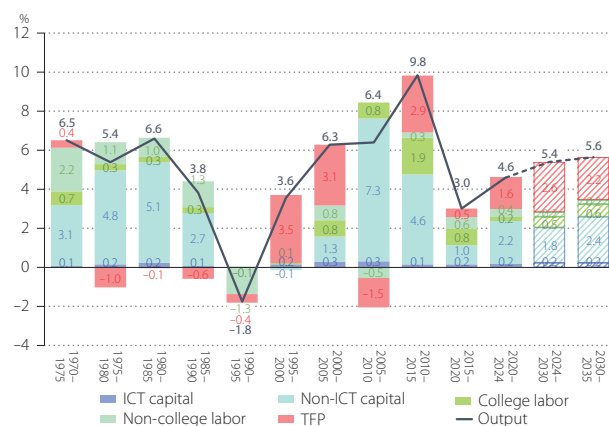


Figure 9 Decomposition of Economic Growth

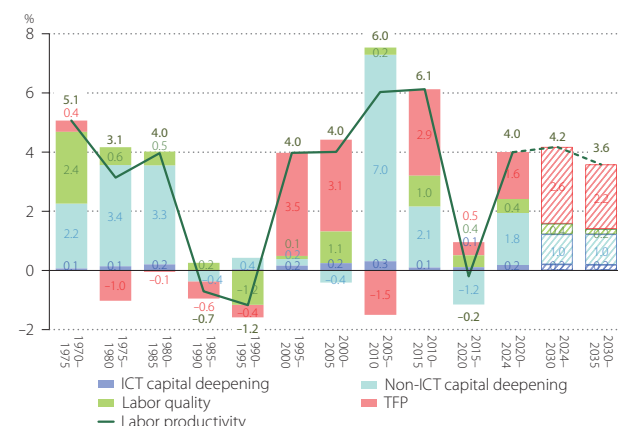


Figure 10 Decomposition of Labor Productivity Growth

Nepal

Key Indicators

GDP in 2024	163	Billion USD (as of 2024)	Number of employment in 2024	12,358	Thousands persons
(exchange rate based)	42	Billion USD (as of 2024)	Employment rate in 2024	43.2	%
Per capita GDP in 2024	5.7	Thousand USD (as of 2024)	Female employment share in 2024	45.0	%
(exchange rate based)	1.5	Thousand USD (as of 2024)	Average schooling years of workers in 2024	4.7	Years
Per-worker labor productivity level in 2024	11.7	Thousand USD per worker (as of 2024)	Investment share in 2024	30.2	%
Per-hour labor productivity level in 2024	6.4	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	0.8	%
Capital stock per hour worked in 2024	24.0	USD (as of 2024)	Agriculture share in GDP in 2024	24.7	%
Energy productivity levels in 2024	10.9	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	4.9	%
Carbon intensity of GDP in 2024	90.2	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	63.2	%

(%: average annual growth rate)	1970-80	1980-90	1990-2000	2000-10	2010-20	2020-24	2019-20	2020-21	2021-22	2022-23	2023-24	projection		
GDP growth	2.0	4.6	4.6	3.9	3.9	3.8	-7.0	0.8	5.1	2.3	3.3	2024-30	2030-35	2034-35
Labor input growth	3.6	4.9	5.5	2.8	1.5	1.6	6.1	4.4	1.7	0.2	0.2	2.5	2.9	2.5
Labor quality growth	0.5	3.5	3.2	1.8	0.0	0.0	1.1	0.6	0.0	-0.3	-0.2	2.8	2.7	2.5
Hours worked growth	3.1	1.4	2.3	1.1	1.5	1.6	5.0	3.8	1.7	0.5	0.5	-0.3	0.2	0.0
College labor input growth	8.9	8.8	16.8	8.5	1.8	1.7	7.0	7.0	5.0	1.8	-0.1	4.1	4.7	4.0
Non-college labor input growth	3.4	4.7	3.9	0.8	1.3	1.6	5.5	5.5	4.1	1.7	0.3	1.5	1.6	1.5
ICT capital input growth	20.1	12.1	12.2	4.9	10.2	4.3	11.3	7.4	6.8	3.1	0.1	5.9	10.3	7.2
Non-ICT capital input growth	3.2	5.8	5.2	4.6	5.7	5.7	7.9	6.0	6.6	6.1	4.1	4.8	5.4	5.0
Per-worker labor productivity growth	-1.2	3.6	2.3	2.8	2.5	2.2	-7.0	0.8	3.4	1.8	2.8	4.8	4.8	4.6
Per-hour labor productivity growth	-1.1	3.2	2.3	2.8	2.5	2.1	-7.4	0.5	3.4	1.8	2.8	4.8	4.8	4.6
Capital productivity growth	-3.3	-5.8	-5.2	-4.6	-5.7	-5.7	-8.0	-5.9	-6.5	-6.1	-4.1	-0.3	-0.5	-0.7
TFP growth	-1.5	-0.6	-0.8	0.3	0.7	0.3	-9.3	-0.7	1.2	-0.7	1.3	1.0	0.9	1.0

Production

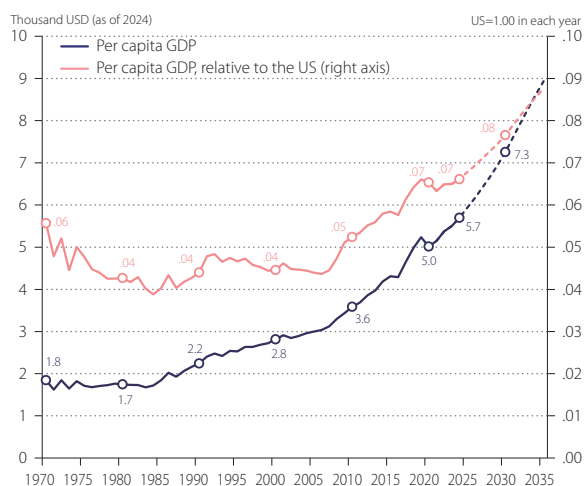


Figure 1 Per Capita GDP

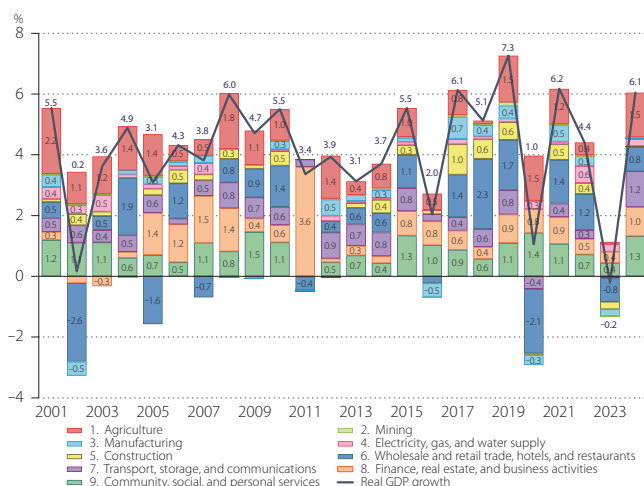


Figure 2 Industry Origins of Economic Growth

Labor

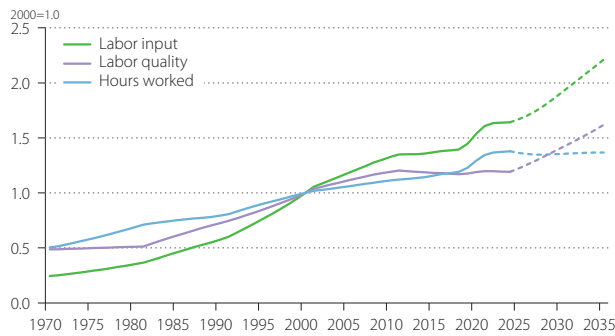


Figure 3 Labor Inputs

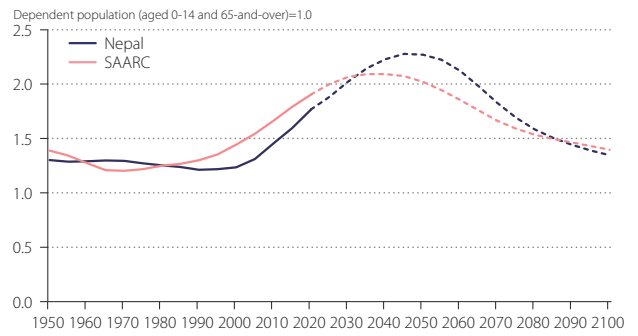


Figure 4 Demographic Dividend

Productivity

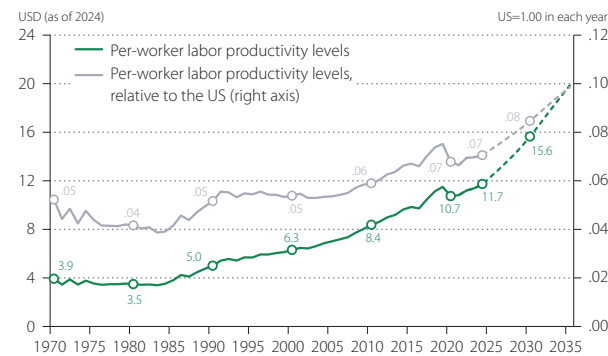


Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

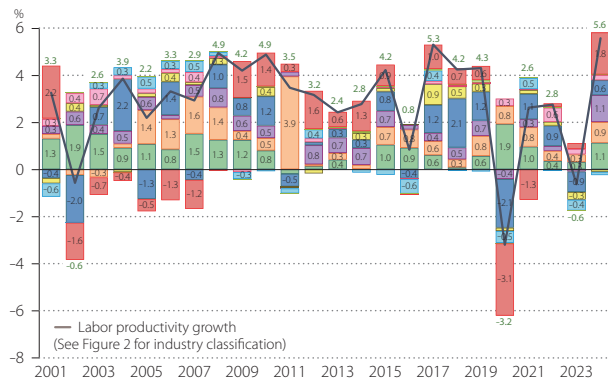


Figure 7 Industry Origins of Labor Productivity Growth



Figure 8 Productivity Indicators

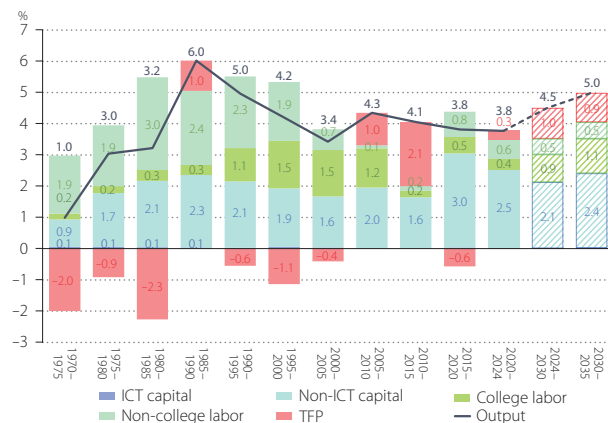


Figure 9 Decomposition of Economic Growth

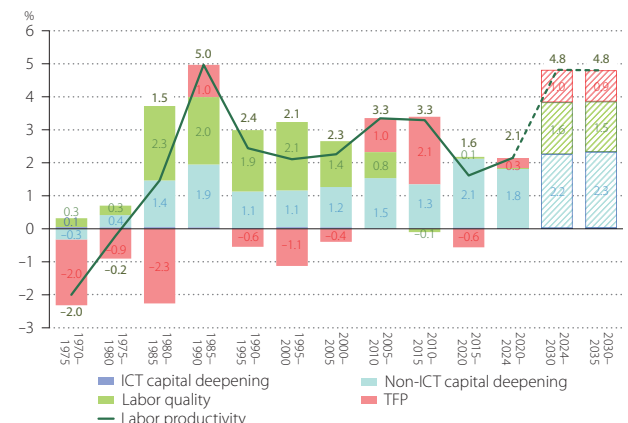


Figure 10 Decomposition of Labor Productivity Growth

Pakistan

Key Indicators

GDP in 2024	1,566	Billion USD (as of 2024)	Number of employment in 2024	68,833	Thousands persons
(exchange rate based)	378	Billion USD (as of 2024)	Employment rate in 2024	31.5	%
Per capita GDP in 2024	7.2	Thousand USD (as of 2024)	Female employment share in 2024	22.4	%
(exchange rate based)	1.7	Thousand USD (as of 2024)	Average schooling years of workers in 2024	5.2	Years
Per-worker labor productivity level in 2024	21.3	Thousand USD per worker (as of 2024)	Investment share in 2024	13.1	%
Per-hour labor productivity level in 2024	9.9	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	9.4	%
Capital stock per hour worked in 2024	15.9	USD (as of 2024)	Agriculture share in GDP in 2024	25.1	%
Energy productivity levels in 2024	18.0	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	13.9	%
Carbon intensity of GDP in 2024	134.4	g-CO2 per USD (as of 2024)	Agriculture share in employment in 2024	34.1	%

(%: average annual growth rate)	1970-80	1980-90	1990-2000	2000-10	2010-20	2020-24	2019-20	2020-21	2021-22	2022-23	2023-24	projection		
GDP growth	4.8	6.8	6.3	4.3	3.6	3.2	-2.9	3.6	4.8	-0.3	2.4	2024-30	2030-35	2034-35
Labor input growth	4.3	3.6	3.0	4.0	3.2	2.3	3.2	3.4	2.1	1.8	1.9	3.1	3.2	3.1
Labor quality growth	1.6	1.1	1.1	1.0	1.3	0.1	0.1	0.3	0.1	0.1	0.1	2.0	2.1	1.9
Hours worked growth	2.7	2.5	1.9	3.0	1.9	2.2	3.0	3.1	2.1	1.7	1.8	1.2	1.1	1.2
College labor input growth	5.9	6.8	8.1	5.3	4.8	1.3	-0.9	-0.9	-0.7	2.2	1.8	4.4	5.0	4.4
Non-college labor input growth	4.2	3.2	2.1	3.6	2.6	2.7	4.9	4.9	5.0	2.1	1.8	2.6	2.4	2.5
ICT capital input growth	7.6	16.0	7.7	20.6	4.5	3.0	10.6	12.1	4.1	-2.6	-1.4	5.7	8.9	6.4
Non-ICT capital input growth	4.6	6.1	5.3	3.7	2.7	2.0	2.6	2.1	1.3	2.9	1.8	1.7	2.2	1.9
Per-worker labor productivity growth	1.9	4.3	4.3	1.0	1.7	1.2	-2.9	3.6	2.7	-2.1	0.6	2.2	2.2	2.1
Per-hour labor productivity growth	2.0	4.4	4.4	1.3	1.7	1.0	-3.9	2.7	2.7	-2.1	0.6	2.4	2.4	2.2
Capital productivity growth	-4.5	-6.1	-5.2	-3.9	-2.7	-2.0	-2.8	-2.3	-1.3	-2.7	-1.7	1.7	1.1	1.2
TFP growth	0.4	2.2	2.0	0.3	0.6	1.0	-3.8	3.0	3.1	-2.7	0.6	1.2	0.8	1.0

Production

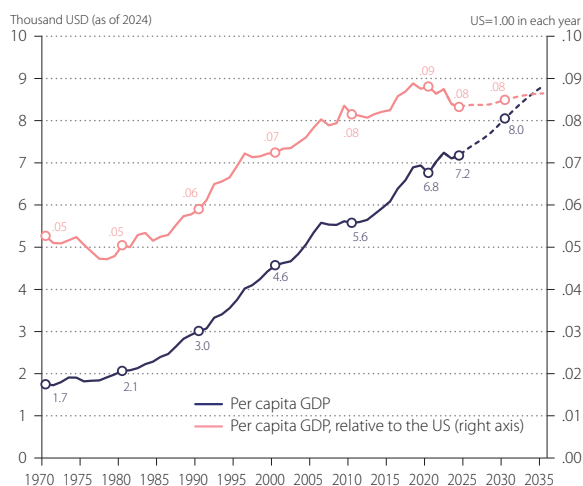


Figure 1 Per Capita GDP

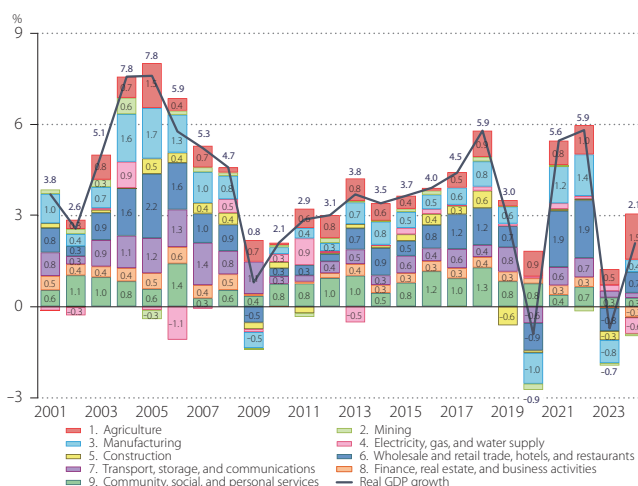


Figure 2 Industry Origins of Economic Growth

Labor

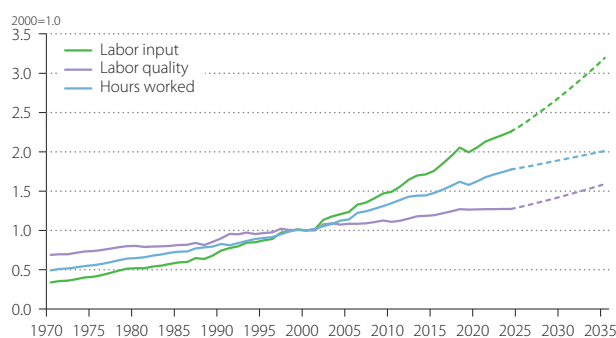


Figure 3 Labor Inputs

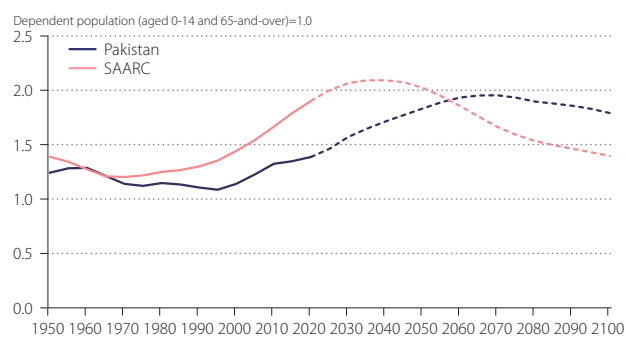


Figure 4 Demographic Dividend

Productivity

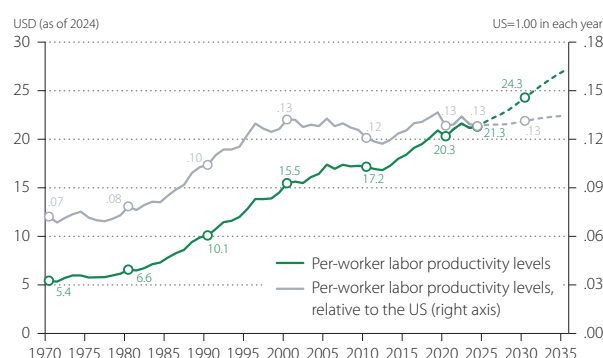


Figure 5 Per-Worker Labor Productivity Level

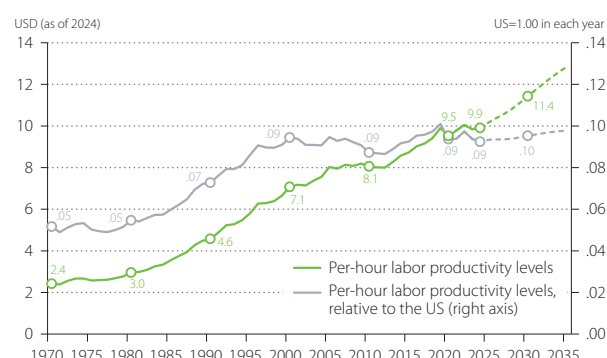


Figure 6 Per-Hour Labor Productivity Level

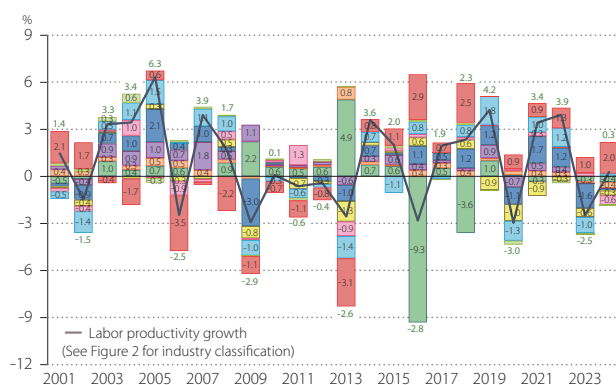


Figure 7 Industry Origins of Labor Productivity Growth

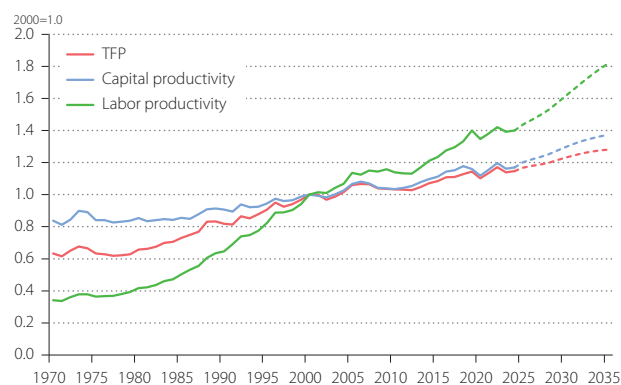


Figure 8 Productivity Indicators

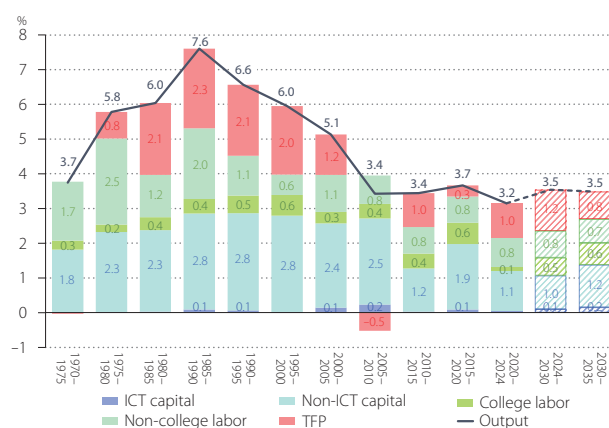


Figure 9 Decomposition of Economic Growth

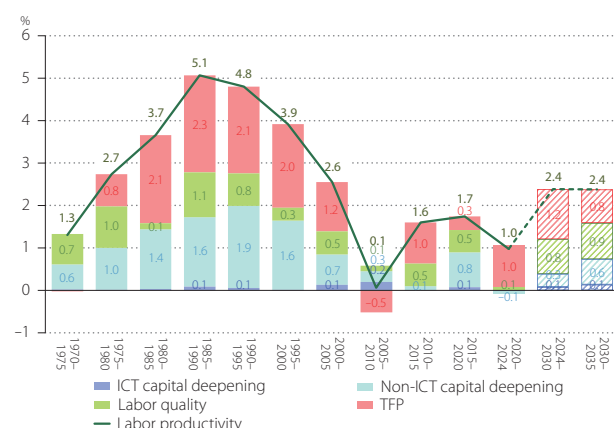


Figure 10 Decomposition of Labor Productivity Growth

Philippines

Key Indicators

GDP in 2024	1,376	Billion USD (as of 2024)	Number of employment in 2024	47,301	Thousands persons
(exchange rate based)	462	Billion USD (as of 2024)	Employment rate in 2024	42.0	%
Per capita GDP in 2024	12.2	Thousand USD (as of 2024)	Female employment share in 2024	40.9	%
(exchange rate based)	4.1	Thousand USD (as of 2024)	Average schooling years of workers in 2024	10.4	Years
Per-worker labor productivity level in 2024	27.5	Thousand USD per worker (as of 2024)	Investment share in 2024	23.7	%
Per-hour labor productivity level in 2024	13.8	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	4.1	%
Capital stock per hour worked in 2024	36.8	USD (as of 2024)	Agriculture share in GDP in 2024	9.1	%
Energy productivity levels in 2024	33.1	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	15.7	%
Carbon intensity of GDP in 2024	124.9	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	20.1	%

(%: average annual growth rate)	1970-80	1980-90	1990-2000	2000-10	2010-20	2020-24	2019-20	2020-21	2021-22	2022-23	2023-24	projection		
GDP growth	5.9	2.6	3.8	4.8	4.4	6.2	-2.7	2.0	8.5	4.3	6.0	2024-30	2030-35	2034-35
Labor input growth	4.6	4.1	3.2	3.3	1.7	3.7	-11.1	6.3	12.8	-1.5	-2.8	3.0	2.5	2.3
Labor quality growth	1.1	1.4	1.2	0.8	1.2	-0.8	-1.0	1.2	-0.9	0.3	-4.0	1.2	1.3	0.8
Hours worked growth	3.6	2.7	2.0	2.5	0.5	4.5	-10.0	5.1	13.7	-1.8	1.2	1.8	1.2	1.5
College labor input growth	5.4	5.3	3.1	4.0	2.1	-0.9	-9.8	-9.8	5.6	13.1	-1.7	4.6	4.1	2.3
Non-college labor input growth	4.3	3.5	3.3	2.9	1.5	6.1	-11.9	-11.9	6.8	12.6	-1.4	2.2	1.6	2.3
ICT capital input growth	7.6	10.7	13.2	7.2	10.0	4.4	7.0	5.3	5.0	3.6	3.7	7.9	10.8	8.7
Non-ICT capital input growth	7.3	3.6	3.9	2.9	6.2	3.6	5.5	2.2	3.6	4.2	4.3	4.8	5.4	5.0
Per-worker labor productivity growth	2.0	-0.2	1.7	2.1	3.6	1.7	-2.7	2.0	-2.5	1.9	5.2	3.5	4.0	3.9
Per-hour labor productivity growth	2.3	-0.1	1.8	2.3	3.9	1.7	-0.1	1.0	-5.2	6.1	4.8	3.4	4.2	3.8
Capital productivity growth	-7.3	-3.7	-4.1	-3.0	-6.3	-3.5	-5.6	-2.2	-3.6	-4.2	-4.2	0.3	-0.1	-0.3
TFP growth	-0.3	-1.3	0.0	1.7	-0.1	2.6	-9.3	2.3	1.2	2.4	4.5	1.0	1.1	1.3

Production

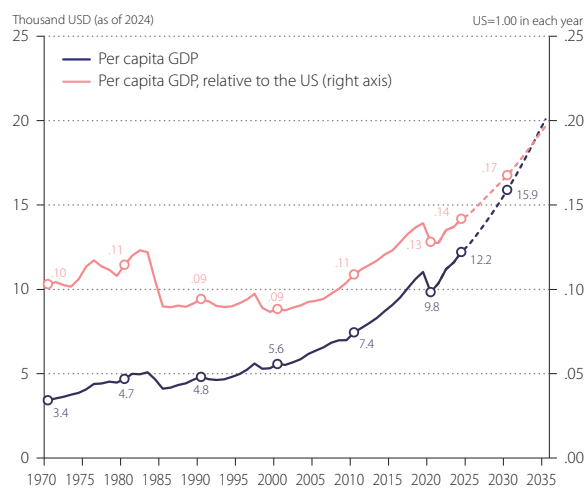


Figure 1 Per Capita GDP

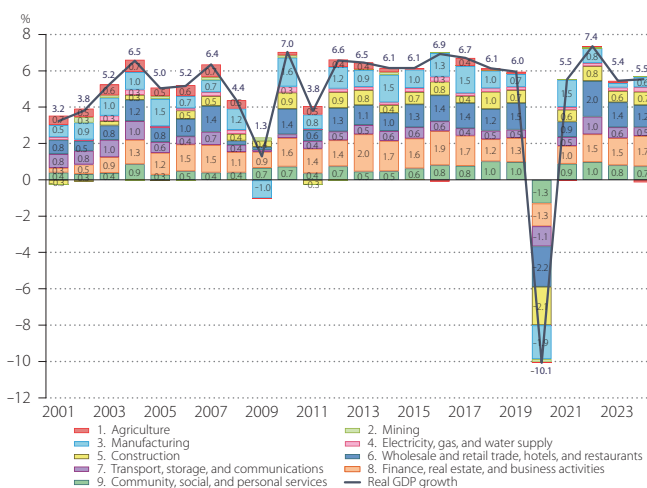


Figure 2 Industry Origins of Economic Growth

Labor

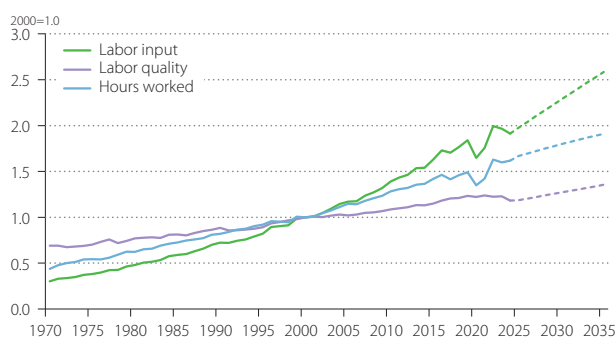


Figure 3 Labor Inputs

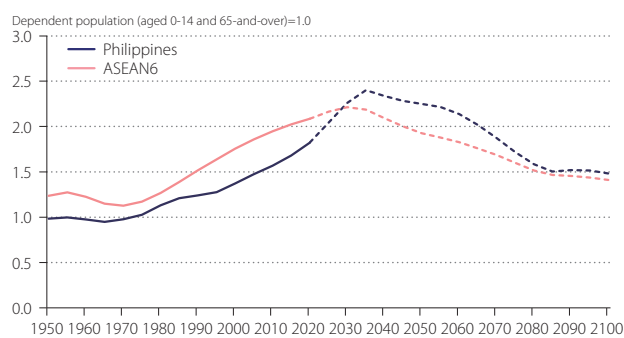


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

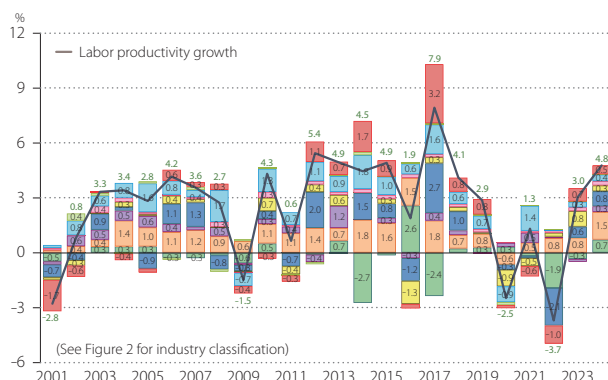


Figure 7 Industry Origins of Labor Productivity Growth

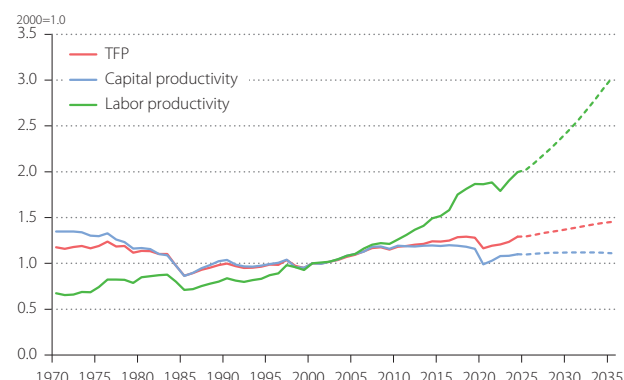


Figure 8 Productivity Indicators

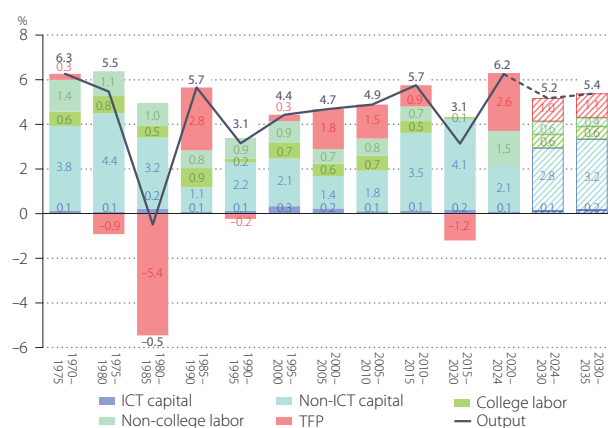


Figure 9 Decomposition of Economic Growth

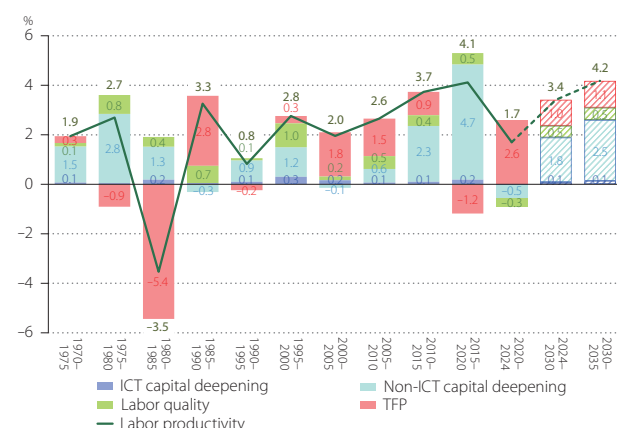


Figure 10 Decomposition of Labor Productivity Growth

Singapore

Key Indicators

GDP in 2024	933	Billion USD (as of 2024)	Number of employment in 2024	3,911	Thousands persons
(exchange rate based)	573	Billion USD (as of 2024)	Employment rate in 2024	64.8	%
Per capita GDP in 2024	154.5	Thousand USD (as of 2024)	Female employment share in 2024	46.7	%
(exchange rate based)	94.9	Thousand USD (as of 2024)	Average schooling years of workers in 2024	10.5	Years
Per-worker labor productivity level in 2024	226.2	Thousand USD per worker (as of 2024)	Investment share in 2024	21.8	%
Per-hour labor productivity level in 2024	104.8	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	29.6	%
Capital stock per hour worked in 2024	184.6	USD (as of 2024)	Agriculture share in GDP in 2024	0.0	%
Energy productivity levels in 2024	47.0	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	17.2	%
Carbon intensity of GDP in 2024	55.6	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	0.8	%

(%: average annual growth rate)	1970-80	1980-90	1990-2000	2000-10	2010-20	2020-24	2019-20	2020-21	2021-22	2022-23	2023-24	projection		
GDP growth	8.7	7.1	7.4	6.0	3.5	4.9	-1.3	10.7	3.6	1.0	6.9	2.7	1.6	2.6
Labor input growth	6.1	6.3	6.5	5.0	2.5	3.2	-1.4	0.8	6.9	2.4	2.6	1.2	0.3	1.0
Labor quality growth	1.2	2.2	3.0	1.6	1.5	1.3	2.1	2.9	1.8	-1.2	1.6	1.1	1.2	1.2
Hours worked growth	4.9	4.1	3.6	3.4	1.0	1.9	-3.6	-2.1	5.0	3.6	1.0	0.1	-0.9	-0.2
College labor input growth	9.7	13.5	13.1	8.1	4.6	4.2	2.6	2.6	3.8	7.0	1.8	2.4	1.3	2.1
Non-college labor input growth	5.7	5.2	4.4	3.3	0.5	1.9	-6.1	-6.1	-3.0	6.6	3.1	-0.3	-1.2	-0.6
ICT capital input growth	14.3	23.3	14.8	10.3	12.9	8.1	6.3	9.3	10.2	7.9	5.3	7.7	7.4	7.4
Non-ICT capital input growth	8.5	6.5	6.1	3.3	3.0	1.5	1.2	-1.8	3.5	2.7	1.5	0.8	0.3	0.7
Per-worker labor productivity growth	3.5	3.7	4.4	2.3	1.9	2.7	-1.3	10.7	-1.2	-4.0	5.1	2.8	2.3	2.8
Per-hour labor productivity growth	3.8	3.1	3.8	2.6	2.5	3.0	0.7	10.3	-1.4	-2.7	5.9	2.7	2.4	2.8
Capital productivity growth	-8.6	-7.3	-6.7	-3.9	-3.9	-2.3	-1.9	0.4	-4.2	-3.3	-1.9	1.1	0.4	0.5
TFP growth	1.3	0.3	0.7	1.7	0.2	2.2	-3.3	8.0	-1.7	-2.0	4.7	1.2	0.7	1.3

Production

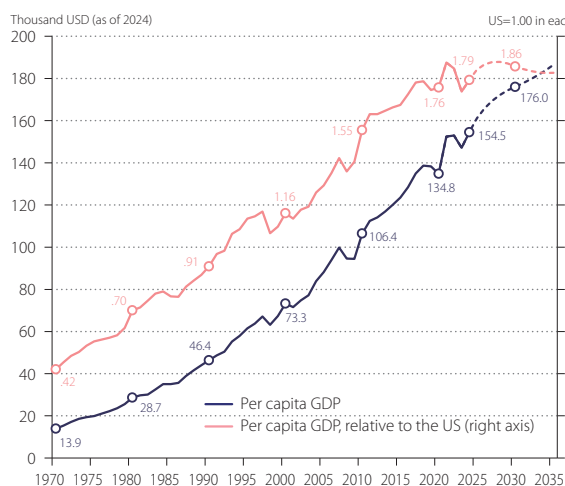


Figure 1 Per Capita GDP

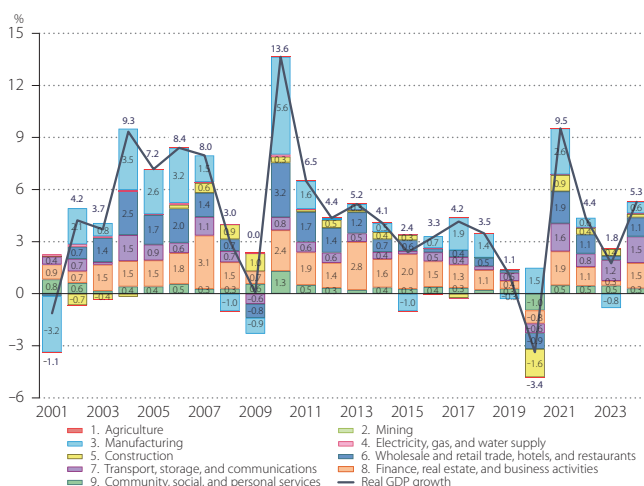


Figure 2 Industry Origins of Economic Growth

Labor

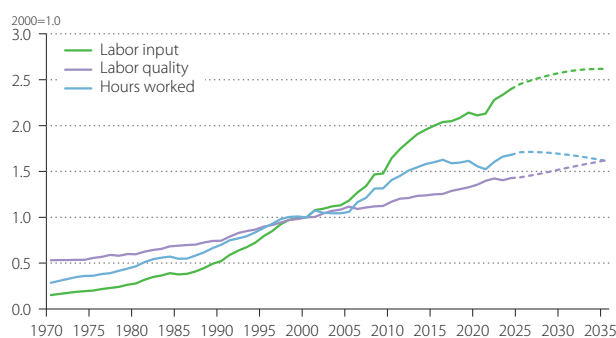


Figure 3 Labor Inputs

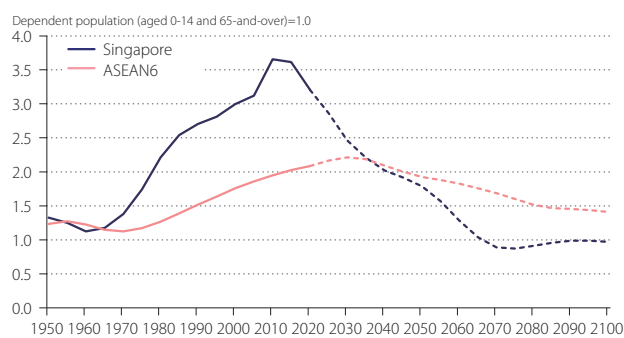


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

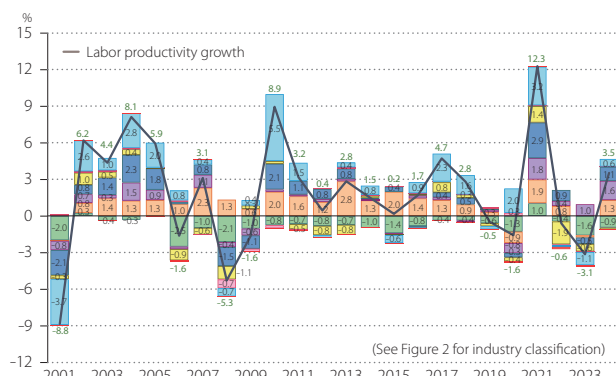


Figure 7 Industry Origins of Labor Productivity Growth

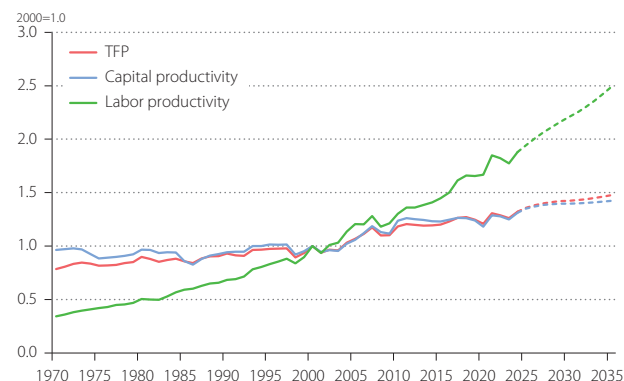


Figure 8 Productivity Indicators

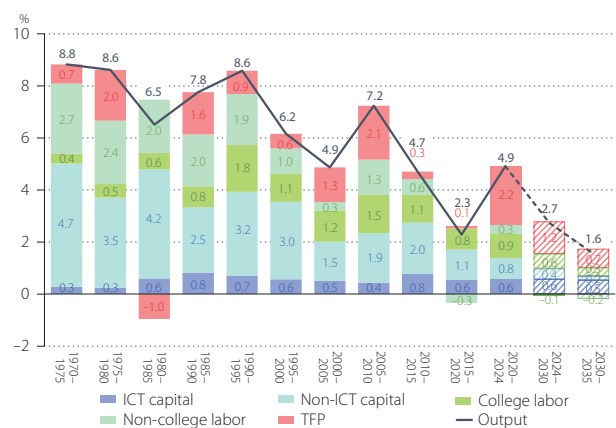


Figure 9 Decomposition of Economic Growth

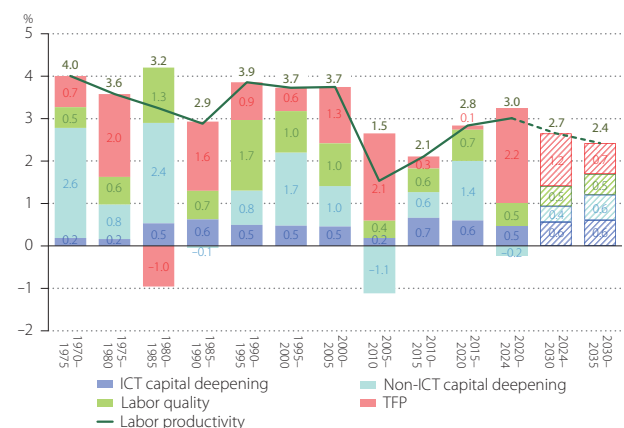


Figure 10 Decomposition of Labor Productivity Growth

Sri Lanka

Key Indicators

GDP in 2024	355	Billion USD (as of 2024)	Number of employment in 2024	7,950	Thousands persons
(exchange rate based)	101	Billion USD (as of 2024)	Employment rate in 2024	36.3	%
Per capita GDP in 2024	16.2	Thousand USD (as of 2024)	Female employment share in 2024	32.6	%
(exchange rate based)	4.6	Thousand USD (as of 2024)	Average schooling years of workers in 2024	11.9	Years
Per-worker labor productivity level in 2024	42.3	Thousand USD per worker (as of 2024)	Investment share in 2024	26.9	%
Per-hour labor productivity level in 2024	22.0	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	12.1	%
Capital stock per hour worked in 2024	71.2	USD (as of 2024)	Agriculture share in GDP in 2024	9.2	%
Energy productivity levels in 2024	38.3	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	19.1	%
Carbon intensity of GDP in 2024	42.4	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	26.0	%

(%: average annual growth rate)	1970-80	1980-90	1990-2000	2000-10	2010-20	2020-24	2019-20	2020-21	2021-22	2022-23	2023-24	projection		
GDP growth	4.2	4.1	5.3	5.8	3.8	0.9	-3.5	4.9	-8.0	-1.3	6.5	2024-30	2030-35	2035-40
Labor input growth	2.2	3.4	3.5	1.6	1.3	1.3	-2.1	2.6	2.0	-0.6	1.0	2.0	1.7	1.8
Labor quality growth	0.5	1.7	1.2	0.9	1.1	1.4	0.0	1.3	1.6	1.0	1.6	0.9	0.8	0.9
Hours worked growth	1.8	1.7	2.3	0.7	0.2	-0.1	-2.1	1.3	0.4	-1.6	-0.6	1.1	0.9	0.9
College labor input growth	0.4	12.2	6.8	4.4	4.1	3.2	-2.3	-2.3	6.1	4.0	-1.2	2.8	2.5	2.8
Non-college labor input growth	2.4	2.2	2.6	0.4	-0.5	-0.4	-2.0	-2.0	-0.4	0.3	-0.1	1.3	0.9	0.9
ICT capital input growth	13.5	7.6	9.9	19.0	14.8	11.7	13.2	14.6	8.6	8.7	14.8	12.1	9.0	11.0
Non-ICT capital input growth	4.6	3.7	2.4	5.1	6.9	2.4	4.7	3.9	3.2	1.2	1.3	2.7	3.1	2.8
Per-worker labor productivity growth	2.8	2.5	3.0	4.4	3.8	1.0	-3.5	4.9	-8.4	0.4	7.3	2.2	2.0	2.5
Per-hour labor productivity growth	2.5	2.4	2.9	5.1	3.6	1.0	-3.7	5.0	-8.4	0.3	7.1	2.4	2.2	2.7
Capital productivity growth	-4.6	-3.7	-2.4	-5.3	-7.1	-2.8	-5.1	-4.4	-3.5	-1.5	-1.9	0.4	-0.3	-0.1
TFP growth	0.7	0.5	2.3	2.0	-1.6	-1.5	-8.5	2.5	-11.0	-2.2	4.8	0.7	0.2	0.8

Production

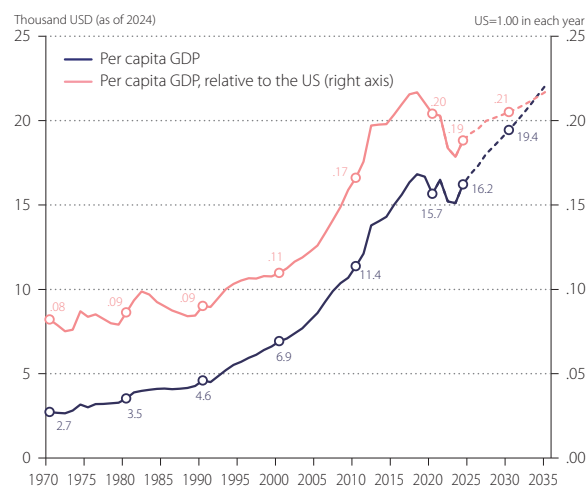


Figure 1 Per Capita GDP

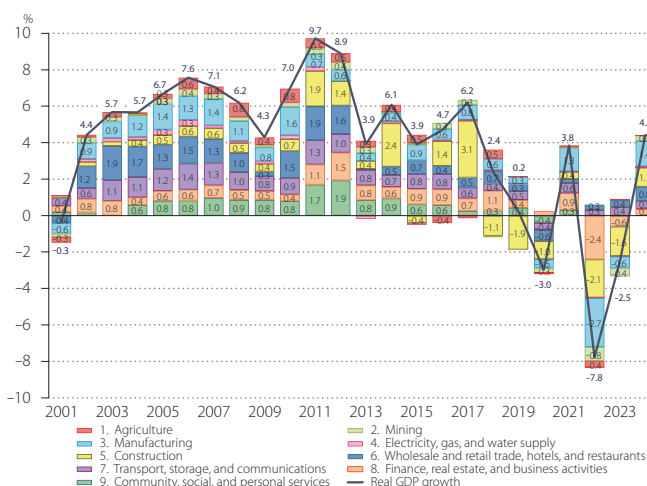


Figure 2 Industry Origins of Economic Growth

Labor

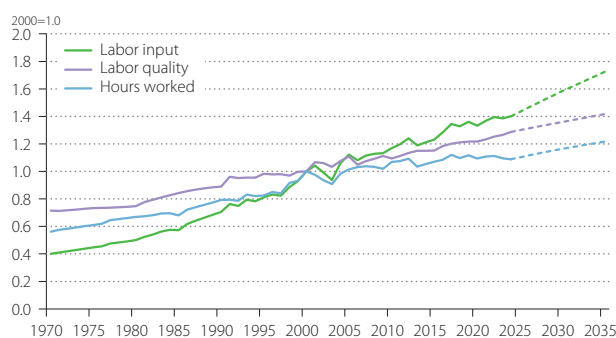


Figure 3 Labor Inputs

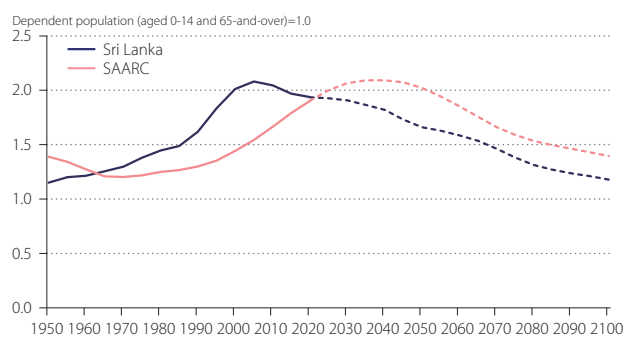


Figure 4 Demographic Dividend

Productivity

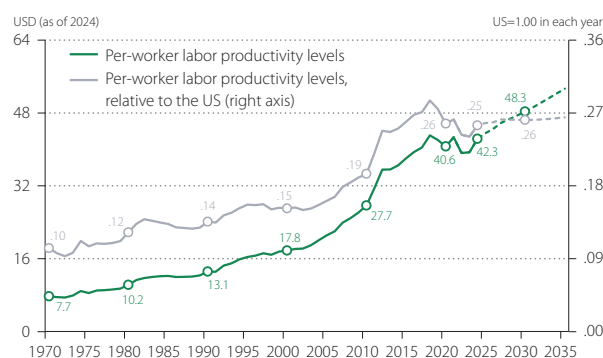


Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

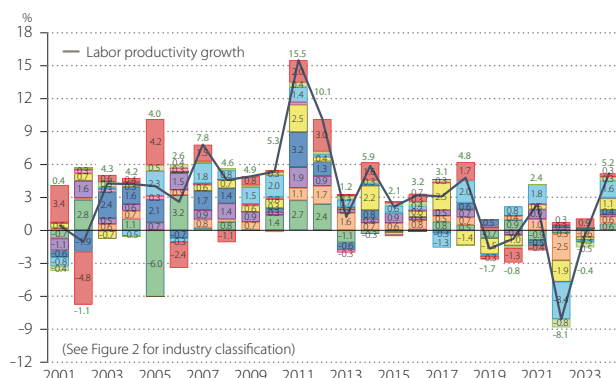


Figure 7 Industry Origins of Labor Productivity Growth

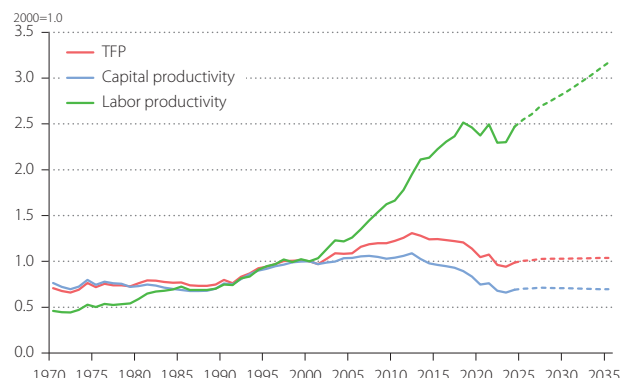


Figure 8 Productivity Indicators

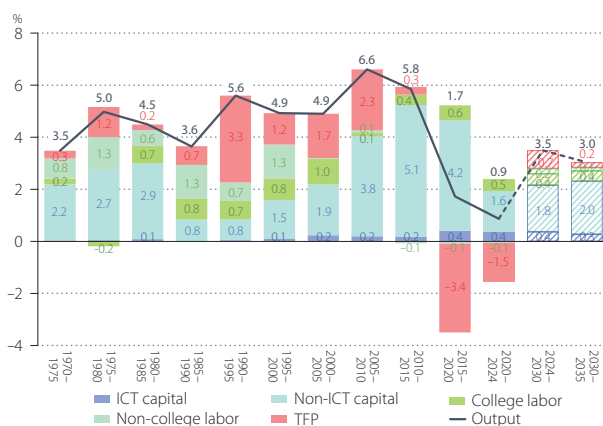


Figure 9 Decomposition of Economic Growth

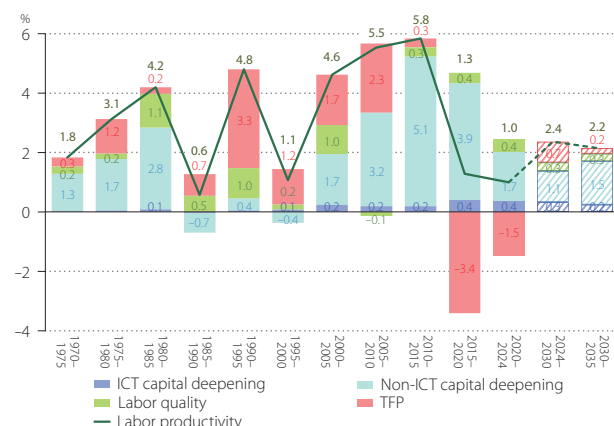


Figure 10 Decomposition of Labor Productivity Growth

Thailand

Key Indicators

GDP in 2024	1,786	Billion USD (as of 2024)	Number of employment in 2024	40,008	Thousands persons
(exchange rate based)	535	Billion USD (as of 2024)	Employment rate in 2024	58.1	%
Per capita GDP in 2024	25.9	Thousand USD (as of 2024)	Female employment share in 2024	49.0	%
(exchange rate based)	7.8	Thousand USD (as of 2024)	Average schooling years of workers in 2024	9.7	Years
Per-worker labor productivity level in 2024	41.3	Thousand USD per worker (as of 2024)	Investment share in 2024	22.3	%
Per-hour labor productivity level in 2024	20.3	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	16.7	%
Capital stock per hour worked in 2024	50.4	USD (as of 2024)	Agriculture share in GDP in 2024	8.9	%
Energy productivity levels in 2024	16.3	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	24.2	%
Carbon intensity of GDP in 2024	153.0	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	29.0	%

(%: average annual growth rate)	1970 –80	1980 –90	1990 –2000	2000 –10	2010 –20	2020 –24	2019 –20	2020 –21	2021 –22	2022 –23	2023 –24	projection		
GDP growth	7.0	7.8	4.6	4.6	2.0	1.4	–7.5	2.1	5.2	–0.9	2.3	2024–30	2030–35	2024–35
Labor input growth	7.7	7.3	5.4	4.1	1.7	1.8	–0.9	–4.5	15.2	–4.8	1.5	1.6	1.5	1.5
Labor quality growth	3.2	4.4	4.7	3.4	3.0	1.2	2.0	–0.4	4.6	–1.0	1.4	1.4	1.5	1.4
Hours worked growth	4.5	2.8	0.7	0.7	–1.4	0.7	–2.9	–4.1	10.6	–3.9	0.0	0.3	0.0	0.1
College labor input growth	15.1	11.4	6.9	3.9	3.9	1.8	2.8	2.8	–3.6	17.2	–7.0	3.2	2.6	2.7
Non-college labor input growth	6.2	5.2	3.9	4.4	–0.7	1.9	–5.3	–5.3	–5.7	12.5	–1.9	–0.6	–0.6	–0.3
ICT capital input growth	13.6	21.6	13.4	13.7	4.3	1.5	–4.2	–2.4	–1.1	1.1	8.2	9.7	7.8	8.8
Non-ICT capital input growth	4.9	6.3	7.1	1.7	2.3	1.7	2.4	1.7	2.0	2.0	1.2	0.9	0.7	0.8
Per-worker labor productivity growth	3.0	4.2	3.4	3.1	2.4	0.9	–7.5	2.1	–2.3	0.9	3.0	1.8	1.7	1.9
Per-hour labor productivity growth	2.0	4.7	3.7	3.8	3.6	1.7	–3.4	5.7	–8.0	6.1	2.9	1.8	2.0	1.9
Capital productivity growth	–5.0	–6.7	–7.4	–2.4	–2.4	–1.7	–2.0	–1.4	–1.8	–1.9	–1.7	0.5	0.8	0.5
TFP growth	0.4	0.6	–2.2	1.4	0.0	0.6	–7.1	2.4	–4.2	2.9	1.3	0.5	0.7	0.6

Production

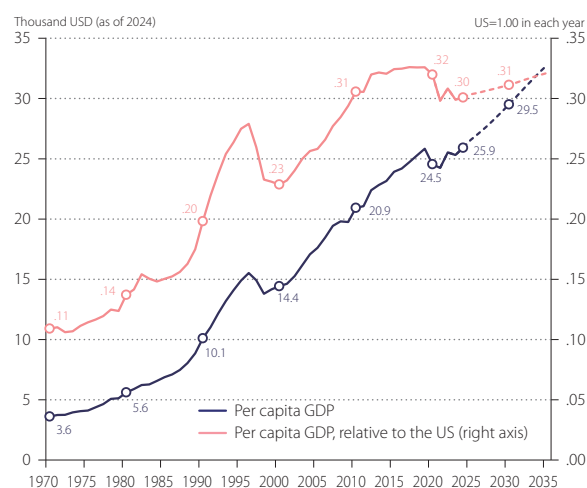


Figure 1 Per Capita GDP

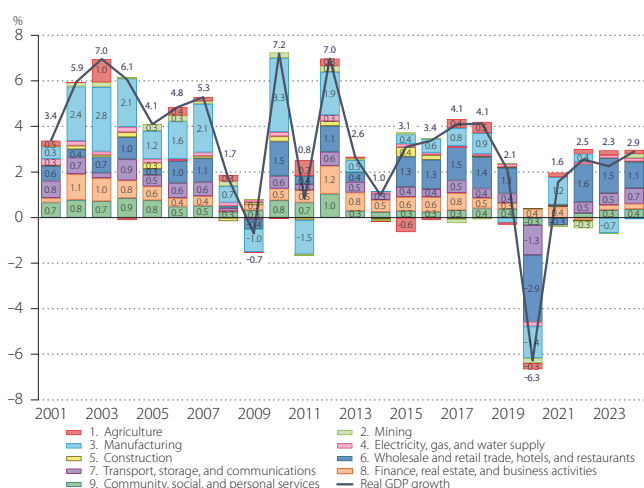


Figure 2 Industry Origins of Economic Growth

Labor

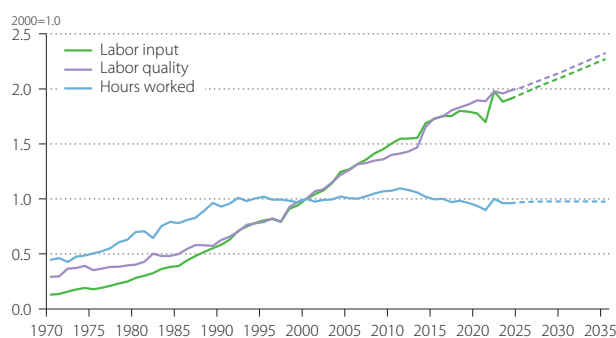


Figure 3 Labor Inputs

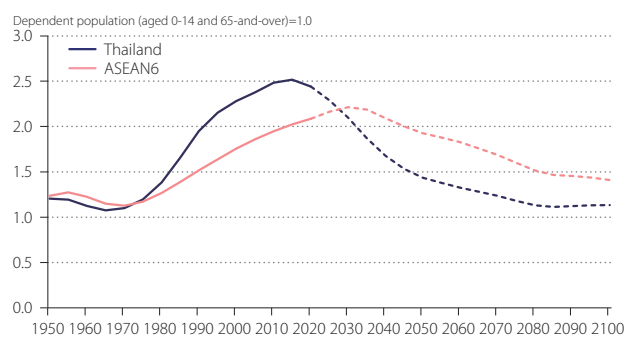


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

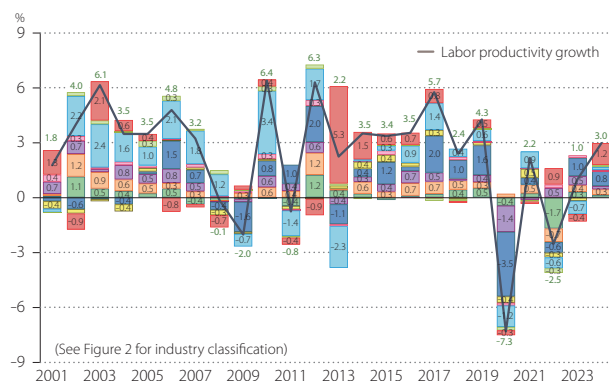


Figure 7 Industry Origins of Labor Productivity Growth

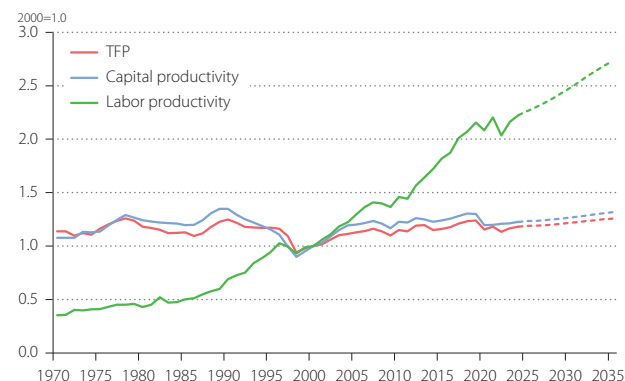


Figure 8 Productivity Indicators

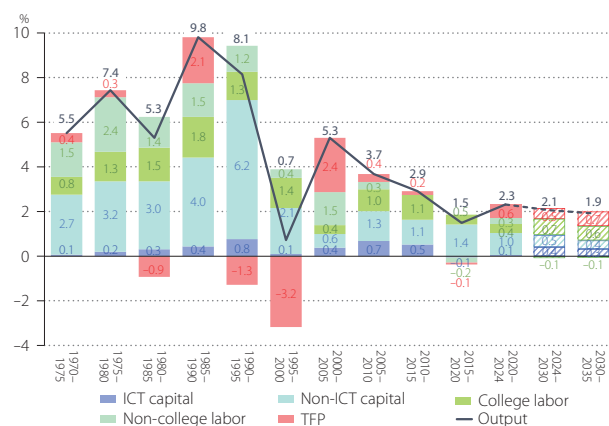


Figure 9 Decomposition of Economic Growth

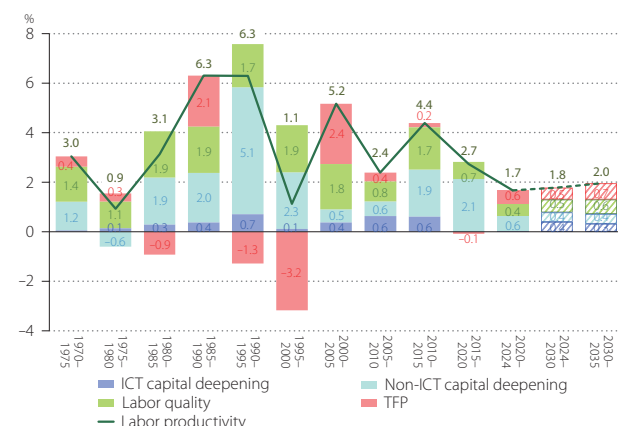


Figure 10 Decomposition of Labor Productivity Growth

Türkiye

Key Indicators

GDP in 2024	3,518	Billion USD (as of 2024)	Number of employment in 2024	32,850	Thousands persons
(exchange rate based)	1,359	Billion USD (as of 2024)	Employment rate in 2024	38.3	%
Per capita GDP in 2024	41.1	Thousand USD (as of 2024)	Female employment share in 2024	30.5	%
(exchange rate based)	15.9	Thousand USD (as of 2024)	Average schooling years of workers in 2024	9.8	Years
Per-worker labor productivity level in 2024	96.1	Thousand USD per worker (as of 2024)	Investment share in 2024	30.7	%
Per-hour labor productivity level in 2024	49.6	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	7.8	%
Capital stock per hour worked in 2024	106.9	USD (as of 2024)	Agriculture share in GDP in 2024	6.6	%
Energy productivity levels in 2024	26.2	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	19.0	%
Carbon intensity of GDP in 2024	129.1	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	14.8	%

(%: average annual growth rate)	1970 –80	1980 –90	1990 –2000	2000 –10	2010 –20	2020 –24	2019 –20	2020 –21	2021 –22	2022 –23	2023 –24	projection		
GDP growth	4.0	5.2	3.6	4.0	5.1	6.2	6.3	4.1	5.3	4.9	3.3	2024–30	2030–35	2024–35
Labor input growth	4.0	4.3	2.3	4.1	2.6	5.6	–4.8	9.5	7.6	4.1	1.4	0.8	0.5	0.7
Labor quality growth	1.2	1.2	1.7	2.2	2.1	0.7	3.6	0.3	0.4	1.5	0.6	1.2	0.9	1.1
Hours worked growth	2.8	3.1	0.6	2.0	0.5	4.9	–8.4	9.2	7.1	2.6	0.8	–0.5	–0.4	–0.4
College labor input growth	12.7	7.1	5.8	9.0	6.8	6.5	1.6	1.6	9.3	6.3	7.2	2.9	2.0	2.6
Non-college labor input growth	3.4	3.9	1.7	2.6	0.2	5.0	–9.2	–9.2	9.6	8.5	1.9	–1.0	–1.0	–1.0
ICT capital input growth	7.5	24.4	17.1	10.5	11.9	8.4	8.0	8.4	8.7	11.3	5.2	4.5	8.3	6.2
Non-ICT capital input growth	5.7	3.7	4.3	5.2	5.4	4.9	4.9	4.8	6.4	4.5	3.9	3.2	2.6	3.0
Per-worker labor productivity growth	1.4	2.5	3.0	2.4	3.3	1.2	6.3	4.1	–1.2	2.2	–0.1	4.0	3.1	3.3
Per-hour labor productivity growth	1.2	2.1	3.0	2.1	4.5	1.2	10.2	1.9	–1.8	2.4	2.5	3.9	3.2	3.5
Capital productivity growth	–5.6	–3.8	–4.5	–5.3	–5.6	–5.0	–5.0	–4.8	–6.4	–4.7	–3.9	0.2	–0.1	–0.3
TFP growth	–1.3	1.2	–0.4	–0.9	0.5	1.0	0.3	4.7	–1.5	0.4	0.3	1.0	0.7	0.8

Production

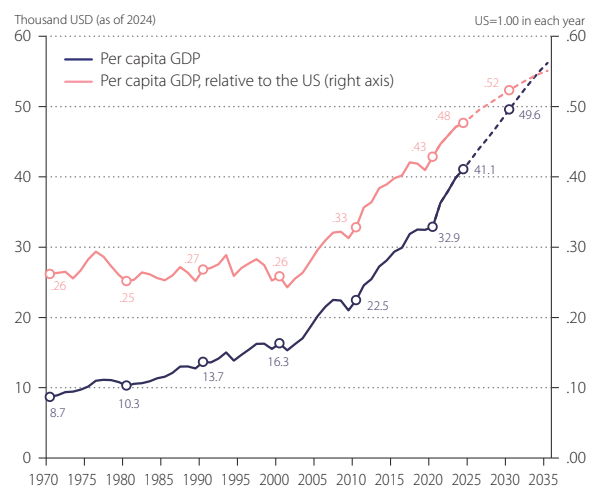


Figure 1 Per Capita GDP

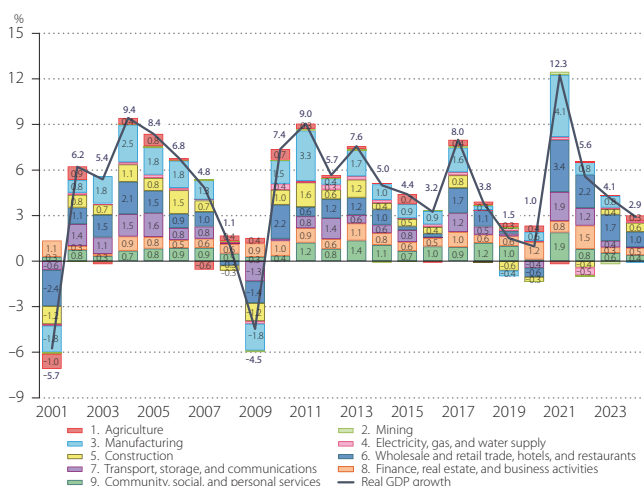


Figure 2 Industry Origins of Economic Growth

Labor

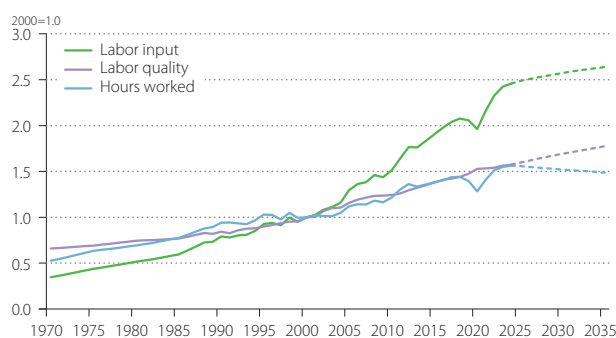


Figure 3 Labor Inputs

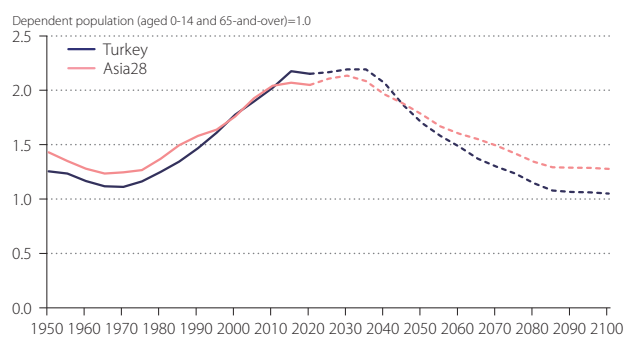


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

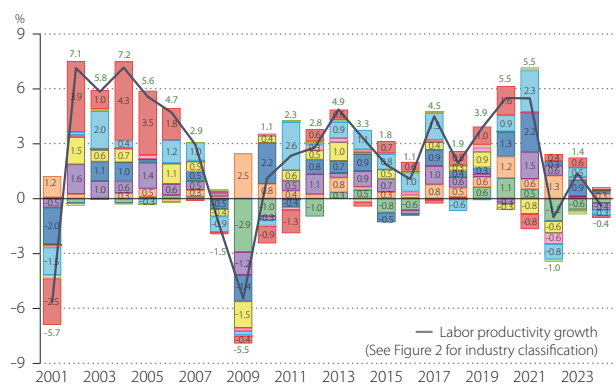


Figure 7 Industry Origins of Labor Productivity Growth

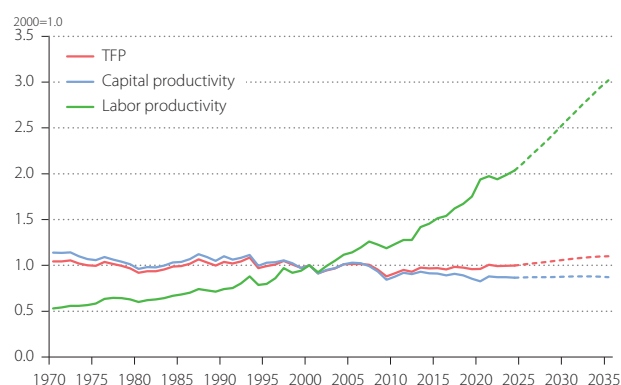


Figure 8 Productivity Indicators

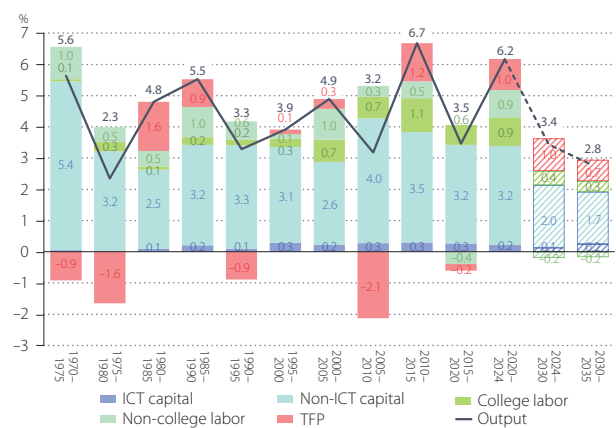


Figure 9 Decomposition of Economic Growth

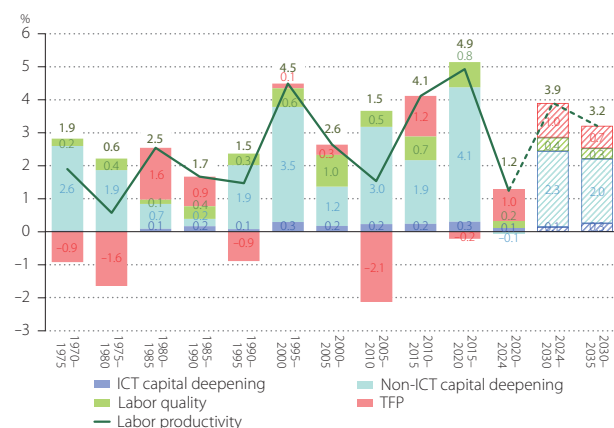


Figure 10 Decomposition of Labor Productivity Growth

Vietnam

Key Indicators

GDP in 2024	1,671	Billion USD (as of 2024)	Number of employment in 2024	55,730	Thousands persons
(exchange rate based)	477	Billion USD (as of 2024)	Employment rate in 2024	55.0	%
Per capita GDP in 2024	16.5	Thousand USD (as of 2024)	Female employment share in 2024	46.7	%
(exchange rate based)	4.7	Thousand USD (as of 2024)	Average schooling years of workers in 2024	9.6	Years
Per-worker labor productivity level in 2024	27.4	Thousand USD per worker (as of 2024)	Investment share in 2024	30.7	%
Per-hour labor productivity level in 2024	12.1	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	2.7	%
Capital stock per hour worked in 2024	42.6	USD (as of 2024)	Agriculture share in GDP in 2024	12.9	%
Energy productivity levels in 2024	20.6	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	26.6	%
Carbon intensity of GDP in 2024	206.3	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	26.4	%

(%: average annual growth rate)	1970 -80	1980 -90	1990 -2000	2000 -10	2010 -20	2020 -24	2019 -20	2020 -21	2021 -22	2022 -23	2023 -24	projection		
GDP growth	4.5	2.9	8.2	8.2	5.7	6.0	5.0	5.3	9.8	3.9	7.0	2024-30	2030-35	2024-35
Labor input growth	5.2	3.6	2.7	4.5	2.1	2.0	1.1	-2.5	5.5	2.8	2.2	1.8	1.4	1.7
Labor quality growth	1.0	0.4	0.3	2.4	1.7	0.5	2.2	-1.4	1.9	1.3	0.3	1.1	0.8	0.9
Hours worked growth	4.2	3.2	2.4	2.1	0.4	1.4	-1.1	-1.2	3.6	1.5	1.9	0.8	0.6	0.8
College labor input growth	7.9	15.8	6.3	10.5	7.0	3.1	1.3	1.3	-11.3	4.7	10.1	3.7	3.4	4.0
Non-college labor input growth	5.2	3.4	2.5	3.6	1.0	1.7	1.1	1.1	-0.5	5.7	1.1	1.3	0.8	1.0
ICT capital input growth	10.9	18.3	18.2	24.1	19.4	4.6	10.6	10.8	7.6	1.7	-1.6	6.0	11.3	7.6
Non-ICT capital input growth	5.8	2.9	8.1	11.3	7.2	6.0	6.5	6.4	5.9	5.9	5.7	6.7	6.9	6.7
Per-worker labor productivity growth	0.3	-0.3	6.0	5.7	4.9	5.1	5.0	5.3	6.7	2.6	5.9	5.5	5.4	5.5
Per-hour labor productivity growth	0.3	-0.3	5.7	6.1	5.3	4.6	4.1	4.5	6.1	2.4	5.1	5.9	5.6	5.7
Capital productivity growth	-5.8	-2.9	-8.1	-11.3	-7.4	-5.9	-6.6	-6.4	-5.9	-5.7	-5.5	0.0	-0.8	-0.8
TFP growth	-1.0	-0.4	2.1	-0.5	0.6	1.9	-1.0	1.0	4.0	-0.4	3.0	2.2	1.8	2.1

Production

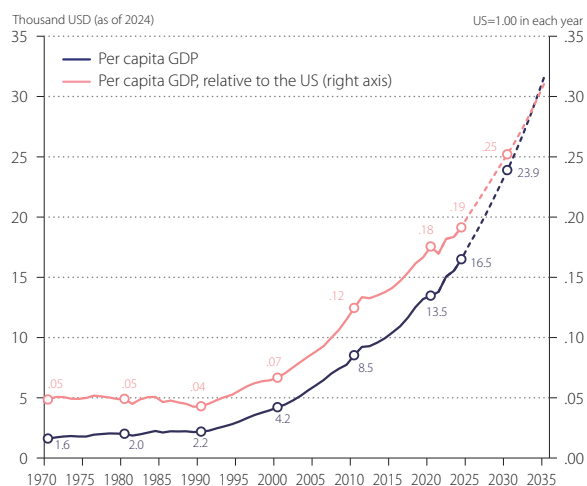


Figure 1 Per Capita GDP

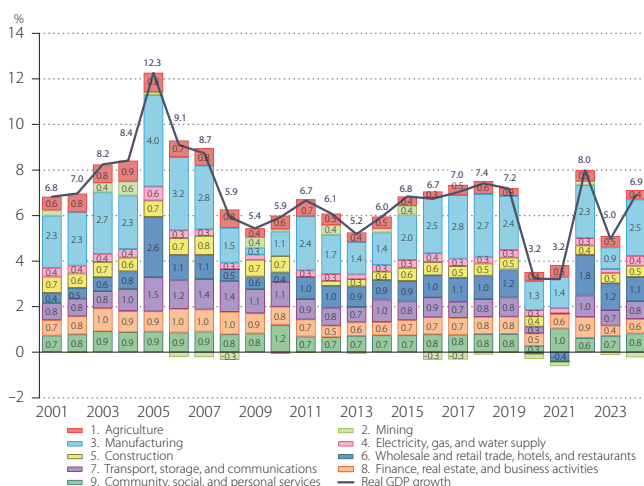


Figure 2 Industry Origins of Economic Growth

Labor

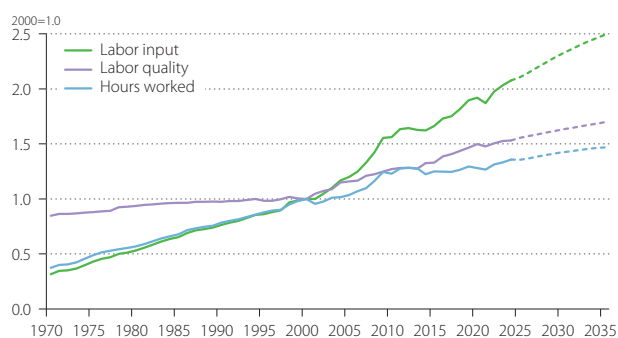


Figure 3 Labor Inputs

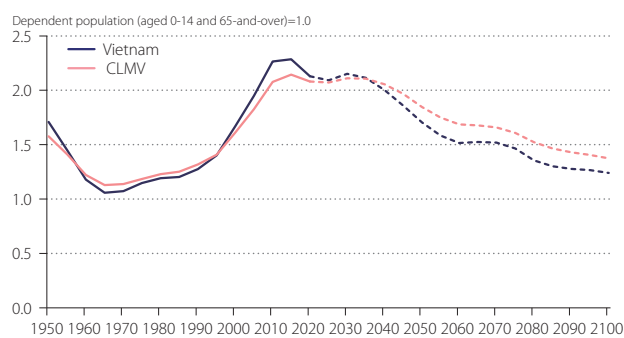


Figure 4 Demographic Dividend

Productivity

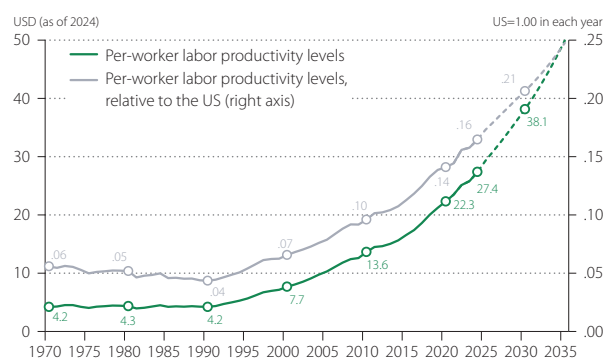


Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

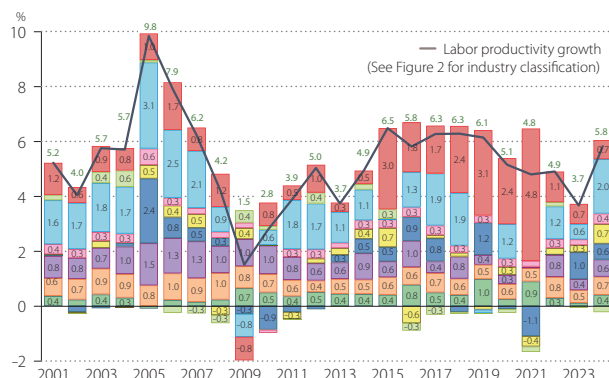


Figure 7 Industry Origins of Labor Productivity Growth

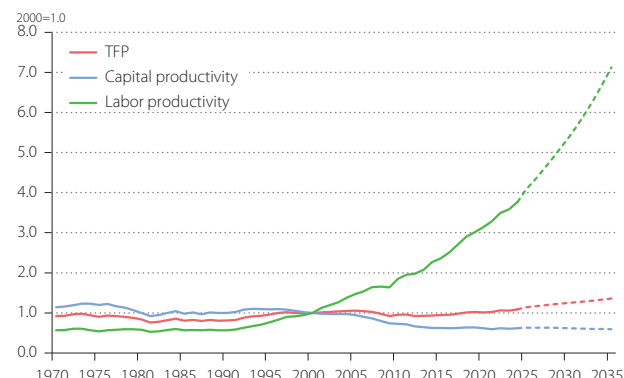


Figure 8 Productivity Indicators

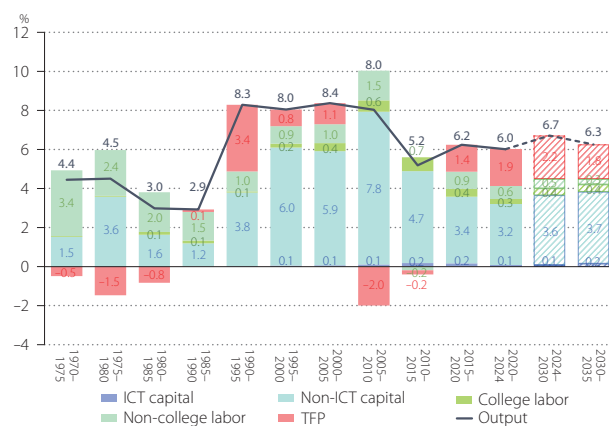


Figure 9 Decomposition of Economic Growth

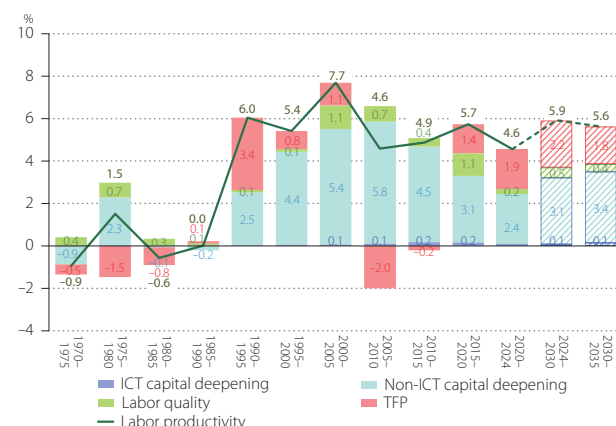


Figure 10 Decomposition of Labor Productivity Growth

APO21

Key Indicators

GDP in 2024	49,118	Billion USD (as of 2024)	Number of employment in 2024	1,196,660	Thousands persons
(exchange rate based)	17,952	Billion USD (as of 2024)	Employment rate in 2024	41.3 %	
Per capita GDP in 2024	17.0	Thousand USD (as of 2024)	Female employment share in 2024	32.2 %	
(exchange rate based)	6.2	Thousand USD (as of 2024)	Average schooling years of workers in 2024	8.0 Years	
Per-worker labor productivity level in 2024	40.2	Thousand USD per worker (as of 2024)	Investment share in 2024	29.7 %	
Per-hour labor productivity level in 2024	19.3	USD per hour worked (as of 2024)	ICT investment share in GFCF in 2024	9.7 %	
Capital stock per hour worked in 2024	62.9	USD (as of 2024)	Agriculture share in GDP in 2024	11.0 %	
Energy productivity levels in 2024	21.4	Thousand USD per toe (as of 2024)	Manufacturing share in GDP in 2024	19.1 %	
Carbon intensity of GDP in 2024	n.a.	g-CO ₂ per USD (as of 2024)	Agriculture share in employment in 2024	32.8 %	

(%: average annual growth rate)	1970 –80	1980 –90	1990 –2000	2000 –10	2010 –20	2020 –24	2019 –20	2020 –21	2021 –22	2022 –23	2023 –24	projection		
GDP growth	4.8	5.2	3.8	4.4	3.3	5.0	–3.1	5.2	5.4	3.6	4.1	2024–30	2030–35	2024–35
Labor input growth	3.2	3.4	2.7	3.0	2.2	1.7	0.4	0.3	3.4	1.7	1.2	2.1	1.8	1.9
Labor quality growth	0.7	1.1	1.1	1.4	1.3	0.5	0.6	0.2	0.9	0.4	0.4	1.5	1.4	1.4
Hours worked growth	2.6	2.3	1.6	1.6	1.0	1.2	–0.3	0.2	2.5	1.3	0.8	0.6	0.4	0.6
College labor input growth	7.7	7.0	5.5	5.5	3.7	2.2	1.6	1.6	0.2	4.5	2.6	3.1	2.9	2.9
Non-college labor input growth	2.7	2.7	2.0	2.0	1.5	1.4	–0.3	–0.3	0.4	2.8	1.3	1.5	1.2	1.3
ICT capital input growth	11.7	18.4	11.2	6.9	7.4	5.0	5.9	5.3	5.2	4.8	4.9	2.9	3.0	3.1
Non-ICT capital input growth	5.5	4.7	4.1	3.5	3.6	3.2	3.2	2.7	3.3	3.4	3.4	3.8	3.9	3.8
Per-worker labor productivity growth	2.0	3.0	2.1	2.8	2.2	3.7	–3.1	5.2	3.8	2.6	3.4	3.8	3.9	3.8
Per-hour labor productivity growth	2.0	3.0	2.2	2.8	2.3	3.8	–2.8	5.8	3.4	2.6	3.5	3.8	4.0	3.9
Capital productivity growth	–5.6	–5.2	–4.5	–3.7	–3.8	–3.2	–3.4	–2.8	–3.4	–3.4	–3.4	0.5	0.3	0.1
TFP growth	0.2	1.0	0.3	1.0	0.2	2.5	–5.0	4.4	2.5	1.3	2.0	1.8	1.8	1.8

Production

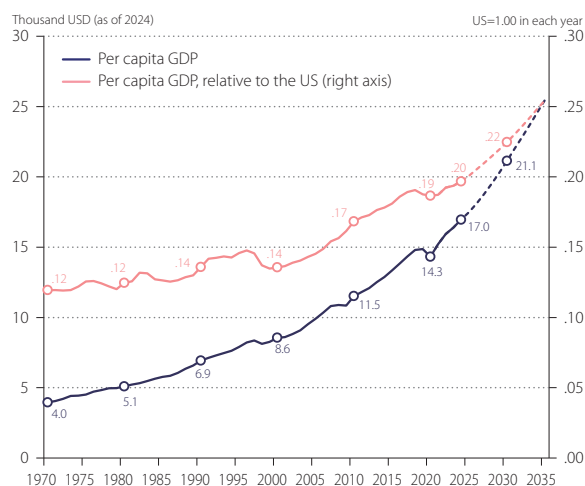


Figure 1 Per Capita GDP

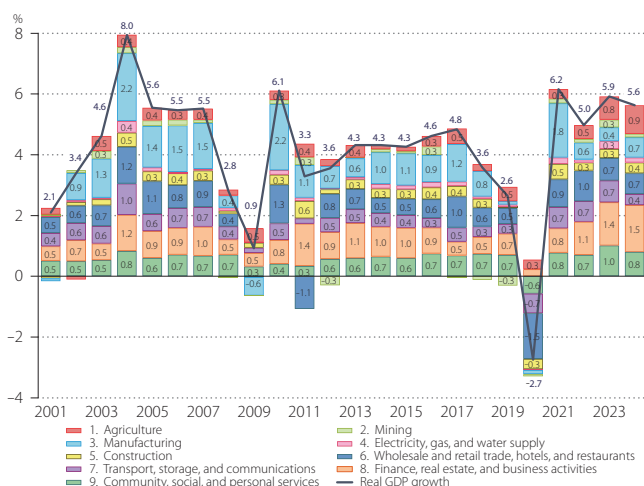


Figure 2 Industry Origins of Economic Growth

Labor

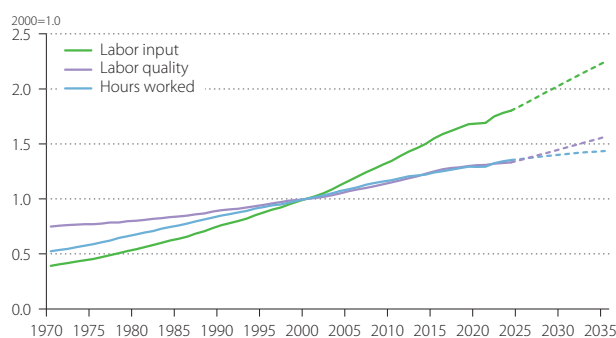


Figure 3 Labor Inputs

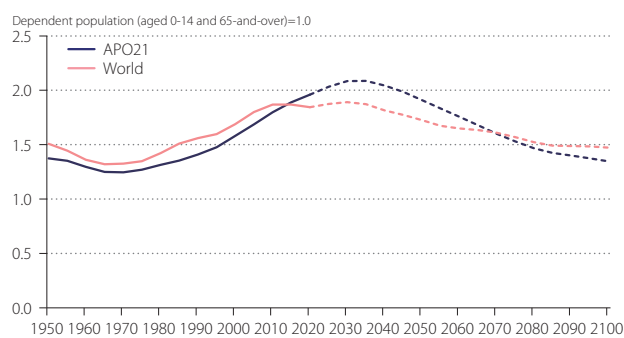


Figure 4 Demographic Dividend

Productivity



Figure 5 Per-Worker Labor Productivity Level



Figure 6 Per-Hour Labor Productivity Level

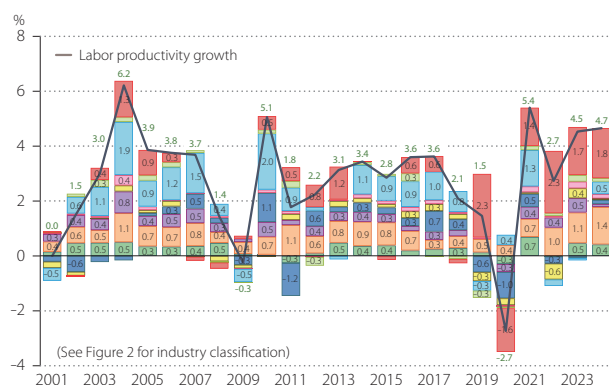


Figure 7 Industry Origins of Labor Productivity Growth

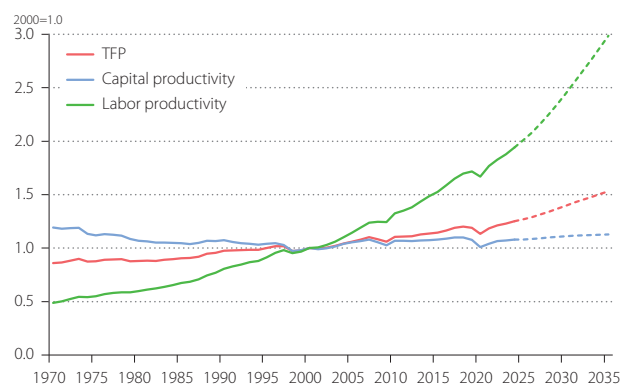


Figure 8 Productivity Indicators

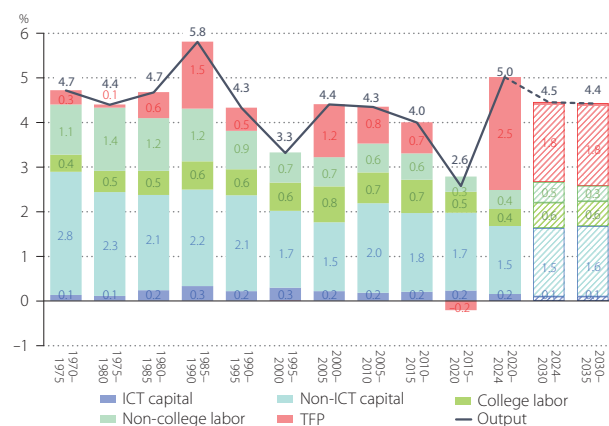


Figure 9 Decomposition of Economic Growth

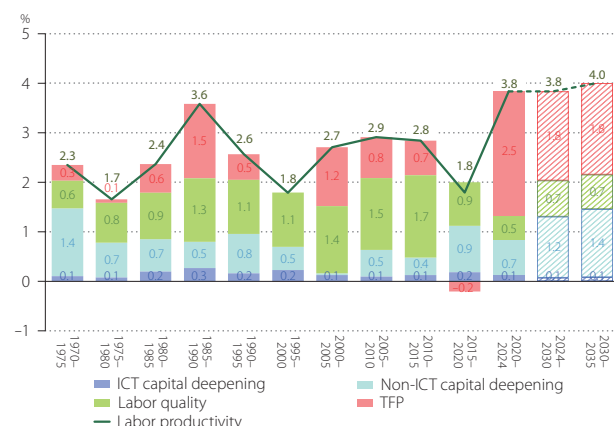


Figure 10 Decomposition of Labor Productivity Growth

References

- Acemoglu, D.** (2024) “The Simple Macroeconomics of AI,” *NBER Working Paper*, 32487.
- Aldasoro, I., L. Gambacorta, R. Pal, D. Revoltella, C. Weiss, and M. Wolski** (2026) “AI Adoption, Productivity and Employment: Evidence from European Firms,” *European Investment Bank Working Paper*, 2026/02.
- Alfaro, L., and D. Chor** (2026) “An Anatomy of the Great Reallocation in US Supply Chain Trade,” *NBER Working Paper*, 34490.
- Baslandze, S., Z. Edwards, J. Graham, T. McClure, B.H. Meyer, M. Sparks, S.R. Waddell, and D. Weitz** (2026) “Artificial Intelligence, Productivity, and the Workforce: Evidence from Corporate Executives,” *NBER Working Paper*, 34984.
- Bick, A., A. Blandin, D.J. Deming, N. Fuchs-Schündeln, and J. Jessen** (2026) “Mind the Gap: AI Adoption in Europe and the US,” *Federal Reserve Bank of St. Louis Working Paper*, 2026-003A. Doi: 10.20955/wp.2026.003
- Brynjolfsson, E.** (2026) “The AI Productivity Take-off is Finally Visible,” *The Financial Times*, February 15.
- Byrne, D.** (2019) “The Mysterious Cross-Country Dispersion in Mobile Phone Price Trends,” Board of Governors of the Federal Reserve System Fed Notes, August 5. Doi: 10.17016/2380-7172.2413
- Caselli, F.** (2005) “Accounting for Cross-Country Income Differences,” in P. Aghion and S.N. Durlauf (eds.) *Handbook of Economic Growth*, Amsterdam: North Holland, 679–741. Doi: 10.1016/S1574-0684(05)01009-9
- Diewert, W.E., and C.J. Morrison** (1986) “Adjusting Outputs and Productivity Indexes for Changes in the Terms of Trade,” *Economic Journal*, 96(3), 659–679. Doi: 10.2307/2232984
- Filippucci, F., P. Gal, and M. Schief** (2024) “Miracle or Myth: Assessing the Macroeconomic Productivity Gains from Artificial Intelligence,” *OECD Artificial Intelligence Papers*, 29, November.
- Gollin, D., S.L. Parente, and R. Rogerson** (2004) “Farm Work, Home Work and International Productivity Differences,” *Review of Economic Dynamics*, 7, 827–850. Doi: 10.1016/j.red.2004.05.003
- Highfill, T., and J.D. Samuels** (2026) “Early Estimates of the Impact of AI Within BEA’s Industry Economic Accounts,” *BEA Working Paper Series*, WP2026-3.
- Ho, M.S., K. Nomura, and J.D. Samuels** (2023) “The Growing Impact of ICT Productivity via the Cost of Capital: Evidence from the U.S. and Japan,” *Telecommunications Policy*, 47(9). Doi: 10.1016/j.telpol.2023.102635
- IEA** (2024) *Greenhouse Gas Emissions from Energy 2023*, Paris: International Energy Agency.
- IEA** (2025) *World Energy Balances 2024*, Paris: International Energy Agency.
- ILO** (2026) *ILO Modelled Estimates: Methodological Overview*, Geneva: International Labour Organization, January.
- Imam, P., and J. Temple** (2025) “Growth, Interrupted: How Crises Delay Global Convergence,” *International Monetary Fund Working Paper*, 25/116.
- IMF** (2018) *World Economic Outlook*, Washington, D.C.: International Monetary Fund, October.
- IMF** (2026) *World Economic Outlook*, Washington, D.C.: International Monetary Fund, April.
- Jeyhun, M.** (2026) “Understanding Saudi Arabia’s GDP Methodology Revision: Critical Verification of Measurement Change,” KS-2026-CO01, King Abdullah Petroleum Studies and Research Center (KAPSARC), March.
- Jorgenson, D.W., and Z. Griliches** (1967) “The Explanation of Productivity Change,” *Review of Economic Studies*, 34(3), 249–283. Doi: 10.2307/2296675
- Jorgenson, D.W., K. Nomura, and J.D. Samuels** (2016) “A Half Century of Trans-Pacific Competition: Price Level Indices and Productivity Gaps for Japanese and U.S. Industries, 1955–2012,” in D.W. Jorgenson et al. (eds.) *The World Economy: Growth or Stagnation?* Cambridge: Cambridge University Press, Chap. 13. Doi: 10.1017/9781316534502.013
- K.C., S., M. Dhakad, M. Potancokova, S. Adhikari, D. Yildiz, M. Mamolo, T. Sobotka, K. Zeman, G. Abel, W. Lutz, and A. Goujon** (2024) “Updating the Shared Socioeconomic Pathways (SSPs) Global Population and Human Capital Projections,” *ILASA Working Paper*, WP-24-003.
- Kohli, U.** (2004) “Real GDP, Real Domestic Income and Terms of Trade Changes,” *Journal of International Economics*, 62(1), 83–106. Doi: 10.1016/j.jinteco.2003.07.002
- Kohli, U.** (2006) “Real GDP, Real GDI, and Trading Gains: Canada, 1981–2005,” *International Productivity Monitor*, 13, 46–56.
- MoSPI** (2026) “Press Note on New Series of GDP Estimates with Base Year 2022–23,” Ministry of Statistics and Programme Implementation, Government of India, February 27.
- National Development Council** (2024) “Population Projections for the Republic of China (Taiwan): 2024–2070,” Department of Human Resources Development, the Republic of China (Taiwan), October.

- Nomura, K.** (2018) “Productivity Growth in Asia and Its Country Origins,” in Das Kusum Deb, et al. (eds.) *Productivity Dynamics in Emerging and Industrialized Countries*, New Delhi: Taylor & Francis Routledge India, Chap. 3. Doi: 10.4324/9781351002547
- Nomura, K.** (2023) “Vietnam Keizai no Roudou Tonyuu to Seisansei no Hanseiki (Half a Century of Experience with Labor Input and Productivity Growths in the Vietnamese Economy),” *Okayama Economic Review*, Economic Association of Okayama University, 54(3), 37–59 (in Japanese). Doi: 10.18926/OER/65011
- Nomura, K.** (2025) *Hydropower-Led Economic Growth in Bhutan: Development of Industry-Level Productivity Account, 1990–2022*, Contemporary South Asian Studies, Singapore: Springer Singapore. Doi: 10.1007/978-981-96-5150-4
- Nomura, K., and N. Akashi** (2017) “Measuring Quality-adjusted Labor Inputs in South Asia, 1970–2015,” *KEO Discussion Paper*, 143. Doi: 10.14991/004.00000143-0001
- Nomura, K., and S. Inaba** (2026) “Measuring Real Energy Price Gaps: The Real PLI Framework for Competitiveness Monitoring,” *Sustainability*, 18, 84. Doi: 10.3390/su18010084
- Nomura, K., and H. Shirane** (2016) “Redefining the Picture of Myanmar’s Economic Growth: Trade, Production, and Jade,” *KEO Discussion Paper*, 141. Doi: 10.14991/004.00000141-0001
- Nomura, K., and T. Amano** (2012) “Labor Productivity and Quality Change in Singapore: Achievements in 1974–2011 and Prospects for the Next Two Decades,” *KEO Discussion Paper*, 129. Doi: 10.14991/004.00000129-0001
- Obashi, A., and F. Kimura** (2018) “Are Production Networks Passé in East Asia? Not Yet,” *Asian Economic Papers*, 17(3).
- OECD** (2001) *Measuring Productivity—OECD Manual*, Paris: OECD. Doi: 10.1787/9789264194519-en
- OECD** (2009) *Measuring Capital—OECD Manual, 2nd edition*, Paris: OECD. Doi: 10.1787/9789264068476-en
- OECD** (2025) *OECD Compendium of Productivity Indicators 2025*, Paris: OECD, February. Doi: 10.1787/b024d9e1-en
- Office for National Statistics** (2025) *UK National Accounts, The Blue Book: 2025*, Government of the United Kingdom, October.
- Ohkawa, K., N. Takamatsu, and Y. Yamamoto** (1974) *Estimates of Long-Term Economic Statistics of Japan since 1868 Vol. 1, National Income*, Tokyo: Toyo Keizai Shinposha (in Japanese).
- Rodrik, D.** (2016) “Premature Deindustrialization,” *Journal of Economic Growth*, 21(1), 1–33. Doi: 10.1007/s10887-015-9122-3
- Roubaud, F., and V.T. Nghiem** (2022) “Measuring the Non-observed Economy in Vietnam,” *World Economics*, 23(2), 1–26.
- SAARC** (1985) “Charter of the South Asian Association for Regional Cooperation,” December 8.
- Shimizu, K.** (2023) “The Mirages of Hedonics: Quantitative Analysis of the Technological Innovation Contained in Inflation Rates,” in Frank Rovekamp et al. (eds.) *Inflation and Deflation in East Asia, Financial and Monetary Policy Studies*, Cham: Springer.
- The Economist** (1977) “The Dutch Disease,” November 26.
- United Nations** (1993) *System of National Accounts 1993*, New York: United Nations.
- United Nations** (2009) *System of National Accounts 2008*, New York: United Nations.
- United Nations** (2024) *World Population Prospects 2024*, New York: United Nations. Doi: 10.18356/9789211065138
- United Nations** (2025) *System of National Accounts 2025*, Pre edit version, New York: United Nations.
- United Nations Conference on Trade and Development** (2025) *World Investment Report 2025*, Geneva: United Nations Conference on Trade and Development, June. Doi: 10.18356/9789211073843
- World Bank** (2024) *Purchasing Power Parities and the Size of World Economies: Results from the International Comparison Program 2021*, Washington, D.C.: World Bank.
- World Bank** (2025) *World Development Indicators 2025*, Washington, D.C.: World Bank.
- Yotzov, I., J.M. Barrero, N. Bloom, P. Bunn, S.J. Davis, K.M. Foster, A. Jalca, B.H. Meyer, P. Mizen, M.A. Navarrete, P. Smietanka, G. Thwaites, and B.Z. Wang** (2026) “Firm Data on AI,” *NBER Working Paper*, 34836.

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