



**United
Nations**

Department of Economic and Social Affairs

RECOVER BETTER

**ECONOMIC
AND SOCIAL CHALLENGES
AND OPPORTUNITIES**

A Compilation of the United Nations
High-level Advisory Board
on Economic and Social Affairs

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Recovering better: economic and social challenges and opportunities

A compilation of the High-level Advisory Board on Economic and Social Affairs

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List of Acronyms

AfCFTA	African Continental Free Trade Area	ICRICT	Independent Commission for the Reform of International Taxation
AfDB	African Development Bank	ICT	information and communications technology
AI	artificial intelligence	ICUs	ICU - intensive care unit
AREAER	Annual Report on Exchange Arrangements and Exchange Restrictions	ID	identity/identification
ASEAN	Association of Southeast Asian Nations	IFFs	Illicit Financial Flows
AU	African Union	ILO	International Labour Organization
BADEHOG	Banco de Datos de Encuestas de Hogares / Household Survey Data Bank	IMF	International Monetary Fund
BEPS	Base Erosion and Profit Shifting	IPBES	Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services
BRICS	Brazil Russia India China South Africa	IPCC	Intergovernmental Panel on Climate Change
CAD	comparative-advantage-defying	IRP	International Resource Panel
CAF	comparative-advantage-following	IT	information technology
CBD	Convention on Biological Diversity	LDCs	Least Developed Countries
CDP	Committee for Development Policy	MDGs	Millennium Development Goals
CEO	Chief Executive Officer	MENA+AP	Middle East, North Africa, Afghanistan, and Pakistan
CEVES	Center for Advanced Economic Studies	MERCOSUR	Southern Common Market
CO2	carbon dioxide	MF	material footprint indicator
COVID-19	Coronavirus Disease 2019	MICs	Middle-Income Countries
CRIC	Committee for the Review of the Implementation of the Convention to Combat Desertification	MIT	Massachusetts Institute of Technology
DMC	Domestic material consumption	NBER	National Bureau of Economic Research
DNA	deoxyribonucleic acid	NEPAD	New Partnership for Africa's Development
DRM	Domestic resources mobilization	ODA	Official Development Assistance
DSA	Debt sustainability analysis	OECDv	Organisation for Economic Co-operation and Development
ECLAC	Economic Commission for Latin America and the Caribbean	PPBES	Planning-Programming-Budgeting-Evaluation Systems
EIB	European Investment Bank	R/GVCs	Regional/Global Value Chains
EU	European Union	RER	Real exchange rate
FCL	Flexible Credit Line	SDGs	Sustainable Development Goals
FDI	Foreign direct investment	SDRs	Special Drawing Rights
FLAR	Fondo Latinoamericano de Reservas/ Latin American Reserve Fund	SMEs	small and medium-sized enterprises
FSDR	Financing for Sustainable Development Report	SSA	Sub-Saharan Africa
G20	Group of Twenty	UN DESA	United Nations Department of Economic and Social Affairs
GATT	General Agreement on Tariffs and Trade	UNCTAD	United Nations Conference on Trade and Development
GDP	Gross Domestic Product	UNDP	United Nations Development Programme
GEO-6	Sixth edition of the Global Environment Outlook	UNEP	United Nations Environment Programme
GHG	Greenhouse Gas	UNIDO	United Nations Industrial Development Organization
GNI	Gross National Income	UNU-WIDER	United Nations University-World Institute for Development Economics Research
GSDR	Global Sustainable Development Report	US	United States
GVCs	Global value chains	VLEs	Village level entrepreneurs
HLAB	High-level Advisory Board on Economic and Social Affairs	WTO	World Trade Organization

[The United Nations High-level Advisory Board \(HLAB\) on Economic and Social Affairs](#) was established in June 2018 to help strengthen United Nations Department of Economic and Social Affairs (UN DESA) in the context of the United Nations development system reform and as a key part of efforts to enhance the United Nations's support to Member States in implementing the 2030 Agenda for Sustainable Development. The Board also, through its twice annual meetings, provided advice to the United Nations on broad economic and social issues, including near term prospects and risks of the world economy, frontier technologies, inequality, migration, issues associated with countries in special situation as well as the implications of these issues for multilateralism and the implementation of the 2030 Agenda for Sustainable Development

Over the course of the last two year, the HLAB has deliberated on many contemporary and cross-cutting issues and challenges. The interventions and insights of the Board have greatly inspired the United Nations to break new grounds in policy research.

This volume is envisaged as the legacy of the HLAB to advancing the sustainable development agenda over the course of its first two-year term. It is scheduled to be launched in late July 2020 after the 2020 High-level Political Forum on Sustainable Development.

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INTRODUCTION



Recovering better: An overview of the compilation of the High-level Advisory Board on Economic and Social Affairs

by Liu Zhenmin



Second High-level Advisory Board (HLAB) Meeting, Shenzhen, China, 16-18 October 2018.
Photo credit: Mr. HE Long, Shenzhen Special Zone Daily

Recovering better: economic and social challenges and opportunities

A compilation of the High-level Advisory Board on Economic and Social Affairs



Liu Zhenmin

Mr. Liu Zhenmin has been the United Nations Under-Secretary-General for Economic and Social Affairs since 2017. Prior to his appointment, Mr. Liu was Vice-Minister for Foreign Affairs of China since 2013. Among his various diplomatic assignments, he served as Ambassador and Permanent Representative, Permanent Mission of the People's Republic of China to the United Nations Office at Geneva and other International Organizations in Switzerland (2011-2013).

INTRODUCTION

The United Nations High-level Advisory Board (HLAB) on Economic and Social Affairs was established in June 2018 to help strengthen the United Nations Department of Economic and Social Affairs (UN DESA) in the context of United Nations development system reform, and as a key part of efforts to enhance support to Member States of the United Nations in implementing the 2030 Agenda for Sustainable Development.

The HLAB consists of sixteen globally renowned experts in the economic and social policy fields, including former Heads of State, a Nobel Laureate, former Senior Government Officials and intellectual leaders. It has provided guidance to the research and policy analysis work of UN DESA, including topics for its flagship publications. The Board members themselves have played an active role in strengthening the linkage between UN DESA and the global economic and social policy research community, and have promoted UN DESA publications and reports at national and global levels.

The Board also, through its bi-annual meetings, has provided

advice to the United Nations on broad economic and social issues, including near-term prospects and risks for the world economy, frontier technologies, inequality, migration, issues associated with countries in special situations, as well as the implications of these issues for multilateralism and the implementation of the 2030 Agenda for Sustainable Development.

Over the course of the last two years, the HLAB has deliberated on many contemporary and cross-cutting issues and challenges. The interventions and insights of the Board have greatly expanded our understanding of issues of important economic and social significance and inspired the United Nations to break new ground in policy research. This volume is envisaged as the legacy of the first HLAB to advancing the sustainable development agenda.

OUR WORLD IN 2020

With the future being shaped by the COVID-19 pandemic and humanity's responses to it, critical insights are more important than ever. Even prior to the pandemic, progress towards the Sustainable Development Goals (SDGs), as

enshrined in the 2030 Agenda for Sustainable Development, was mixed. This was the conclusion of several overarching assessments and reports published in late 2019 that brought together the latest science and data about progress in economic, environmental and social sustainability.¹ These reports informed five summits held on the occasion of the seventy-fourth session of the United Nations General Assembly.² In the case of some targets, progress before the COVID-19 crisis was encouraging; in some others, it was present but insufficient; in yet others, the trends were not even moving in the right direction.

Taken together, these reports issued dire warnings and calls for urgent action to step up progress towards the achievement of the SDGs and the Paris Agreement on Climate Change, with the overall message that business as usual would not be enough, and that the window of time within which to act was closing fast. The reports also underscored that vulnerable populations—those in countries in special situations, in conflict and post-conflict settings; migrants; women; older persons; youth; persons with disabilities; and indigenous persons, among others—continued to be at risk of being left behind.

The human tragedy of the pandemic, with more than half a million deaths worldwide so far, has imposed additional challenges. Mandated restrictions on activity have helped to prevent even greater loss of life, but have also resulted in lost livelihoods and incomes, forced absence from classrooms, foregone vaccinations against other infectious diseases, stresses on mental health, and, for women in particular, a disproportionate increase in the burden of care work as well as greater risk of domestic violence.

At the aggregate level, economies are in recession, leading to falling public revenues and shrinking fiscal space, likely

to result in poorer public services. Additional stresses are arising in economies dependent on tourism or commodity exports, and with disruptions in food supply chains. At the same time, falling fossil fuel prices and temporary declines in greenhouse gas emissions could help accelerate a just transition towards a low-carbon world.

Uncertainties about the future course of the pandemic and its socioeconomic consequences will persist for the foreseeable future, affecting consumption and investment behaviours. Social distancing and mobility restrictions may make certain kinds of businesses unviable, while encouraging others to grow. These in turn can create new regulatory challenges to which policymakers may need to respond quickly.

Initial assessments are already indicating some of the likely outcomes, at least in the short term. As many as 40 million people may fall into extreme poverty, reversing a declining trend that lasted over two decades. Some 1.6 billion working in the informal sector could see their livelihoods at risk, and many lack access to any form of social protection. Numbers such as these are indicative of the immense risks of not acting swiftly, coherently, and in a coordinated manner. At the same time, they indicate the imperative to “build back better,” in order to forestall similar risks to our future.

KEY DETERMINANTS OF PROGRESS TOWARDS THE SUSTAINABLE DEVELOPMENT GOALS

The chapters collected in this edited volume reflect and further the discussions HLAB members have had on a wide range of development trends and issues of critical importance to the achievement of the SDGs and the recovery from COVID-19. The insights shared could help

¹ Reports included United in Science, a synthesis report on climate science prepared for the Climate Action Summit; the Special edition of the Secretary General's SDG progress report; and the Global Sustainable Development Report (GSDR) prepared by an independent group of scientists; as well as the 2019 Global Environment Outlook (GEO-6) assessment; the 2018 and 2019 Intergovernmental Panel on Climate Change (IPCC) reports; the 2019 Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES) report; and the report of the Committee for the Review of the Implementation of the Convention to Combat Desertification (CRIC).

² Summits included the Climate Action Summit, SDG Summit, High-level Dialogue on Financing for Development, High-level Meeting on Universal Health Coverage, and the High-level Review of the SAMOA Pathway.

to accelerate action, which is particularly important given that the window of opportunity for attaining the SDGs is closing quickly.

The observations and recommendations reported here can inform COVID-19 responses so that countries build back better and avoid returning to a pre-pandemic pathway, where progress towards important objectives was not rapid enough, or was happening at the cost of significant reversals on others. Taken together, they reflect an understanding of key underlying trends that will need to be leveraged and managed as we design and implement policies for the pandemic response and recovery.

Policy elements are highlighted in the chapter summaries below.

Chapter I: Uncertainties surrounding the global economy and their implications for the global development agenda

Chapter I, by **José Antonio Ocampo**, discusses the multitude of uncertainties that the global economy is facing, putting them in perspective with a historical account of key economic trends in the past decades. He recommends actions that the international community can take in areas such as trade, finance and tax cooperation to put the global economy on a more sustainable path.

The chapter notes that a synchronized growth slowdown began prior to the COVID-19 pandemic and was later accentuated by it. The slowdown is broad based, and economic growth in developing-country regions has been especially hindered by two trends: weak progress concerning structural changes and low spending on research and development (R&D). Further complicating the global economic outlook is significant trade uncertainty. Already facing tepid trade growth since the global financial crisis, international trade is confronted by the uncertainty generated by trade frictions between major economies and, most recently, the pandemic. The analysis points to some positive developments around plurilateral trade agreements, but stresses that the global community must continue to defend multilateralism and address multiple

issues on the agenda of the World Trade Organization, including clarifying the relationship between multilateral rules and those established by bilateral and plurilateral trade agreements.

Chapter I highlights high financial volatility as another prominent feature of the global economy, with countries facing varied intensity of boom-bust cycles of external financing. In addressing such volatility, the chapter calls for strong macroprudential regulations that manage capital flows, and the use of more ambitious financing instruments by the International Monetary Fund, including more active use of special drawing rights. A multilateral institution that facilitates the sovereign debt restructuring with private creditors is also proposed, as well as institutional reforms of the Bretton Woods Institutions that broaden the participation of emerging and developing countries. Regarding international tax cooperation, and in particular on addressing tax avoidance and evasion, the chapter notes that in-depth solutions should include three elements: (i) consolidated taxation of multinationals as a single firm; (ii) a global minimum effective corporate income tax rate; and (iii) a single global asset registry that documents information on final beneficiaries.

The chapter points out that global economic uncertainties, coupled with the ongoing threat to multilateralism, pose a significant challenge to sustainable development. In this view, the United Nations must become the forum for reaching major political agreements on these issues, which is critical to the achievement of the ambitious sustainable development agenda.

Chapter II: Digital challenges for developing countries

In this chapter, **Jayati Ghosh** stresses rising concerns over the adverse and often unintended implications of digital technological advances. While presenting tremendous development potentials, new technologies, if mismanaged, could exacerbate inequality; enable tax avoidance; create health, safety and ethical issues; and generate risks concerning privacy related to large-scale monitoring

and surveillance. For developing countries, adding to these challenges are the difficulties with technology transfer, subpar digital infrastructure, digital divides, and the adverse effects on export-oriented industrialization due to developed countries' reshoring of production. By highlighting the negative effects of digital technologies, the chapter makes a convincing case for Governments to focus on devising innovative and context-specific policy measures that address these new challenges in the interest of achieving sustainable development.

Chapter II brings attention to the implications of technology for labour markets, noting the fear that human labour will be increasingly replaced by robots. It is, however, important to distinguish technological changes that improve productivity from those that simply create conditions for changes in how goods and services are produced and distributed. The new productive possibilities should be welcomed, while policy efforts can aim at countering the adverse employment effects of new technologies by promoting new economic activities, such as care services and creative work that are labour intensive and contribute to better quality of life.

The chapter also highlights the potential of technologies for delivering public services, but stresses that they cannot be a solution to inequality or replace critical human elements in the provision of essential services. The increasing use of biometric identification associated with public service provision also creates concerns over the mishandling of personal data, as data collection, transmission and storage are susceptible to identity fraud, data breach and human errors, among other issues. Developing countries also face the additional challenge that data are collected by multinational firms based outside of their own jurisdictions, which could have implications for tax collection and national security. The chapter concludes with a call for active state intervention in promoting R&D, investing in infrastructure and education, and introducing regulatory practices that ensure that technology-induced organizational arrangements generate decent jobs, while remaining mindful of possible government overreach with new technologies.

Chapter III: Inclusive catch-up: the new structural economics approach

Justin Yifu Lin and his colleague **Peilin Liu** contend in their chapter that the strategy of enabling firms to make industry entry decisions and technology choices based on the economy's comparative advantage allows for better performance than the alternative comparative-advantage-defying (CAD) strategy. The former is more effective at allowing countries to catch up and to reduce poverty and within-country inequality—all of which are essential to the achievement of the 2030 Agenda.

Given that developing countries are typically characterized by an abundance of labour and therefore have comparative advantages in labour-intensive sectors, promoting industries and adopting technologies that are in line with a country's comparative advantage would lead to creation of more job opportunities, rising wages, particularly for lower-wage workers, and improvement in economic equality. Under such a comparative-advantage-following (CAF) strategy, workers would have more access to training and on-the-job learning opportunities, which in turn helps to advance human capital accumulation. Unlike the CAD strategy, the CAF strategy has the additional advantage of not requiring Governments to distort product and factor markets in order to support otherwise non-viable firms. Without the distortions, small and medium-sized enterprises have greater chances to develop. Another advantage of the CAF strategy is that it generally does not entail preferential loans, trade barriers, currency intervention, and other policy measures that are needed for supporting uncompetitive firms. Adoption of such a strategy therefore results in more favourable external balance and fiscal conditions, and hence better macroeconomic stability.

This chapter further notes that Governments of developing countries that seek to implement the CAF strategy must seek to remove constraints that impede the emergence of industries for which a country has latent comparative advantage. This includes improving the hard and soft infrastructures needed for firms' technological upgrading in a market economy. The authors proposed that the

United Nations system could introduce an Inclusive Catch-up Initiative composed of two major components: (i) a Knowledge Initiative that focuses on facilitating the cross-country exchange of experiences concerning sustaining industrialization; and (ii) a Coordination Initiative that supports technology transfer, which can be facilitated by a technology bank operated by the United Nations.

Chapter IV: Sustainable financing for (an owned) sustainable development: time for Africa to give the driver's seat to domestic resource mobilization

In this chapter, **Cristina Duarte** calls for a much-needed shift in the sustainable development paradigm in Africa. Emphasizing that sustainable financing is a prerequisite for sustainable development, chapter IV draws attention to three important financing issues.

First, it calls for a stronger emphasis on flow variables (such as the debt servicing cost-to-export revenue ratio) rather than stock variables (such as the debt-to-GDP ratio) in assessing the debt situation of a country. Second, policymakers should make significant investments in development institutions that aim to facilitate fair and better integration of their countries into regional and global value chains. This could improve domestic value added and access to technologies and resources, as well as diversify economic activities, thereby helping to maximize impacts of SDG investments and minimizing associated risks. Third, there should be a rethinking of the role of private sectors in society, which should go beyond private financing and also include participation in the process of reducing any risks surrounding SDG financing and investment. As part of the “de-risking” efforts, Governments should adopt integrated national financing frameworks that are linked to Planning-Programming-Budgeting-Evaluation Systems. Such frameworks enable policymakers to look at the whole range of financing sources and non-financial means of implementation that are at a country's disposal and to devise a comprehensive financing strategy that is compatible with sustainable development objectives.

The chapter stresses that achieving sustainable financing

would demand African policymakers to give the “driver's seat” to domestic resource mobilization rather than equating development with the business of poverty management and relying on external financing for poverty reduction. The chapter also calls for a different type of multilateralism, noting that people's trust in the multilateral system is eroding since it has failed to deliver inclusive and sustainable growth in recent decades. Restoring trust would require acknowledging the emergence of a new international economic order and building a new global collective and accountable political leadership.

Chapter V: Decoupling: a key to achieving Sustainable Development Goals

This chapter, by **Izabella Teixeira** and her colleagues **Yi-Ann Chen** and **Victor Valido**, points out the insufficient focus on the environment in the pursuit of economic and social development, despite the substantial linkages between natural resources and socioeconomic and geopolitical processes at different levels. While the SDG framework recognizes the links between economic, social and environmental dimensions of development, actual SDG progress shows that the focus on the environment remains inadequate. Historically, improvement in labour productivity has outpaced improvement in the efficiency of natural resources use, creating substantial environmental pressures for countries. For sustainable development to become a reality, natural resource management must be an integral part of any country's socioeconomic development plans.

Highlighting the rapid increase in consumption of natural resources in the past decades, the chapter notes that this trend has been dominated by upper-middle-income countries and, to some extent, lower-middle-income countries. This reflects the build-up of infrastructures in these countries and the relocation of natural resource-intensive production from more efficient countries to less efficient ones. The latter implies an outsourcing of production-related environmental impacts to middle-income countries.

Without immediate and concerted actions to curb natural resources use, business-as-usual behaviours would mean global natural resources use could more than double by 2060. It would lead to significant increases in carbon emissions. Water distribution would face uncertainty, and food security would be threatened. In this view, the chapter calls for strategies for decoupling economic activities from resource use and environmental impacts. Guided by the principles of policy coordination and integration, decoupling can be achieved through resource efficiency improvements and sustainable consumption and production that require a transition from linear to circular flows of resource use.

Chapter V urges that specific elements of decoupling strategies should include, among others, promoting the adoption of innovation and sustainable technologies that improve natural resource use efficiency. This should be complemented by increases in resource extraction taxation to avoid the so-called rebound effect (i.e., increased consumption induced from a cost reduction associated with material efficiency improvement). Global carbon levies are also needed, and the revenues collected should be shared equally among households and Governments. Also, policies aimed at climate mitigation and energy sustainability should be made consistent with goals associated with land use and food systems. Moreover, behavioural changes—such as shifting to plant protein-based diets and diminishing food waste—are crucial. A key area that the United Nations can support is the continued work with Governments in monitoring progress towards decoupling, which requires refining data collection mechanisms at all levels.

Chapter VI: Production structures for sustainable development: learning how to shape them from the bottom up

The chapter by **Kori Udovički** calls for a more systematic, extensive study of different countries' production structures that will contribute greatly to the achievement of the SDGs. Noting that development research on structural transformation remains overly focused on inapplicable theoretical work and ideological differences, this chapter argues for the generation of experiential and actionable

knowledge on how to successfully enable structural transformation, with implications for growth, employment, inequalities and the environment. It stresses that accumulation of productive capabilities and the process of structural change are path dependent, which underscores the need for Governments to better understand the evolution of product structure.

The chapter makes an important observation that a regional or small national economy, even one with excellent institutions, can hit a “dead end” in terms of advancing production structures before it reaches the frontier of an industry. Governments play an important role in encouraging and making what the author terms “out investments”—that is, open-ended investments with uncertain returns, but important for enabling a country to continue structural transformation even when hitting a dead end.

The chapter uses the example of Serbia to demonstrate the range of complex decisions that policymakers would need to make in their pursuit of sustained growth and the generation of decent jobs through structural transformation. These include investment choices concerning products and technologies—which require careful assessment of synergies and tradeoffs among industries, as well as interactions between foreign direct investment and small and medium-sized enterprises—and the direction of the production structure's evolution. Private sectors possess much of the information required for making these decisions, and policymakers need to further analyse the information with a focus on understanding externalities between sectors and how to expand longer-term development opportunities. This analytical process can benefit greatly from examining the experiences of other countries with comparable income levels and production structures. In a similar spirit as the Knowledge Initiative proposed in chapter III by Lin and Liu, this chapter recommends a networked, coordinated, and bottom-up research programme that the United Nations is best-positioned to undertake, which can help to substantially reduce individual countries' costs of collecting and adequately processing the wealth of useful information available.

Chapter VII: Equality, democracy and sustainable development

This chapter, by **Alicia Bárcena**, centers on equality and its interaction with structural change and productivity growth, illustrated with the experience of Latin America and the Caribbean. Through carefully explaining the interlinkages between economic and political equalities and how they are conducive to innovation and productivity growth, the author makes the important point that there is no fundamental trade-off between economic efficiency and equality.

The chapter argues that there is a two-way causal relationship between production structure and income distribution. It contends that an economy that features significant concentration in a small number of low-tech sectors—the international competitiveness of which relies on cheap low-skilled labour or natural resources—is likely to experience higher income inequality than an economy that competes based on technological advances and knowledge. The reason behind the higher inequality is multifold, but can be largely attributed to the weak bargaining power of a predominately low-skilled labour force, and the tendency for rents to accrue to a small group of natural resource owners and large firms entrenched in global value chains. To transform such an unfavourable production structure, the author argues that one cannot rely on market forces alone, and a necessary mix of industrial policy and macroeconomic policies—which include a variety of context-specific countercyclical and macroprudential policies—would be needed.

On the other hand, the level of equality has implications for the trajectory of an economy's production structure. High inequality erodes trust and the spirit of cooperation within an economy, which limits the possibility of creating industrial and macroeconomic policies that are compatible with structural change. Advantaged groups, who have oversized influence in a highly unequal society, would favour producing private goods, rather than financing public

goods that can create opportunities and capabilities for most of the population, thereby dimming the prospect of structural change.

This chapter makes the case that national efforts to improve equality and promote structural change—both of which are crucial for the achievement of sustainable development—should be complemented by a new multilateral governance model. The model needs to acknowledge the structural asymmetries in the global economy and the principal need of providing global public goods in the form of facilitation of technology spillovers; international labour and social protection standards; agreements over carbon emissions; and regulations for financial capital flows.

CONCLUSION

The HLAB provided a platform for the free and frank exchange of ideas among eminent experts for shaping economic processes and trends to better deliver on the SDGs. While these chapters represent “deep dives” into various areas and differ in the topics that they cover, there is a shared message that stands out: the United Nations can play an important role in addressing global challenges and advancing sustainable development. As a trusted global convener, the United Nations serves as a platform for important international agreements on matters that are relevant to all countries, such as international tax cooperation, and as a knowledge broker that facilitates the sharing of development experiences across the world, such as upgrading production structures and decoupling economic activities from resource use. In these roles, and through its technical expertise in many different areas, the United Nations is also uniquely placed to facilitate the coordinated and coherent action that will leverage the recovery from COVID-19 to into a transformative period for attaining sustainable development.

CHAPTER I



Uncertainties surrounding the global economy and their implications for the global development agenda

by José Antonio Ocampo



Fourth High-level Advisory Board (HLAB) Meeting, Geneva, Switzerland, 7-9 October 2019.

Photo credit: Mr. Jean-Philippe Escard, UNCTAD

Uncertainties surrounding the global economy and their implications for the global development agenda



José Antonio Ocampo

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INTRODUCTION

Major uncertainties have arisen in the global economic context in recent years, along with significant changes in the global agenda. On the positive side, the three agreements reached at the United Nations in 2015 stand out: the approval of the Sustainable Development Goals (SDGs), the Third International Conference on Financing for Development in Addis Ababa, and the Paris Agreement on Climate Change. Unfortunately, the last has already been tarnished by the decision of the United States of America to leave the Agreement and the failure of the later meeting in Madrid to reach a consensus on the functioning of a global carbon market. Also on the positive side, the international tax cooperation agenda, which the Group of 20 (G20) entrusted to the Organization for Cooperation and Development (OECD), has continued to move forward, albeit with several frustrating elements. The changes in financial regulation triggered by the G20 after the North

Atlantic financial crisis¹ of 2008-2009 have also continued, although with partial reversals in some major economies.

On the negative side, the most worrying element is the weakening of multilateralism, largely associated with decisions made by the United States, the great driver of multilateral cooperation in the post-World War II era. The weakening of the most important multilateral agreement in history, the European Union (EU), has also contributed to this outcome. Among the major reflections of weakening multilateralism is the deterioration of institutional structure in international trade as a result of the so-called trade war between China and the United States; the various unilateral actions the United States has taken with other partners; and the suspension of the World Trade Organization's (WTO) Appellate Body. Furthermore, all of this takes place within the context of slow growth in world trade since the North Atlantic financial crisis. Additionally, the global economy was already experiencing a major slowdown

¹ I prefer this to the generally used term “global financial crisis” because, although it did have global effects, it focused on the United States of America and Western Europe. I refer to the period as 2008-2009, when the collapse of the investment bank Lehman Brothers took place (September 2008) and a sharp recession of the advanced economies occurred, although the first symptoms of the financial crisis occurred in 2007.

Table I.1
World GDP growth

	1990-2007	2002-2007	2010-2018	2017	2018	2019
World	3.0%	3.9%	2.8%	3.2%	3.0%	2.3%
Developed economies	2.4%	2.6%	1.8%	2.4%	2.2%	1.7%
United States	3.1%	3.0%	2.3%	2.4%	2.9%	2.2%
Japan	1.3%	1.7%	1.0%	1.9%	0.8%	0.7%
European Union	2.2%	2.5%	1.5%	2.6%	2.0%	1.4%
Euro area	2.1%	2.2%	1.3%	2.5%	1.9%	1.2%
Other Developed countries	2.8%	2.9%	2.2%	2.6%	2.3%	1.7%
Economies in transition	0.3%	7.9%	1.8%	2.2%	2.7%	1.9%
Developing economies	5.3%	7.0%	4.7%	4.5%	4.2%	3.4%
Africa	3.8%	5.9%	2.8%	2.9%	2.7%	3.0%
East and South Asia	7.2%	8.4%	6.1%	6.1%	5.7%	4.8%
China	10.6%	11.7%	7.4%	6.8%	6.6%	6.1%
India	6.1%	7.9%	6.9%	7.4%	6.9%	5.4%
Western Asia	4.4%	6.6%	4.2%	2.6%	2.3%	1.0%
Latin America and the Caribbean	3.2%	4.6%	1.5%	1.2%	0.9%	0.1%
Least developed countries	4.6%	7.4%	4.6%	4.5%	4.7%	4.9%

Source: UN DESA.

before it was hit in 2020 by the worst collapse of economic activity since the Great Depression of the 1930s and a major contraction of international trade due to the effects of the COVID-19 pandemic. No less important, the new economic uncertainties have been reflected in world capital markets in general and in international financial markets in particular, and notably in renewed volatility in capital flows to emerging economies. The insufficiencies and weakening of the agreements on climate change can be added to the list, but they will not be discussed here.

This chapter analyses these issues from a global perspective and discusses their implications for the global development agenda. It is divided into six sections, the first of which is this introduction. The second reviews international economic trends. The third section focuses on international trade. The fourth takes a look at the renewed financial volatility. The fifth analyses the debates on international tax cooperation. The last presents some brief conclusions.

GLOBAL ECONOMIC TRENDS

Before the COVID-19 pandemic hit the global economy, international debates focused on the “synchronized slowdown” of the global economy, the term used by the International Monetary Fund (IMF) in its October 2019 World Economic Outlook (International Monetary Fund, 2019). These trends are reflected in table I.1, albeit using the background data for the United Nations World Economic Situation and Prospects,² whose aggregates are calculated at market exchange rates (and not at parity prices, as those of the IMF). These adverse trends have, of course, worsened because of the economic effects of the COVID-19 pandemic.

As can be seen, in 2019, the global economy experienced the slowest growth (2.3 per cent) since the recovery that followed the North Atlantic financial crisis. This is true both if the comparison is made with the peak reached in 2017

² For the most recent issue, see United Nations, 2020.

(3.2 per cent) as well as with the average of 2010-2018 (2.8 per cent). This is particularly so for developed economies, especially Japan and the EU (and the eurozone in particular). The slowdown also took place in the United States, and was expected to worsen in 2020. Additionally, the slowdown occurred at a global growth rate that reached neither the levels of the five years prior to the 2008-2009 crisis (3.9 per cent in 2002-2007) nor those reached in 1990-2007 (3.0 per cent). Again, this is especially the case for developed economies. In other words, lower growth has taken place in the context of a trend towards a slowdown of economic growth which, from a long-term perspective, began in the 1970s or 1980s in different parts of the developed world. These adverse trends have given way in 2020 to the worst economic crisis since the Great Depression, with the IMF forecasting a widespread recession that will lead to a fall of world gross domestic product (GDP) of 4.2 per cent (at market exchange rates), with a downward bias and significant uncertainties on the speed of the recovery (International Monetary Fund, 2020a).

Developed countries have responded to the current crisis with strongly expansionary monetary and fiscal policies, which are particularly tough in the case of the United States. The heterodox monetary policies have been able to moderate the adverse trends in financial markets, but it is unclear whether these policies—together with the ambitious fiscal policies, which focus on the demand dimensions of the crisis—will help to overcome the supply constraints generated by the COVID-19 crisis. One of the legacies of current policies will be the significant increase in public sector debt ratios, on top of the strong negative trends that had been observed in recent years, particularly in the United States.

Developing economies were also experiencing a slowdown before the COVID-19 crisis and are now headed for a widespread recession. The slowdown included the more dynamic regions, East and South Asia, including their two largest economies, China and India, which are among the few that are expected to record a slow positive growth in 2020. In the case of China, however, it has not been

possible to adopt a package of fiscal and credit expansion similar to the massive one it launched to respond to the North Atlantic financial crisis, particularly because of the high levels of indebtedness that package created. India's high fiscal imbalances also represent a major constraint for the adoption of stronger expansionary policies.

Latin America and the Caribbean has been the least dynamic region in the developing world, but this reflects the trend it has experienced since the debt crisis of the 1980s. Its recent underperformance is not only affected by international events, but also by domestic and regional factors, both economic and political. This includes the collapse of the Venezuelan economy that began in 2014, the slow recovery of Brazil from its strongest post-war recession in 2015-2016, the political transitions in Argentina and Mexico, and political turmoil in Chile and several other countries. COVID-19 will hit the region hard, interrupting the recovery that was expected in 2020. Slowdown has also been a feature of sub-Saharan African economies as a whole in recent years, leading to the frustration of the great expectations that arose in the early twenty-first century, that this region was finally overcoming the historical divergence in income levels vis-à-vis the developed countries. There was some good news for developing countries, however: the least developed countries—particularly in Asia—not only experienced a boom in the early twenty-first century, but have also had above-average performance in recent years.

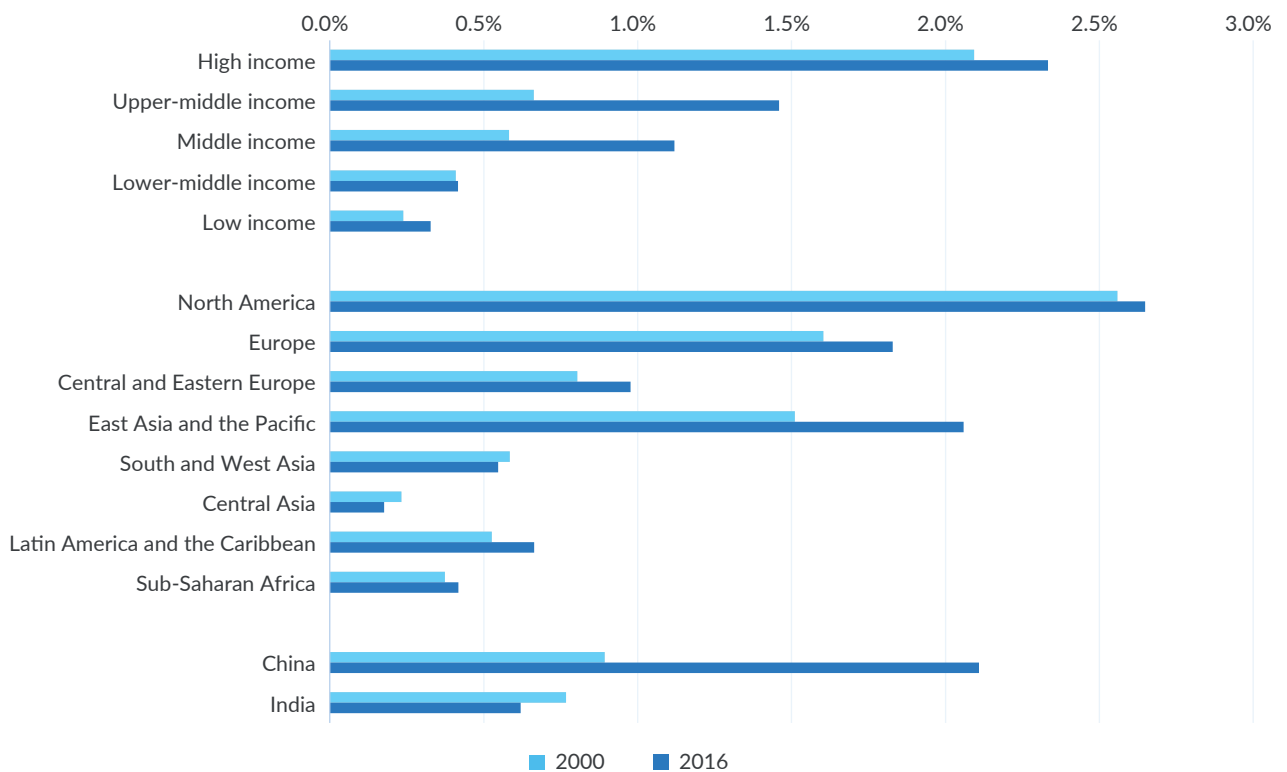
Some long-term adverse trends have undoubtedly had significant effects on the weakest developing-country regions: Africa and Latin America and the Caribbean. I would like to highlight two such trends, which are closely correlated: (i) the limited structural change associated with the reallocation of labour towards sectors with high levels of productivity, which has been identified in development literature as an essential element for reducing the income gap that separates developing from developed countries; and (ii) the derisory levels of investment in research and development (R&D), which is particularly critical for the transition from middle-income to high-income levels.

The first of these issues has been analysed in detail by Diao, McMillan, and Rodrik in a recent paper (Diao, McMillan, and Rodrik 2019). As these authors suggest and table I.1 shows, growth accelerated in all developing-country regions, particularly in the early twenty-first century, and this process continued in some of them after the North Atlantic financial crisis, supported in several cases by the super cycle of commodity prices that took place in 2003-2014 (with a temporary suspension during the North Atlantic financial crisis). However, structural change over the past decades has been particularly weak in several regions. In particular, and in contrast to the East Asian experience, the growth accelerations in Africa, Latin America, and South Asia have not been driven by rapid industrialization. Beyond that, as these authors argue, it is not common to

observe changes in economic structure that move labour from low- to high-productivity activities together with rapid within-sector productivity improvements—the mix that led to rapid growth in East Asia and was at the core of classical development economics thinking. Thus, Africa has benefited from the first of these transformations, but not from the second (i.e., it has had declining labour productivity in the modern sectors of the economy), and Latin America has experienced the second but not the first (rather, low-productivity urban activities have absorbed a growing share of the labour force).

These authors explain the African anomaly by arguing that structural change in Africa originated on the demand side, as a result of either external transfers or increases in agricultural incomes. In turn, as I have argued in my work

Figure I.1
Research and development expenditures as a percentage of GDP



Source: UNESCO.

on Latin America,³ the joint effect of the debt crisis of the 1980s with the premature deindustrialization that this region has experienced since market reforms of the 1990s has led to a very poor performance relative to the post-war industrialization era (going back in several countries to the 1930s): an average GDP growth of only 2.7 per cent per year in 1990-2019 versus 5.5 per cent in 1950-1980. This slow growth has determined the region's stagnation at average income levels, and is a prominent example of what has been called the "middle-income trap" in recent economic literature. It should also be remembered that Latin America and sub-Saharan Africa remain the regions with the highest levels of inequality in the world, despite the improvement experienced by Latin America in the beginning of the present century. According to several analysts, inequality may also be a factor behind weak economic performance.

Differences in R&D spending are a major source of differences between developed and developing countries, as figure I.1 indicates. The difference has narrowed since the early twenty-first century, but this is associated mainly to the rise in R&D spending in East Asia—and notably in China, where it increased from 0.9 per cent of GDP in 2000 to 2.1 per cent in 2016, thus reaching, in recent years, levels comparable to those of high-income countries. There have been small advances in other developing countries regions as well as transition economies (which dominate in Central and Eastern Europe and Central Asia). The significant lag of India vis-à-vis China is remarkable in this regard. In an era of rapid technological development—the "fourth industrial revolution," as it has been called, although its major developments are taking place in services—this backwardness is counterproductive and is one of the most important causes of inequalities in levels of development and, particularly, of the middle-income trap that several countries face.

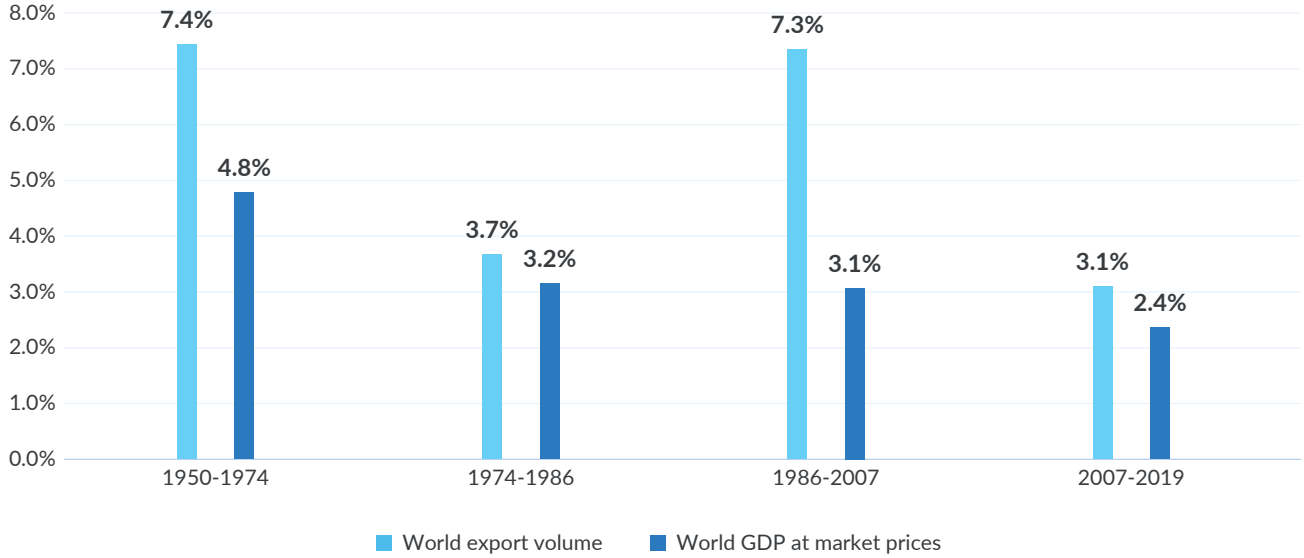
THE CRISIS OF INTERNATIONAL TRADE

One of the frequent criticisms concerning the inward-looking industrialization processes that several regions of the developing world experienced in the post-war period was the excessive protection of domestic production that led to significant inefficiencies, and the consequent inability to integrate into the dynamic growth of international trade. The basic defense of trade liberalization was, therefore, that it was essential in order to benefit from the boom of international trade that took off relatively early in the post-war period (figure I.2.A). It should be noted, however, that this boom was largely concentrated in its initial stages in trade among developed countries—with intra-European trade being the most important—and only started to provide opportunities to developing countries beginning in the mid-1960s. The origins of the East Asian success story, as well as that of China, are associated with the full exploitation of those opportunities, although this usually involved mixing good export sectors with continued support for domestic industries and generally high levels of state intervention (i.e., not to full trade liberalization as such).

The post-war trade boom was interrupted by the first oil shock of the 1970s in late 1973; the slowdown that followed lasted while oil prices remained high. Beginning in 1986, there was a second boom of international trade. Although world GDP growth never recovered the rates of the post-war boom, the growth of trade between 1986 and 2007 reached similar rhythms—over 7 per cent per year in real terms (see again figure I.2.A). Moreover, this second boom was characterized by much more active participation of developing countries, thanks, among other reasons, to the emergence of international value chains. Although trade liberalization had been a major feature of the first boom, it was largely concentrated in reduced tariffs among developed countries, following the sequence of negotiations under the General Agreement on Tariffs and Trade (GATT). Trade liberalization was more extensive and contributed to

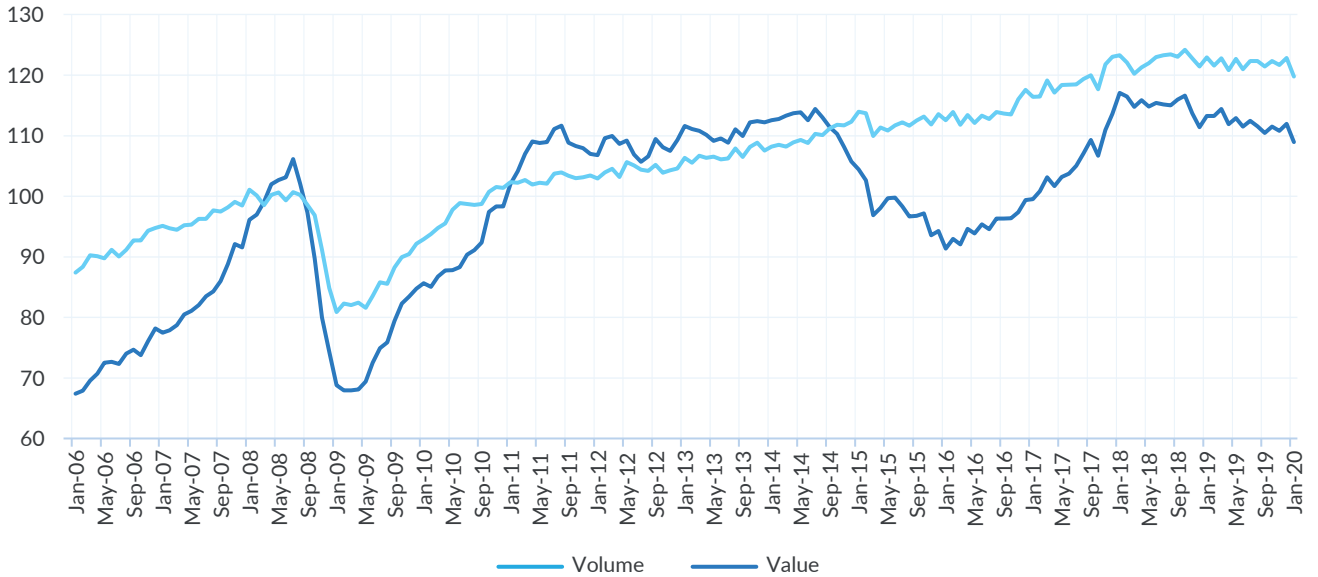
³ In this regard, see Bértola and Ocampo, 2012.

Figure I.2
A. Growth of world trade volumes and GDP



Sources: Until 2007, United Nations; 2007-2019, IMF.

B. World monthly exports (1st semester of 2008=100)
(CPB Netherlands Bureau)



Sources: CPB Netherlands Bureau.

the second boom—as it also included developing countries and took place under the WTO (created in 1994)—and to a boom in bilateral and plurilateral free trade agreements.

The second boom of international trade ended, however, with the North Atlantic financial crisis, a fact that is sometimes ignored. Indeed, as figure I.2.A indicates, the growth of international trade since 2007 has been the slowest in the post-war period. The sharp slowdown in trade growth has also surpassed that of global GDP, to which I referred in the previous section. Figure I.2.B details the corresponding dynamics, according to the regular estimates by the former Dutch planning office (CPB Netherlands Bureau). There was a sharp fall during the most acute phase of the North Atlantic financial crisis, but also a rapid recovery, which happened in such a way that trade recovered to pre-crisis levels by the end of 2010. The coordinated action of the G20 to avoid protectionist measures during the crisis was important in this regard; indeed, the Great Depression of the 1930s was taken as a reference, when widespread protectionism exacerbated the deep crisis that the world economy experienced at that time. However, recovery did not result in a new period of rapid expansion: based on the background data for figure I.2.B, it can be estimated that the pace of annual real growth of trade was 2.0 per cent per year in 2007-2019 and 2.2 per cent in 2011-2019, lower than IMF estimates, shown at the top in figure I.2.A. Beginning in late 2019, these figures started to show a decline; indeed, in terms of value, global trade in 2019 was not much higher than it was in 2011 or even than in 2007.

Currently, there are great uncertainties in trade policy. From the standpoint of the multilateral system, the worst threat is that associated with the suspension of the WTO Appellate Body on 11 December 2019, due to the lack of appointment of new members. The roots of this threat can be traced back to objections to the Appellate Body by the United States, especially its allegation that decisions are

used as “precedents”—an accusation that is considered unfounded even by US experts.⁴ Other objections relate to with the views that the Appellate Body has had on the use of contingent protections, particularly of anti-dumping measures by the United States, which is certainly the country that most actively uses them. These objections have been made despite the fact that the United States has also benefited from the Body’s decisions (for example, those in favour of the United States on European subsidies to Airbus).

Although negotiations on the WTO dispute settlement are ongoing and temporary mechanisms have been suggested, the United States has been inflexible in its rejection of proposals presented by European and other countries over the past two years. The world therefore risks the possible loss of the best instrument of dispute settlement in the multilateral system, and a crucial one for guaranteeing that countries abide by WTO rules. Under this system, disputes were settled in a strict and time-delimited sequence: (i) consultations among the parties involved; (ii) mediation; and (iii) eventual arbitration by the Appellate Body. The arbitral decisions must also be complied with or else give room for legal retaliation by the affected party. This dispute settlement mechanism had been used by a large number of both developed and developing countries.

Beyond the WTO crisis, the other complex problem facing international trade is the unilateral use of trade measures by the United States, in some cases to achieve objectives not directly related to trade (as happened with Mexico to curb irregular immigration), or seeking geopolitical goals (sanctions for companies trading with the Bolivarian Republic of Venezuela or the Islamic Republic of Iran). The most notable case is that of the trade war with China, which seeks objectives that may partly be considered legitimate (such as curbing possible violations to intellectual property rules by China), versus others that have no clear economic rationale (e.g., reducing the bilateral trade deficit), or

⁴ See an excellent critical analysis of US positions on the Appellate Body by Bacchus and Lester, 2019. The first of these authors is an American citizen who was one of the founders and chaired the Appellate Body.

which involve the use of other instruments without clear justification (e.g., China's currency manipulation, which is believed to be done to keep it undervalued). Although a temporary truce was reached in December 2019, it remains to be seen whether it is a step to a final solution. Some of the measures are also contrary to international trade rules, notably the insistence of the United States that China commit to the bilateral purchase of US agricultural goods with no regard to market mechanism.

The trade war contributed to the slowdown in world trade, affecting both countries negatively and becoming one of the factors that has contributed the most to the uncertainty surrounding the global economy. It can also generate other effects whose impact is unknown, especially on the future of information technologies, due to sanctions against the Chinese company Huawei, which could lead to the development of two parallel digital technology systems—say, a Western and a Chinese one—that do not interact with each other. It is worth noting that the trade war also generated multiple and inefficient trade deviations, some of which have had positive effects on some developing countries (e.g., export of industrial products from Mexico to the United States, and soybean and corn exports from Argentina and Brazil to China, among others), but also negative impacts (such as the likely dumping of some Chinese manufacturing products in countries that have no restrictions on imports from the Asian giant).

The COVID-19 crisis has in turn generated a major contraction of international trade that has contributed to disruptions in value chains, as well as falling demand for manufactures, problems in industrial supplies during the lockdowns adopted in different locations, and additional problems associated with disruptions in international transportation and customs offices. In the service area, airlines and tourism have been dramatically affected. WTO estimates that the volume of world trade will decline between 13 and 32 per cent in 2020 (World Trade Organization, 2020). The disruption in value chains may be permanent, and thus the recovery is likely to be much weaker than it was after the North Atlantic financial crisis,

or even incomplete. In turn, some commodity prices have collapsed, notably energy products (especially oil), and to a lesser extent base metals, with agricultural goods experiencing a mixed pattern (World Bank, 2020). This means that, in value terms, the decline in global trade will be much stronger.

It may be worth emphasizing that there have also been positive developments in international trade in recent years. They include the Trans-Pacific Partnership, which was launched despite the United States withdrawing from the agreement. To this we could add the recent agreement, in November 2019, among fifteen Asian countries to constitute the Regional Comprehensive Economic Partnership, which promises to be the largest free trade area in the world, and which would be ratified in 2020. The agreement includes Australia, China, Japan, New Zealand, the Republic of Korea, and the ten member countries of the Association of Southeast Asian Nations (ASEAN). India is expected to join in the future. The signing of the long-negotiated Strategic Partnership Agreement between MERCOSUR and the EU in June 2019 should be added to this list. However, this agreement is still pending ratification due to (i) the tense controversies between Brazil and France over Brazil's lack of protection of the Amazon forests; (ii) the possible objection by other European countries; and (iii) the tensions that could arise in MERCOSUR between the new Argentinian Government and Brazil.

The defense of multilateralism in trade—in particular the defense of WTO dispute settlement, including the Appellate Body—and the strong rejection to the use of unilateral trade measures must clearly be part of the global development agenda. There are also several outstanding issues on the WTO agenda that need to be addressed, particularly those relating to the effects of new technologies on trade, and the relationship between the trade and environmental agendas, as well as old issues, among which is the relationship between multilateral rules and those established by the plethora of bilateral and plurilateral free trade agreements. The agenda must also include, of course, compliance with international agreements by China and the United States.

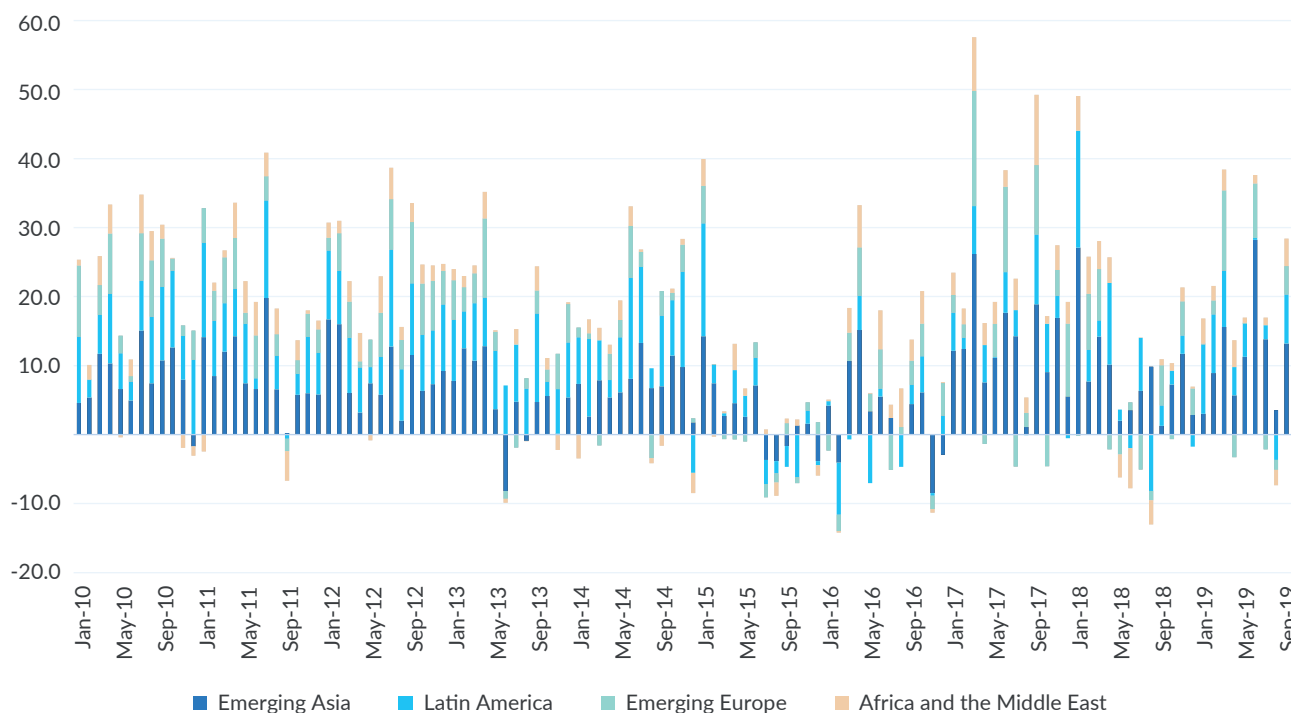
In China's case, intellectual property commitments are critical—although in this regard it would be worthwhile to renegotiate some of the regulations that are burdensome for developing countries, an issue on which I will not focus in this chapter.

FINANCIAL VOLATILITY⁵

As explained by an extensive body of economic literature, volatility is inherent in finance.⁶ The boom-bust cycles of external financing to developing countries are a reflection

of this fact, and some of them lead to deep financial crises.⁷ These boom-bust cycles have several elements in common across the developing world, particularly among the emerging economies. However, their intensity has depended on the degree of openness different countries have to international capital flows; and, during crises, the intensity and length of the “sudden stop”⁸ of financing has depended on the way international financial markets perceive the risks faced by different regions and countries. In some cases, these cycles have coincided with broader global finance events.

Figure I.3
Portfolio flows towards emerging economies, 2010-2019
(Billions of United States dollars)



Source: Institute of International Finance.

⁵ For a more extensive discussion of the issues analysed in this section, see Ocampo, 2017.

⁶ The classic study of this topic is Kindleberger, 2011. See also Reinhart and Rogoff, 2009.

⁷ Some early experiences are those of the Southern Cone countries of Latin America that had some of the first uses of financial liberalization in the second half of the 1970s. See, in this regard, the classic essay by Díaz-Alejandro, 1985.

⁸ This is a term widely used in the literature on this issue, following the work of Calvo, 1998.

Since the 1970s, emerging economies have experienced four boom-bust cycles of external financing, to which the current turmoil associated with the COVID-19 crisis must now be added. The first was the boom in syndicated bank lending in the second half of the 1970s, which was enhanced by the recycling of petrodollars, followed by the debt crisis of the 1980s of Latin America and some other emerging economies. The second boom started in the early 1990s, and its main source was the international bond market; it coincided with a boom in foreign direct investment, which has since become a more stable form of financing for emerging and developing countries. This boom was interrupted by crises in several East Asian economies in 1997 and, particularly, by the Russian moratorium of August 1998. The third cycle was part of the 2003-2007 global financial boom, which included significant flows towards the domestic bond markets and stock markets of emerging economies. It was interrupted by the North Atlantic financial crisis, but in contrast to the previous two periods of sudden stops, this one was relatively short, largely because of the strongly expansionary monetary policies adopted by the central banks of major developed countries.

The fourth boom began in 2010. Figure I.3 shows the behaviour of portfolio flows towards emerging economies, which have been directed mainly to the domestic bond markets and secondarily to equities. It is interesting to note that the 2011-2012 eurozone crisis had limited effects on these flows. The same can be said of the shift towards a less expansionary monetary policy by the United States Federal Reserve (Fed) in 2013. The effect of China's large capital outflows in the second half of 2015 and early 2016 had broader effects, as well as the financial volatility of flows towards emerging economies in 2018-2019. This volatility has strongly affected major emerging economies—Argentina, Brazil, the Russian Federation and Turkey, among others—but there was no widespread and prolonged interruption of external financing towards emerging

economies, as happened during previous crises. On the contrary, attacks on individual economies have been very diverse, and many countries have continued to enjoy good access to external financing.

It should be noted that these cycles have also been reflected in the evolution of the risk margins and bond yields of emerging economies. The most dramatic increases in risk margins occurred during the crisis of the late twentieth and early twenty-first centuries, especially since the Russian moratorium of August 1998. In turn, the sharpest fall in risk spreads took place during the 2003-2007 boom. In turn, risk margins were only affected for a short period during the North Atlantic financial crisis, as they returned to moderate levels in early 2010, albeit higher than those that had prevailed before the crisis. Since 2010, risk margins have fluctuated, but within a more moderate range than had been typical in the past, except for the most affected economies.

The COVID-19 crisis also generated major global financial disruptions, but the massive intervention of developed countries' central banks (particularly of the Fed) were successful in moderating the financial collapse and actually generated a partial recovery of financial markets.⁹ The crisis also initially generated the worst outflows of portfolio capital from emerging economies in history,¹⁰ but there have been signs of recovery in the emerging countries' bond markets since mid-April 2020. However, many uncertainties remain and are associated with those that relate to the fears that the recovery from the collapse of economic activity may face major setbacks.

In order to address this volatility, the IMF adopted its “institutional view” on capital account liberalization in 2012, which holds that liberalization is not suitable for all countries at all times, and when it is adopted, it must be gradual and planned (International Monetary Fund, 2012). Capital account management is therefore considered to be

⁹ See International Monetary Fund, 2020b, chap. 1.

¹⁰ See Brooks and Fortun, 2020.

a policy tool under various conditions, as part of a broader package of macroprudential measures, and consistent with the overall macroeconomic policies.

The IMF also launched a new financing policy in 2009-2010, whose most important elements were (i) the creation of a contingent and preventive credit line, the Flexible Credit Line (FCL), which is not subject to ex ante conditionality; (ii) duplication of other credit lines (including the most traditional stand-by facility), and the creation of other facilities of a preventive nature for countries that do not meet the requirements for access to the FCL; (iii) a broader set of credit lines for low-income countries; and (iv) a new rule indicating that disbursements cannot be curbed if any of the structural conditions are violated, which implies that they can only be stopped if macroeconomic conditions are not met. The latter conditions must, however, be those considered critical to achieving the objectives of the agreement, following the principles adopted in 2002 after great criticism of conditionality arose during the East Asian crisis (International Monetary Fund, 2002).

It should be underscored that the FCL has been used by only three countries: Colombia, Mexico and Poland. The lack of demand for this facility by East Asian economies has been a significant issue, despite the crises that some of them have faced, and reflects the stigma associated with IMF programmes, which continues to be severe in that part of the world. The other credit facilities have been used by a broader set of countries, and despite the changes in the associated rules, their conditionality has continued to be a subject of controversy and major political repercussions in recipient countries.

A key issue that has long been in the debate is how to secure the resources that the IMF has to fund its programmes. The most complex issue has been the negotiation of quotas, which have historically lagged behind the growth of the global economy and, in particular, of private capital flows.

The negotiation that took place between 2006 and 2010 led to a doubling of the quotas and a modest redistribution in favour of emerging and developing economies (3.9 per cent of the quotas). However, this agreement only became effective in 2016 due to the considerable delay for its approval by the United States Congress. The new quota negotiation, which should have taken place in 2019, failed due to opposition from the United States, and will only return to the agenda in 2023. Meanwhile, resources provided from the countries to the IMF through arrangements to borrow and different credit bilateral lines—a mechanism that is not truly multilateral—are expected to be maintained.

Additionally, one of the major absences in the debate has been the possibility of using the issuance of Special Drawing Rights (SDRs), the only truly international currency, as a financing mechanism. SDRs were included in the IMF Articles of Agreement in 1969, but have been significantly underutilized. The last issue, equivalent to \$250 billion,¹¹ was made in 2009 as part of the measures to deal with the North Atlantic financial crisis, together with a smaller allocation of 1997 that had not been effective. However, nothing has been done to ensure regular emissions of SDRs, nor to correct the main flaw of this mechanism—to maintain parallel accounts of SDRs and regular resources, which prevents the former from being used to finance IMF programmes.¹² This would be possible if unused SDRs held by countries were considered as deposits from the countries in the Fund, which the organization could then use to finance its credit programmes.

Compared to the actions adopted by the IMF to manage the North Atlantic financial crises, those adopted during the COVID-19 crisis have been very limited. The most important ones relate to the doubling of IMF emergency financial facilities (the Rapid Financial Instrument and the Rapid Credit Facility), which provide, in the short term, up to the equivalent of a country's quota. These credits can be approved fast and have no ex ante conditionality. They are

¹¹ All dollars are expressed in United States dollars, unless otherwise noted.

¹² The classic proposals to do so are from the outstanding International Monetary Fund economist Jacques Polak. See, in particular, Polak, 1979.

expected to be used by about 100 countries. There have also been efforts to guarantee the funding for IMF programmes for up to one trillion dollars using arrangements to borrow and bilateral credit lines. Some debt relief actions for low-income countries have also been agreed by the IMF and the Paris Club. However, there has been no decision (or even discussion) on speeding up the increase in the quotas; the proposal for a major allocation of SDRs was vetoed by the United States; and there has been no attempt to limit capital outflows and adopt a debt standstill or other debt relief measures for emerging economies.¹³

It should be noted that, besides the IMF, there are three major instruments of monetary cooperation among emerging economies. The oldest and most widely used is the Latin American Reserve Fund (FLAR, according to its acronym in Spanish), which has eight members. The second is the Chiang Mai Agreement, launched after the East Asian crisis, which includes the ASEAN countries and three additional Asian partners (China, Japan and the Republic of Korea). According to several analysts, a basic reason why the Chiang Mai Agreement has not been used is that it requires an IMF programme beyond a certain level of resource use, thus facing the stigma associated with Fund conditionality—a criterion that is absent in FLAR financing. It is paradoxical that the same link to IMF programmes beyond a certain level of financing was introduced when the third mechanism, the BRICS Contingency Reserve Arrangement, was created in 2015.

Unlike balance-of-payments financing, there is no multilateral mechanism to renegotiate sovereign debts with private creditors. An alternative to this would be to create a multilateral institution, which could be similar to the Paris Club, where debts with official creditors are addressed. The renegotiation of sovereign debts with private institutions therefore continues to depend on ad hoc mechanisms with bond holders or creditor banks. Following Argentina's loss

of lawsuits in New York courts from creditors who had not participated in its foreign debt renegotiation of 2005 and 2010, an agreement was reached in 2014 in the IMF Board and the consensus of the main relevant private association (the International Capital Market Association) to introduce new clauses regarding the issuance of bonds that allow debt consolidation, and to modify the so-called *pari passu* clause, which was used by creditors that did not participate in the Argentinian renegotiations to sue that country. The United Nations also approved some principles for the restructuring of sovereign debts in 2015.

Regarding these issues, the agenda of emerging and developing countries should include the strong defense of macroprudential regulations to manage capital flows—together with a well-financed IMF that can offer more ambitious lending instruments—and the more active use of SDRs as a financing instrument. The major new policy instrument could be the swap mechanism suggested by IMF technical staff in 2017 and the group of experts convened by the G20 in 2018.¹⁴ This must be accompanied by the creation of new mechanisms of regional and interregional monetary cooperation among emerging and developing countries, as well as by the more active use of existing arrangements. The creation of a multilateral institution to facilitate the restructuring of sovereign debts with private creditors would be an additional element. Such a mechanism could be managed by the United Nations or the IMF. If the IMF is the managing entity, the mechanism should guarantee full independence of the corresponding arbitral authorities in relation to the Fund's Board.

Finally, everything must be accompanied by a number of institutional reforms: the replacement of the G20 by a truly representative global body; changes in IMF and World Bank governance that broaden the participation of emerging and developing countries; and rules to ensure that the heads of these organizations are subject to selection

¹³ For a broad reform agenda to face the current crisis, see Gallagher and others, 2020.

¹⁴ International Monetary Fund, 2017, and G20 Eminent Person Group on Global Financial Governance, 2018. The creation of the Short-term Liquidity Line in April 2020 reflects this call, but it would be available only for countries with strong policies. It also provides much less resources than the Flexible Credit Line created in 2009, which the same group of countries can use. For this reason, the new facility may never be used.

processes based exclusively on the merits of the candidates - a fair competition in which citizens from all countries can participate.

INTERNATIONAL TAX COOPERATION¹⁵

One of the central topics of the global economic agenda in recent years has been the strengthening of international tax cooperation. The outrage in the world over the low or zero taxes paid by some of the largest multinational companies led to major debates in several parliaments around the world, and to strong criticism by non-governmental organizations and the media. In the face of this outrage and its own fiscal needs, in 2012, the G20 entrusted the OECD with the responsibility of designing alternatives aimed at ending these abuses. To facilitate the participation of developing countries in this process, the OECD created the so-called Inclusive Framework, in which over 135 countries are now members.

Tax avoidance and evasion are extremely serious problems. In the United States, for example, 60 of the 500 largest companies—including Amazon, Netflix and General Motors—did not pay any taxes in 2018, despite a combined \$79 billion profit, because the current system allows them to do so in a completely legal way. They do so through complex schemes, but the principle is very simple: they play with their network of subsidiaries like pieces of a chess game, each of which is considered an independent company for tax purposes, to declare profits in jurisdictions where taxes are low or nil, even if the company does not exert its main activities there. To this end, they use transfer pricing: the parent company sets transaction prices among its subsidiaries to ensure that profits are recorded in low-tax countries, or even in tax havens. Although in principle such prices should be comparable to other market transactions, this is impossible in practice when transactions involve intangible assets, particularly those related to intellectual

property rights and trademarks.

These practices, together with the desire to attract investment from multinationals, have also generated tax competition among countries seeking to reduce taxation in order to attract investment, or to prevent profits made in the country from being diverted. It should be added that, with the accelerated digitization of economies, the quantities diverted have steadily increased. As a result, an estimated 40 per cent of multinationals' profits are diverted to low- or zero-tax countries or locations, and every year developing countries lose at least \$100 billion in tax revenues. Added to this is the diversion of taxes on high personal incomes to tax havens. The adverse effects of all these practices on income inequality are monumental, both domestically and internationally.¹⁶

In-depth solutions should include three elements, as proposed by the Independent Commission for the Reform of International Corporate Taxation (ICRICT). The first element is a consolidated taxation of multinationals, which would then be considered as a single firm for tax purposes. This would imply that their revenues would be consolidated and the use of transfer pricing would be eliminated. Global profits and associated taxes would be allocated geographically according to objective and non-manipulative factors such as sales, employment, natural resources use, and digital users. The second would be the introduction of a global minimum effective corporate income tax rate, which could be 25 per cent, which is the current average rate of OECD countries. Domestic rates, as well as those applicable to personal income, would be subject to national legislation. The third element would be to create a single global asset registry, both of physical and financial assets, with information on individuals who are final beneficiaries. It could be built based on real estate and financial property registries already existing in many countries.

¹⁵ This section makes extensive use of the analysis by the Independent Commission for the Reform of International Taxation (ICRICT), whose documents are available from <https://www.icrict.com/resources/icrict-documents>. This Commission is supported by the work of several non-governmental organizations that work on tax issues.

¹⁶ Besides analyses by the Independent Commission for the Reform of International Corporate Taxation, see FitzGerald and Siu, 2019, and Saez and Zucman, 2019.

The OECD proposals to address these problems are framed in the project that came to be known as base erosion and profit shifting (BEPS). Its first results, announced in 2015 and 2016, were the improvement in the exchange of information among tax authorities and the obligation of large multinationals to submit reports of where they are making their profits and paying taxes, country by country. Unfortunately, this obligation only applies to very large multinationals, and the reports are not available to the public, depriving civil society and the media of an essential transparency tool.

The second initial outcome of the BEPS process was the improvement in cross-border tax rules through the Multilateral Convention to Implement Tax Treaty Related Means to Prevent Base Erosion and Profit Shifting, which effectively amends existing bilateral treaties.¹⁷ Among the new rules introduced by the Convention, two should be highlighted. The first is a standard clause for abuses to the treaty, which prevents tax avoidance through further testing of business activities (“main purpose test”), allowing tax authorities to assess the economic substance of a transaction and the revenue generated by it, and to challenge the characterization made of it by the multinational if the relevant tax authority considers that the transaction’s attribution to a particular company was done to avoid paying taxes. This rule is particularly relevant for transactions involving intangibles. The second is the revision of the characterization of an establishment as “permanent,” that is, of the rules of economic nexus, which expand the authorities’ capacity to tax economic activities that take place within their borders. This expanded economic nexus rule represents a modest but welcome step forward in shifting tax power to the countries where the economic activities actually take place. Unfortunately, the United States did not sign this Convention.

On the other hand, the challenges posed by the digital economy are the subject of ongoing discussions based on the OECD proposals to the Inclusive Framework at the beginning of 2019 (BEPS 2.0, as it has been called),¹⁸ which must lead to new rules that would become effective in 2020. It is worth noting that, in the absence of an international consensus on the tax effects of the digital economy, some countries have opted for partial solutions. This is the case in France, where the turnover of certain digital services will be taxed. Others, such as Mexico, are considering forcing platforms such as Uber or Netflix to pay value added tax for the services provided in their territory. Although it is a good initiative to tax revenue that is out of reach today, it is impossible to compartmentalize digital enterprises and take them as the sole target of the reform, given that more and more companies are using digital technologies as part of their ordinary business practices.

The new OECD proposal is based on two pillars. The first is to clearly establish, for tax purposes, where profits of firms —and, particularly, of multinationals— are made and registered. In this area, however, the proposals are not sufficiently ambitious or equitable. According to the OECD proposals, the profits that would be redistributed internationally would be limited to the so-called residual part, which the organization differentiates from ordinary profits (“routine,” in terms of the proposal). This concept is inappropriate because the profits of multinationals are derived from their global activities. Even worse, this principle would only apply to very large multinationals in the consumer goods sector, and their allocation of these benefits to individual countries would depend solely on the volume of sales, excluding employment or other factors that would favour developing countries. The second pillar is a minimum effective income tax rate on companies worldwide, but without a specific proposal on the table.

¹⁷ See Organization for Economic Cooperation and Development, 2016. This convention was opened for signature on 24 November 2016 and became effective on 1 July 2018.

¹⁸ OECD/G20 BEPS Project, 2019.

One of the interesting elements of the recent debate has been the active participation of the Intergovernmental Group of Twenty-Four on International Monetary Affairs (G24), the main grouping of developing countries in discussions at the IMF and the World Bank. This debate has now been expanded to tax negotiations. These countries' points of view have been linked to the first pillar, for which they have proposed a system that ensures that companies undertaking digital activities have an economic (and tax) presence in an individual country, despite not having a physical presence, and that the system adopted be equitable and simple (for example, by estimating profit margins on the value of transactions performed, according to the type of transaction). They have also opposed the proposal to create a mandatory arbitration system for tax disputes, and propose that the focus of the new system should be on dispute prevention, maintaining national competencies when disputes occur. However, the G24 has no proposals on the second pillar, and objects that adopting an international single rate would reduce the capacity of developing countries to provide tax benefits in order to encourage investment. On this issue, it should be noted that the existing evidence on the ability of these incentives to generate more real investment is debatable, according to IMF research.¹⁹

Finally, it is worth highlighting that the governance structure in this field is also worth further discussion. Unfortunately, despite their name, developing countries do not play on equal terms in the "Inclusive Framework," not just because major developed countries have more human, political, and financial resources to make their views prevail, but also because the secretariat of the OECD is made up primarily of experts from these countries. Therefore, it would be desirable to revert to the proposal presented by the Group of 77 at the 2015 Addis Ababa Conference on Financing for Development: to give the leadership on this issue to the United Nations through the Committee of Experts on International Cooperation in Tax Matters, which would then

be transformed into a multilateral body backed with strong technical support.

CONCLUSION

In 2015, the United Nations launched three major global programmes of action: the Sustainable Development Goals (SDGs), the Addis Ababa Action Agenda, and the Paris Climate Agreement. These programmes represented a major advance for the global community. However, this development agenda, possibly the most ambitious in history, has faced in recent years the weakening of multilateralism and major uncertainties surrounding the world economy, to which the dramatic health, economic and social effects of the COVID-19 pandemic have now been added.

The uncertainties include all areas analysed in this chapter. The expected slowdown in growth of the world economy has worsened with the pandemic, which has generated the worst economic crisis since the Great Depression. International trade was already experiencing the effects of the trade wars and the collapse of WTO dispute settlement, and is now facing the disruption in value chains and several commodity markets. It will also experience the strongest contraction since the 1930s, which may have some permanent features. Although the effects generated by the COVID-19 crisis on financial markets have been moderated by the massive interventions of the developed countries' central banks, global cooperation in this area has been much weaker than that experienced after the North Atlantic financial crisis. International tax cooperation has continued to advance, but current negotiations are likely to have frustrating results. There are also insufficient efforts to mitigate adverse climate change trends—an issue not analysed here.

To reverse these massive adverse trends, the United Nations system must become the forum for major political agreements—agreements that are essential to meeting the ambitious development agenda agreed in 2015, notably the

¹⁹ See, in particular, International Monetary Fund, 2015.

SDGs. Global political agreements must include (i) stronger mechanisms of cooperation with emerging and developing countries, not only in the health area but also to manage the negative economic and social effects of the COVID-19 crisis; (ii) renewed commitments to strengthening trade multilateralism, and to reversing the ongoing collapse of

international trade; (iii) an agenda for global monetary and financial cooperation at least as ambitious as that adopted after the North Atlantic financial crisis; and (iv) strong commitments to strengthen international tax cooperation, which is essential to guaranteeing the fiscal resources needed to manage the current crisis.

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CHAPTER II



Digital challenges for developing countries

by Jayati Ghosh



First High-level Advisory Board (HLAB) Meeting, New York, USA, 9-10 July 2018.

Photo credit: Mr. Michal Szymanski, UN DESA

Digital challenges for developing countries



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INTRODUCTION

The technological revolution that began in the late twentieth century is generally accepted to have fundamentally transformed economies, societies and even politics. Both the range and the speed of development of new technologies appear to be nearly unprecedented in human history, notwithstanding the many massive changes already brought about by technological advance, especially during the previous century. Consider the range of some of the frontier technologies that are seen as characterizing the Fourth Industrial Revolution: artificial intelligence (AI) software; artificial, augmented and virtual reality; advanced automation, robotics and machine intelligence; biotechnology and genetic engineering; blockchain; drones and autonomous vehicles; digital manufacturing; and so on. Some of these are being developed at a terrific speed, even when their actual adoption is more scattered, concentrated and uneven.

Obviously, these technologies can have huge potential for developing countries, to the point where they can enable countries to bypass or leapfrog some traditional

development hurdles and lower others. Improved communication services enable not just more interaction, but also much cheaper and more efficient transmission of crucial information that can benefit producers, distributors and consumers, and, of course, citizens more generally. The fact that production processes keep getting more efficient and result in newer and more affordable products can open up possibilities for more equitable access to such products, especially among the poor in developing countries. Similarly, unlike most standard technologies of the twentieth century, many of these newer production processes do not have significant economies of scale, which means that they can generate many new opportunities for small-scale producers across the world. Technologies can also transform the provision of essential services such as health and education—for example, by enabling cheaper, better and more easily accessible methods of medical diagnosis and treatment, and enabling more effective and lifelong distance learning. Perhaps most important, new technologies are crucially needed to cope with some of the most existential problems of our time, such as climate change and environmental destruction, by promoting green

energy sources and seeking cleaner and less extractive ways to produce and deliver goods and services. The current severe threat to health in the form of the COVID-19 pandemic also points to the possible benefits of using some of these new technologies. However, it must also be noted that the use of some technologies (e.g., tracking apps that trace the course of social interactions to identify the spread of infection, rather than relying on other means) is a more complex matter and could become a double-edged sword, because of concerns around privacy, monitoring, surveillance and data breach.¹

Obviously, therefore, contemporary technological change offers an exciting range of possibilities. Nevertheless, there are concerns at global, national and local levels about the implications of the nature and spread of these technologies, and the often unintended consequences of their adoption. New technologies are perceived to add to inequality, not only because of the fears of job loss, exemplified in the doomsday cry, “the robots are coming!” With new biotechnologies, such as cloning, there are safety and health concerns as well as ethical issues. With digital technologies, there are warnings about the control over data by large companies; privacy concerns; monitoring and surveillance; the enhanced chances of 360 degree concentration (vertical and horizontal monopolies) resulting from the wide-ranging power of platform companies; and the enabling of more tax avoidance by companies because of the growing role of intangibles in market values. For developing countries, some of these concerns are accentuated because of additional problems, such as difficulties in and constraints on technology transfer because of misuse of intellectual property rights; inadequate digital infrastructure and digital divides in the population that can reduce access to the benefits of such technologies; the possible inability to exploit new technologies because of the organizational and lobbying power of monopolies; and potential brakes

on export-oriented industrialization because of reshoring of production in developed countries. Both developed and developing countries also face entirely new issues in regulation and taxation for both large and small enterprises, creating new policy challenges.

In this chapter, I take as given the many advantages of the new technologies, particularly the digital technologies, since they are typically widely known, accepted and appreciated. Instead of reviewing these advantages, I consider some of the more widely discussed challenges, particularly for developing countries. I briefly examine only some of these challenges, beginning with employment; then the use of new technologies in public services, particularly the use of biometric identification; next, the debate about control over data and whether data localization is a feasible and desirable option; and finally concerns about monitoring and surveillance. The idea is to consider some of the issues and problems that are of special relevance to developing countries.

TECHNOLOGY AND THE JOBS SCARE

The fear of the disappearance of jobs has become prominent as more observers note that technology is in the process of transforming work—and dramatically reducing the need for some forms of human work. From the extremely gloomy prognosis of Schwab (2016) to the more nuanced but nonetheless discomfiting predictions of Frey and Osborne (2017) and the specific task-based assessments of Autor and Dorn (2013), there is a general sense that slow/stagnant employment generation—and even job loss—along with growing wage differentials could be blamed on production technologies that reduced the demand for less-skilled workers in particular. From 3D printing to robots that can increasingly perform not just some basic services but even more skilled activities (like those of accountancy and so on), the fear is that human labour will be increasingly displaced

¹ For example, the Aarogya Setu app promoted by the Government of India during the COVID-19 pandemic has been criticized for being non-transparent with regard to its source code, breaching personal privacy, having inadequate safeguards against data theft, and without any protocol for deletion of data. In any case, such tracking will only be of any benefit if it is part of a wider and extensive process of informing the public, testing, tracing and quick response with adequate medical care thereafter (Gowda, 2020).

by machines, and there will simply not be enough work to provide employment to all the people who need it.

However, discussion of the impact of technological progress on employment must have a broader perspective. First, it is important to distinguish between two types of technological change: (i) those changes that increase productivity and change the nature of economic activities; and (ii) those that do not necessarily increase productivity, but simply create enabling conditions for organizational changes in the way that goods and services are produced and distributed.

In the contemporary scene, the first kind of technological change certainly includes increasing automation, as well as a host of new developments in AI, biotechnology and other areas, which clearly reflect “creative destruction”. Obviously, these do involve the destruction of certain jobs in particular areas of activity. But there is little point in fighting against such advances or in trying to slow them down. Not only would that simply not work, it is not desirable. This does not mean that we should despair simply because technological development may displace much of human work; in fact, where it replaces arduous work full of drudgery, or makes it possible to do some things more easily, we should celebrate it. Of course, this is easier said than done when the immediate impact of job loss is extensive or hits particular types of employment in concentrated ways, so as to sharply increase inequality. The long historical sweep of Frey (2019) provides insights from the history of capitalism, showing that new technologies have affected particular types of workers very badly, and those workers have not been compensated—as hoped and expected, perhaps—through the expansion of productive opportunities in other sectors or over time. This renders adverse responses to such change hardly surprising. The current revolution seems to be no different in this respect. “Despite the promise of digital technology to flatten the world, it has done the opposite. Since the dawn of the computer revolution, new jobs have overwhelmingly been clustered in cities with skilled populations, while automation has replaced jobs in old manufacturing powerhouses” (Frey, 2019, p. 26).

Job destruction/concentration is not something that should be blamed on the technologies per se, but rather on the socioeconomic context (and the broader sway of fiscal austerity that prevents the public spending that would expand employment and increase people’s welfare). As Acemoglu and Restrepo (2019) note, nothing about the new technologies inherently requires slow employment growth and declining wage shares. Rather, AI and other technologies could be deployed to restructure tasks that not only raise productivity but also create new activities. For example, such technologies as real-time data collection and analysis could allow teachers to individualize pedagogy for each student or personalize health-care services delivered by doctors and nurses.

The point is to distinguish between the impact on specific activities and jobs, and the aggregate level of employment—the latter being much more a function of macroeconomic policies and processes than of technology per se. Essentially, there are still many types of necessary or desirable activities that can be generated in the most technologically advanced economy; however, market forces on their own may not result in expansion of these activities. The greater surpluses generated in more productive activities should be transferred to demand for more employment-intensive activities that enhance the quality of life in society. State intervention is required to transfer these surpluses and encourage new and more employment-intensive activities, either through direct public investment or through fiscal changes that incentivize these activities. Therefore, it appears that the great misfortune of the current technological revolution, which is otherwise quite full of promise, is that it is occurring in a neoliberal era when the possibilities of positive state intervention have become so constrained.

Precisely what are these other activities that could generate employment? Many would be in service industries, both old and new—including care activities in which the human element is essential—as well as creative industries and knowledge and entertainment activities, and a range of other services. Care work in particular is likely to become an

increasingly important and necessary part of future work, given projected patterns of demography and morbidity. Care work is fundamentally relational: it requires both cognitive and social skills that can respond flexibly to changing stimuli and contexts. Therefore, technology, however sophisticated, cannot replace human activity; at best it can reduce some of the drudgery and the repetitive nature of tasks, freeing workers to engage in the human interaction so essential to good care services. In its broader definition, “care work” means not just relational care (e.g., care of the young, the old, the sick, the differently abled), but also all activities that contribute to the existence and well-being of others, which includes a wide range of what are commonly known as “household tasks”. Such work is currently provided along a broad continuum from relatively highly paid skilled professionals (doctors, for example) to lower paid workers with skills that are less socially acknowledged (such as nursery school teachers whose work is actually very demanding and requires substantial skills and training to be effective) to unpaid labour (much of the work performed largely but not solely by women and girl children within households and local communities). In most developing countries, care services are massively underprovided, underpaid and undervalued in terms of their enormous contribution to human well-being and social cohesion. Recognizing and redistributing such work and according it dignity and proper remuneration is not only important, but will serve as a major driver of employment generation in the future, even as it improves the quality of life for all.

In addition, new jobs that could potentially be generated by the surpluses created by productivity increases in some sectors could also include certain types of production jobs (organic agriculture, for example, or more craft-driven handicraft production that is increasingly discovering new niche markets) that become more valued by society and require more human labour by their very nature. Further, a wide range of services that result from the “creative economy” also fall into this category: entertainment industries, artistic and creative work, and so on—all of which improve the quality of life, which is surely what economic

activity should be all about. As economies grow, people also look for more variety, not only in material consumption but also in how they spend their time. The creative industries fulfil major human needs for self-expression and appreciation, and they generally contribute to better quality of life. Once again, new technologies here are enablers, not substitutes.

Many of the activities mentioned above actually require more people working at them to deliver better quality. So standard indicators of productivity in such work are not truly informative and should not be used to assess it. Insofar as more people being engaged in these activities results in improved quality of life, we should welcome the potential for such employment that is, effectively, funded by increases in productivity in other supposedly more “productive” activities.

It should be evident, though, that this transfer of surpluses generated by technological advances is not an easy process, and it is definitely not naturally created by market forces. Rather, the processes of capitalist market workings are more likely to create mass unemployment and greater inequality if left to function unchecked—and this is precisely the reason why technological change is generating such pessimism about job creation. Managing this process for the greater public good definitely means greater public intervention, which in turn needs to occur through more democratic and accountable behaviour by States. This can happen through more public spending that will generate more employment directly, by providing goods and services that improve the quality of life for people in the society; and indirectly through the positive multiplier effects of the initial spending that in turn increases demand in that economy. The process of encouraging expansion of labour-intensive activities that improve quality of life, rather than only gross domestic product, can also be pushed by States through fiscal policies that change the market incentives for private players.

Another point that should be noted is that manufacturing will inevitably be less of an employment-generator than it has been in the past. As has been noted by the United Nations

Conference on Trade and Development (UNCTAD) (2017, chap. III), the threat is not necessarily to manufacturing jobs across the spectrum in all developing countries, since what is technically feasible need not be economically viable—economic viability depending not just on the potential ease of automation but, crucially, on the relative price of labour. However, even developing countries that do not adopt the most labour-saving technologies may be at risk from countries that do so, and the benefits of export-oriented industrialization need not include significant increases in numbers of manufacturing workers. So strategies of development also need to change accordingly.

All this means that dealing with the impact of such technological change requires a change in the currently conventional mindset of policymakers across the world; but this impact is still something that is potentially positive and should be welcomed if societies (and their Governments) are able to shift strategies and generate processes so that everyone can benefit.

However, the second type of technological change noted above does not really increase productivity, but simply creates enabling conditions for changes in the way that goods and services are produced and distributed. Such organizational changes are exemplified by what is now called “Uberization” and the growing gig economy, whereby improvements in information and communications technology (ICT) allow “aggregators” to emerge who simply link up providers and buyers of goods and services, and apparently eliminate middlemen. It is interesting that many of those who worry about the implications of new productive technologies that will displace labour are much less concerned about such technologies; they even celebrate them. This is because there is an immediate effect on prices, as the many who have benefited from cheaper taxi services because of Uber or reduced hotel costs because of Airbnb can attest. However, such reduction of costs and prices does not come for free: it occurs because workers effectively become the direct producers, contracting out their goods or services to customers enabled by new technology. The services end up being provided at what are effectively “piece-rate wages”

for the workers concerned. This in turn means that a whole range of costs (those associated with work safety, physical conditions of work, and other forms of security and social protection) are borne by the workers themselves, who also have to deal with all the production risks and possibilities of fluctuating demand. For example, in a study of working conditions and remuneration in English-speaking microtask platforms that surveyed 3500 workers living in 75 countries around the world, Berg and others (2018) found that, even for those working for successful companies, compensation for crowdwork is often lower than the minimum wage and is highly variable, forcing workers to manage unpredictable income streams. Inevitably, the standard labour protections of an employment relationship are completely absent as these workers are effectively seen to be self-employed.

We know that throughout history—as well as now, when it is so common in production chains in manufacturing across the developing world—piece-rate work has been a classic vehicle for the greater exploitation of workers. Such workers try to ensure sales by driving down their own prices or accepting lower prices offered by buyers, and then work longer hours to compensate or to ensure higher incomes. They face all the risks of production and market variability. They often take on multiple activities in order to diversify and increase their incomes. And since they are effectively self-employed (even when they are in effect dependent subcontractors of much larger companies), they are responsible for their own safety at work, their own social security, and all else that would normally be covered by employers. It is ironic that much of this kind of reorganization of work is being treated as a major technological advance, when in effect what it is doing is reviving the putting-out arrangements that were typical of early capitalism.

In the contemporary context, whether intentional or not, these ramifications of the gig economy are also mechanisms for slipping through regulatory cracks and allowing the aggregators to avoid bearing any responsibility for the protection or well-being of workers. So, unlike the creative destruction of the first kind of technological change, which has positive effects even when it displaces workers, this

kind of disruptive organizational change enabled by new technology is neither inevitable nor ultimately that desirable. This process is certainly something that can be tamed and made more socially palatable through appropriate regulation. What is more significant from the point of view of addressing these problems is that they do not stem from the technology per se but from the organizational arrangements of such work, which are enabled but not necessitated by such technology. “None of these negative outcomes is inherent [in] the concept of crowdwork, or to microtask work in particular. On the contrary, it would be possible to reconfigure the terms of microwork in order to improve conditions for workers” (Berg and others, 2018, p xviii). The idea that aggregators, or those who subcontract out several parts of the production process, are not employers and therefore not responsible for the conditions of the actual workers involved, is something that must be fought. Regulatory mechanisms must be put into place to ensure that workers’ rights and protection are not lost as a result. Interestingly, enforcement of regulations in many instances may well be facilitated and made easier by the same technologies that have created these changes in the first place.

The brief conclusion is that, despite current concerns about technological change destroying jobs, prospective threats to employment such as this have occurred throughout history and should not scare us as long as societies can provide new job opportunities. Governments and societies need to embrace the new productive possibilities—which will also be critical in helping us to cope with and address existential challenges like those posed by climate change—and consider how the job losses driven by new technologies can be effectively countered by promoting new activities that contribute to quality of life. The employment potential for such activities is actually massive, but needs appropriate policies, the creation of which in turn requires more official imagination and ambition, pushed by public demand.

TECHNOLOGY, PUBLIC SERVICE PROVISION AND THE USE OF BIOMETRIC IDENTITY

There is no question that new technologies have a profound impact on services provision; in fact, the entire spectrum of services could be impacted. As noted above, these technologies can reduce costs; increase the effectiveness of and widen access to a range of services, including in health and education; and determine eligibility criteria for particular schemes and incentives, which makes them particularly attractive to Governments. Conversely, there are several dangers associated with increasing reliance on such systems, dangers that do not necessarily outweigh the many benefits, but are still often underestimated.

The rapid increase in the data-driven administration of various public programmes across the world is based on the notion that it provides greater efficiency and reduces costs, especially by making the process of targeting of services and benefits to the more deserving or needy more efficient. However, as Eubanks (2018) has pointed out so eloquently, technologies that are typically directed towards welfare programmes and poverty reduction are not neutral. Indeed, “the new regime of data constricts poor and working-class people’s opportunities, demobilises their political organising, limits their movement and undercuts their human rights” (Eubanks, 2018, 10). Critical decisions such as who gets food, who gets basic housing, which families are broken up or allowed to stay together, are made by algorithms that appear objective and purely technocratic, when in reality they may be laden with value judgements that are so embedded into the system that they do not appear up front easily. “When an efficient technology is deployed against a despised outgroup in the absence of strong human rights protections, there is enormous potential for atrocity. Currently, the digital poorhouse concentrates administrative power in the hands of a small elite. Its integrated data systems and digital surveillance infrastructure offer a degree of control unrivalled in history” (Eubanks, 2018, p. 200).

There are also concerns about the ways in which new technologies are deployed to monitor the delivery of services. While these are typically designed to ensure greater accountability, they can end up changing the very nature of relational work, such as in the care services. Excessive rigidities and very stringent standards on the number of recipients or activities to be performed not only can make the process of care delivery less mindful, more stressful and lower in quality from the point of view of caregivers, they can also devalue and undermine the specific nature of care activities.

Another common error is to view technology as a silver bullet that can transform the nature of public service delivery without taking adequate account of the sociopolitical and economic contexts (with their associated power imbalances) in which such delivery occurs. The attempt by the Government of India to launch Common Service Centres under the Digital India initiative provides a telling example. These are front-end delivery points for a range of citizen services in parts of rural India, meant to be run by private village level entrepreneurs (VLEs). While such centres could have immense potential in altering both government front-end service delivery and social/power relations in villages, a study of such centres found that "several promises of timely and low-cost delivery of government services were not met and users faced several hardships in applying for various services... inefficiencies, corruption, and hardships in accessing government and administrative services seem to continue" (Sabhiki and others, 2019). Indeed, in some cases it was found that elite capture of the running of such centres could actually reproduce and exaggerate the citizen-state divide.

In other words, a technological fix cannot be a solution to a socioeconomic or power inequality, which has to be addressed directly. Similarly, technology cannot substitute for the quality of the human element in the provision of critical services in health and education, or in care services like therapy—all of which ultimately require caring and knowledgeable attention on the part of trained providers. A note of caution in this regard comes from someone who

was himself involved in attempting to use new technologies to improve school education in India: "[T]echnology never made up for lack of good teachers or principals. Indifferent administrators didn't suddenly care more because their schools gained clever gadgets; undertrained teachers didn't improve just because they could use digital content; and school budgets didn't expand no matter how many 'cost-saving' machines the school purchased. If anything, these problems were exacerbated by the technology, which brought its own burdens" (Toyama, 2015, pp. 6-7).

Another emerging concern comes from the attempt to use new forms of biometric identification to determine the "rightful" recipients of public services or beneficiaries of public programmes. The siren call of biometric identification seems to be irresistible for many Governments across the world. From passports and visas to national identities, from recognition for purposes of security to benefit transfers, States are using an ever-wider range of biometric information to establish "true" and "unique" human identity. The range of techniques used is also growing, from fingerprints and handprints, to iris scans to more sophisticated facial recognition technology, voice recognition, vein mapping, DNA and recently even brain waves.

It is not just Governments who have wholeheartedly embraced these identification methods: many more products and services (from personal devices to financial transactions to travel facilities) enable or even require biometric identification, and people willingly accept it because of its greater simplicity. Instead of having to remember multiple passwords and going through often complicated two- or three-factor identification, simply using a finger swipe or even a gaze to open various devices and accounts is so much more convenient. It also appears to be less vulnerable to hacking. After all, others could possibly access your password, but how could they replicate your essential biological features?

Greater simplicity and apparent reliability explain the popularity and proliferation of biometric identification technology. But as with so much else nowadays, we tend to underestimate the risks and vulnerabilities associated with

immediate convenience. The experience of the Aadhaar, the “unique” Indian identity number based on biometric characteristics, encapsulates many of these problems.

Data security is a key concern. Data are vulnerable and can be hacked during the process of enrolment, during transmission, and while they are stored. When biometric enrolment occurs, there can be fraud or even honest human errors if the procedures for such data collection are not adequately established or implemented and then cross-checked. In India, official haste to enrol a large population quickly meant that biometric data collection was outsourced to a range of smaller service providers with mobile machines. In many cases, this has led to errors, which become a nightmare to correct and can lead to major difficulties for people. Sometimes errors happen because of sensor inaccuracy; even slight variations in how a fingerprint scanner is touched or the position of the eyes for an iris scan can create different images, which may not subsequently match. Other mistakes are simple human errors, like misspelling names or mis-stating age or address.

In addition, bodily changes over time (for example, to fingerprints, especially for those engaged in manual labour) mean that for many biometric indicators, there is never a perfect match. But small discrepancies can lead to denial of identity, with often very serious consequences. There are multiple cases of loss of entitlement² in India, with people being denied their food rations and workers at public works programmes not getting their due wages because of such biometric mismatch.

All this can happen without outright fraud, but even that is quite possible. One example of how fraud could be perpetrated is that of the synthetic fingerprints, like the frighteningly accurate MasterPrints created at the University of Illinois, which have effectively matched real fingerprints. Police in Gujarat, India, investigating theft of

food grains from the public distribution system, recently found more than 1100 casts of beneficiary fingerprints made on a silicone-like material. These were used to illicitly withdraw food rations, but they could also be used on locked phone apps, bank accounts that accept fingerprints, and many other systems. Such “spoofing” of fingerprints is potentially huge because people leave their fingerprints on everything they touch; catches like this could be the tip of an iceberg.

Then there are the risks in transmission and storage of the data. Typically, biometric data are moved to a central storage database after collection. Data in transit have to be encrypted, but these encryptions can be (and have been) hacked. Storage, whether in local or global and cloud servers, also creates vulnerability. In India, there have been numerous reports of leakage from the Aadhaar database,³ which is even more vulnerable because of the many public and private agencies that have access to it. These are serious concerns, because once the data breach has taken place, it cannot be undone. Furthermore, the more systems that are linked to it, the greater the danger, because a hacked profile can be manipulated and misused in all sorts of ways, putting a person's reputation, finances, legality and social interaction all at risk.

Aadhaar in India may be an extreme case. Thus far, there has only been official denial, rather than any serious attempt to fix the problems and adopt protocols and procedures that would reduce data leakage, fraud and errors. These are emerging issues in many developing countries (such as Brazil, the latest to push for a national biometric database) as they rush to adopt this technology without sufficient checks and precautions. Indeed, biometrics pose significant and complex security risks that can impact the future of humanity; however, we are still far too complacent about it.

² See Vidhi Doshi, “India's biometric ID program was supposed to end welfare corruption. But the neediest may be hit hardest”, Washington Post, 25 March 2018.

³ See Zack Whittaker, “Indian state government leaks thousands of Aadhaar numbers”.

The control over data

The control of major digital and platform companies over the data acquired in the process of their operations has become a major issue in both developed and developing countries. The phrase “data is the new oil” is now a cliché, drawing attention to the manifold uses that can be made of such data, not only for marketing and targeted advertising, but for other less salubrious purposes, such as influencing and manipulating political outcomes, targeting individuals based on particular criteria, enabling surveillance by both States and private agencies, and so on. For many of the largest digital companies, data are now the biggest source of revenues and profits.

One fallout of data’s burgeoning value is related to the growing role of intangibles in value addition, and the associated ability of multinational companies to indulge in base erosion and profit shifting (BEPS) practices that minimize their tax liabilities. The International Monetary Fund has estimated that countries of the Organization for Economic Cooperation and Development may be losing \$400 billion in tax revenue each year because of profit shifting, with lower-income countries losing a further \$200 billion. As the United Nations Financing for Sustainable Development Report 2019 points out, tax avoidance hits developing countries particularly hard, because their Governments tend to rely more on corporate tax revenues, and because companies’ declared profits are more sensitive to tax rates than in developed countries. Multinationals’ tax-avoidance strategies can also distort cross-border trade statistics. Global firms increasingly report intracompany trade and investment in intangible assets such as intellectual property, primarily for tax arbitrage purposes (United Nations Conference on Trade and Development, 2018, chap. II). This creates “ghost trade flows” that have little or no connection with real economic activity. This completely legal tax avoidance is most evident in digital companies, mainly because digitalization makes it very hard to establish where production takes place. As a consequence, a digital

multinational’s revenues typically bear no relation to its reported profits and resulting tax bill (e.g., Amazon revenues for 2017 and 2018). In 2018, Amazon generated more than \$232 billion in worldwide revenue, but reported profits of only \$9.4 billion, on which it could then claim various deductions and offsetting credits. In 2017, Google legally moved nearly \$23 billion to Bermuda⁴ through a shell company based in the Netherlands, dramatically reducing its foreign tax bill. While both developed and developing countries are affected by this, the losses relative to public finances are arguably greater for Governments in the developing world, which are in great need of resources to meet their development challenges.

In developing countries, another important concern is that not only are such data collected by multinational companies headquartered outside their own jurisdictions, but the data are also stored outside the country (in servers located elsewhere or in clouds) where national agencies cannot get access. This has led to demand for data localization, whereby data relating to citizens/residents of a country must be collected, processed, and/or stored inside the country, and can be transferred internationally only after meeting local privacy or data protection laws. The basic point relates to data sovereignty (records about citizens/residents must follow its personal or financial data processing laws), but extends beyond it. As Singh (2018) has pointed out, Governments in the North are nowhere close to providing full legal access and non-interference to data originating in developing countries but controlled by companies based in developed countries. This obviously gives rise to national security concerns, including the possibility of external attacks, surveillance and influence (as in the infamous role of Cambridge Analytica in attempting to influence elections and voting behaviour). It also affects law enforcement, and has major implications for tax revenues as described above.

As a result, some large countries, such as China and the Russian Federation, have come out as strong proponents of data localization, along with promotion of national

⁴ Bart Meijer, “Google shifted \$23 billion to tax haven Bermuda in 2017: filing”, Reuters, 3 January 2019.

champions as digital companies. By contrast, several trade and economic partnership agreements (such as the Trans Pacific Partnership), in which developed countries are involved, explicitly prohibit the use of data localization as a form of trade protection. Some countries protect certain kinds of data only (e.g., health data in Canada and Australia). The European Union has proposed some principles for data protection, which relate to collection, organization, structuring, storage, alteration, consultation, use, communication, combination, restriction, erasure or destruction of personal data. The principles can be summarized as (i) lawfulness, fairness and transparency; (ii) purpose limitation; (iii) data minimization; (iv) accuracy; (v) storage limitation; (vi) integrity and confidentiality (security); and (vii) accountability. While these are certainly excellent principles, they are indeed just principles, which can become fiendishly difficult to implement in practice given the volumes of data constantly being generated and the relatively unregulated manner in which they are currently being collected in most developing countries.

To be effective, these principles must be combined with a strong and effective regulatory system for privacy, but this does not exist in most countries. For example, India still does not have a privacy law (the Supreme Court of India declared privacy to be a fundamental right some time ago, but the legislative follow-up has been slow, and the proposed bill is extremely weak, without adequate safeguards). Since control over personal data need not be exercised only by companies but also by the State, it can be associated with extreme surveillance, profiling and monitoring of citizens. So there is a genuine concern: are we stuck between control by multinational corporations and control by aggressive state surveillance? For example, the methods of biometric identification discussed above pose truly extreme and unprecedented threats to privacy. Governments are increasingly using biometric data for surveillance. While China is a well-known and extreme example, many other States are doing this, and most countries do not have adequate laws to protect citizens.

If anything, such concerns have been heightened by the legitimization of surveillance technologies in order to control the COVID-19 pandemic. In India, for example, technology is being invoked as part of containment measures in three ways: (i) to create lists of persons suspected to be infected with COVID-19; (ii) to ensure physical restriction and mobility control fencing using drones to monitor compliance by people who have been quarantined; and (iii) to use smartphone applications (including a new app developed specifically for this purpose) to enable the Government to trace contacts of infected persons. The issue with these is that they open the door to much wider surveillance and monitoring, which can be used in other ways by Governments—for example, against political opponents and dissenters. It has been noted in this context that “the state’s most significant responses to the pandemic have been predicated on an invasive use of technology, that seeks to utilise people’s personal health data. While the measures deployed intuitively sound reasonable, the mediums used in implementing the programme overlook important concerns relating to the rights to human dignity and privacy” (Parthasarathy, Bhatia and Gupta 2020).

This relates to a broader concern about what has been described as “surveillance capitalism [which] unilaterally claims human experience as free raw material for translation into behavioural data” (Zuboff, 2019, p. 8). It is important to note that this is not embedded in the technology per se; rather, Zuboff points out that it is a logic that imbues technology and commands it into action. Since it is unprecedented, it is harder to recognize and, therefore, that much harder to fight. Nevertheless, it is important to highlight and identify it so as to bring in social and regulatory institutions that can seek to address and control this new mutation of global capitalism.

CONCLUSION

Several of the arguments advanced in this chapter may appear to be extremely pessimistic, but the point is that they need not be so. There are many advantages and potentially

massive potential in the new technologies, but they must be directed and controlled in ways that ensure that humanity as a whole can fully benefit from them. Unger (2019) has argued that part of the problem is that the knowledge economy is still confined to what he calls “insular vanguards, advanced fringes within each sector of the economy” and must be transformed into an inclusive rather than an insular vanguard. But this would require changes in our basic economic arrangements and assumptions, necessitating not simply a different way of regulating the market economy or of doing business under its present institutions, but a different kind of economy.

Ultimately, as has been suggested throughout this chapter, the outcomes associated with technological change depend not on the technologies themselves but on the policies and the sociopolitical and economic contexts in which

they play out. It is evident that active state intervention is required to promote research and development, investment, and knowledge dissemination, and that public investment is essential for achieving all of this, especially in infrastructure and education. China has already shown the way in this regard for both renewable energy and digital technologies. Regulatory practices are also critical and may also have to be accompanied by legal changes that inhibit or redirect certain types of organizational arrangements (e.g., Uber, etc., being treated as employers rather than merely aggregators). However, the possibilities of state overreach with new technologies also exist and must be recognized and resisted where necessary. Finally, South-South cooperation has huge potential, and it can even begin with small steps and then expand; but it must do so quickly, because the challenges are no longer in the future. They are already upon us, here and now.

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CHAPTER III



Inclusive catch-up: the new structural economics approach

by Justin Yifu Lin, Peilin Liu



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Photo credit: Mr. HE Long, Shenzhen Special Zone Daily

Inclusive catch-up: the new structural economics approach



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OVERVIEW

Global inequality can be measured by both between-country and within-country income gaps, the former being the dominant factor in global income inequality. The key to curbing global inequality—an act of supporting developing countries as they “catch up” to developed countries—is supporting developing countries’ income levels to grow at full potential while keeping internal income inequality at relatively low levels. Attention to the internal income inequality of developing countries allows for “inclusive catch-up”. Income level is determined by industrial and technological structure, which in turn is endogenously determined by endowment structure. The comparative-advantage-following (CAF) development strategy—which attempts to facilitate a firm’s entry/

choice of industry/technology according to the economy’s existing comparative advantages—will perform much better than the comparative-advantage-defying (CAD) strategy in prompting (i) physical and human capital accumulation; (ii) acceleration of upgrading comparative advantage; (iii) an opening to the international economy; (iv) greater technological progress; and (v) the maintenance of macroeconomic stability. By adopting a CAF strategy, developing countries can provide more job opportunities and, consequently, cause wage rates to increase more rapidly than capital interest, which in turn will lead to much lower income inequality. The social transfers and direct taxes needed to decrease disposable income differences would therefore be modest and pro-growth. By contrast, the CAD strategy—which attempts to encourage firms to ignore the existing comparative advantages of the economy

in their entry/choice of industry/technology—delivers an inferior performance in all of these aspects. Moreover, the Government will be in a much better position to cope with shocks, such as a global financial crisis or pandemic, if the country adopts a CAF strategy instead of a CAD. In order for countries to adopt a CAF strategy, Governments need to play a facilitating role in improving the hard and soft infrastructures needed for firms' industrial and technological upgrading in a market economy, either by coordinating firms' efforts to improve infrastructure and institutions or providing those improvements themselves.

INTRODUCTION

In the past three decades, per capita income levels in most developing countries have increased, and many developing countries entered higher stages of development. As shown in table III.1, the share of the world population living in low-income countries decreased from 57.9 per cent in 1990 to 9.3 per cent in 2018. At this point, three quarters of the world population is living in middle-income countries. By any criterion, this is a great achievement.

However, it is still a major challenge for middle-income countries to catch up with developed countries. That is the context in which the middle-income trap has become an important policy issue (Gill and Kharas, 2007; 2015); it remains even more difficult to lift low-income countries—accounting for nine percent of the world's population—out of the low-income trap. According to Milanovic (2006), “[s]ome 70 percent of global inequality is ‘explained’ by differences in countries’ mean incomes”. Milanovic (2016, p. 232) subsequently argued that “[e]conomic growth will still matter a great deal in the coming century: it is the most powerful tool for reducing global poverty and inequality (as it is, also, for reducing national poverty).”

Another issue that is as difficult to address as catching up is that of narrowing within-country income differences. As shown in table III.2, estimates indicate that, in 2017, the lower the development stage of a country, the greater the difference between the income share accruing to the highest 10 per cent of workers and that accruing to

the bottom 50 per cent. This latest evidence is no longer consistent with inverted-U relationship between income level and income difference documented by Kuznets (1955). Figure III.1 shows that, as of 2015, generally speaking, GINI coefficients of low-income countries are generally higher than those of middle- and high-income countries, although some low-income countries have GINI coefficients as low as those of high-income countries. So one can safely infer from this evidence that inclusive catch-up—that is, to catch-up while curbing the income gap—still remains the biggest challenge for developing economies.

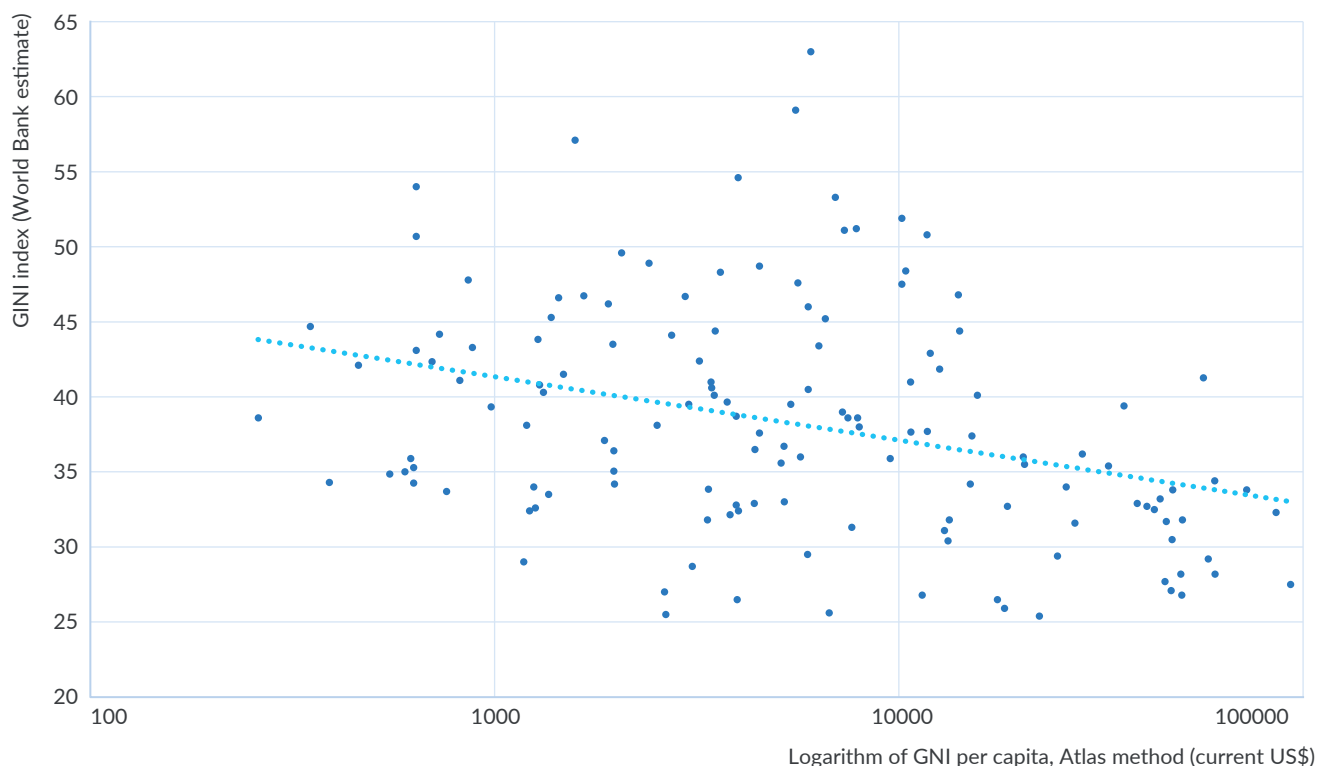
The first and second generations of development economics (i.e., structuralism in post-World War II and neoliberalism after the 1970s) failed to solve the problems of catching up and curbing income difference. To address these twin issues, this chapter, based on New Structural Economics (Lin, 2012), proposes a policy agenda for achieving inclusive catch-up, which aims to prompt developing countries' income levels to grow at full potential while holding their internal income difference at reasonable levels.

The remaining parts of this paper are arranged as follows. Part II introduces some critical concepts, such as endowment structure, viability and comparative advantage. Part III analyses two alternative development strategies—that is, comparative-advantage-defying (CAD) strategy and comparative-advantage-following (CAF) strategy. Parts IV and V compare the performances of these two alternative development strategies in terms of economic growth and income distribution. These two parts will show that adopting the CAF strategy is the key for developing countries to catch up inclusively. Part VI analyses the facilitating role of government in adopting and implementing a CAF strategy. Part VII concludes the chapter with a summary and recommendations.

ENDOWMENT STRUCTURE, VIABILITY AND COMPARATIVE ADVANTAGE

The higher a country's development stage, the more sophisticated its industrial and technological structures are. However, a country's industrial and technological

Figure III.1
Income distribution of countries at different income levels, 2015



Source: World Development Indicators, updated 04/09/2020.

Note: The year 2015 is the most recent for which the dataset contains the GINI coefficients for 80 countries—the largest number of countries available in the dataset. For those countries that have no GINI coefficient for 2015, the linear interpolation value of GINI coefficient for years no earlier than 2010 and no later than 2018 was used. With that, 60 more GINI coefficients are supplemented.

structures are determined endogenously by its endowment structure (Lin, 2009; Ju, Lin, and Wang, 2015). The mismatch of endowment structure and industrial and technological structures is the key to understanding most problems in a country’s development performance.

Endowment structure

“Endowment structure” refers to the relative abundance of certain factors within a country, including land and natural resources, capital, and labour. In developing countries, capital is generally relatively scarce, while labour and natural resources are relatively abundant. In developed countries, capital is relatively abundant, while labour is relatively scarce. At any particular time, the endowment structure determines an economy’s total budget and, in a

competitive market, the relative prices of its various factors: prices of relatively abundant factors are low, while prices of relatively scarce factors are high.

One well-established economic principle is that relative prices of production factors determine technological structure. Figure III.2 presents a simple economy that possesses two given factor endowments (capital and labour) and produces only one product. Each point on the isoquant curve shown in figure III.2 represents a technology of production or the combination of capital and labour required to produce a given amount of a certain product. The technology represented by letter A is more labour-intensive than that of B. Lines C, C1, D and D1 are isocost lines, the slope of which represents the relative

Table III.1
The distribution of world population in different development stages

	1990			2000			2010			2018		
	No. of countries and territories	Population (millions)	Share of world population (percentage)	No. of countries and territories	Population (millions)	Share of world population (percentage)	No. of countries and territories	Population (millions)	Share of world population (percentage)	No. of countries and territories	Population (millions)	Share of World Population (percentage)
Low income	51	3044.9	57.9	64	2495	40.9	35	796.6	11.5	31	702	9.3
Lower middle income	68	788	15	53	2048.3	33.6	57	2545.2	36.9	47	3022.9	39.9
Upper middle income	34	580.4	11	37	651.4	10.7	53	2451.9	35.5	60	2655.6	35.1
High income	40	798	15.2	52	881.9	14.5	71	1106.1	16.1	80	1186.7	15.7
Unclassified	25	49.8	0.9	12	16.3	0.3	2					
World	218	5261.1	100	218	6092.9	100	218	6899.9	100	218	7567.3	100

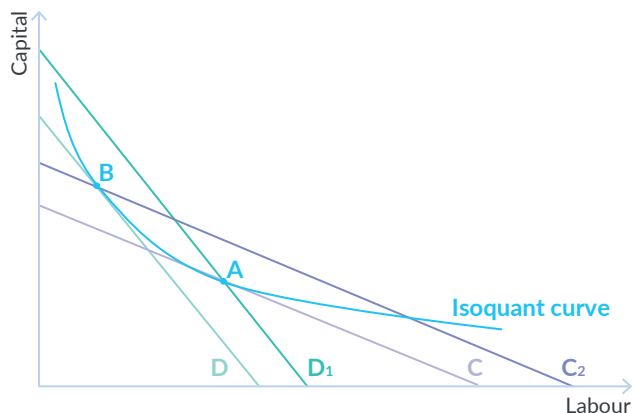
Source: World Bank, World Development Indicators, 2019 (available at <https://databank.worldbank.org/reports.aspx?source=world-development-indicators>); and World Bank classifications (available from <http://databank.worldbank.org/data/download/site-content/OGHIST.xls>).

Table III.2
Ratio of labour income share of top 10% to that of bottom 50%

	Low-income countries	Lower-middle-income countries	Upper-middle-income countries	High-income countries
Minimum	2.8	1.1	0.8	0.7
Median	8.3	3.2	1.9	1.3
Maximum	73.5	13.5	8.5	2.4

Sources: United Nations, Labour income distribution, ILO modelled estimates, July 2019 (available from https://www.ilo.org/shinyapps/bulkexplorer45/?lang=en&segment=indicator&id=LAP_2LID_QTL_DT_A); and World Bank classifications (available from <http://databank.worldbank.org/data/download/site-content/OGHIST.xls>).

Figure III.2
Endowment structure,
relative price of factors and viability



Source: Lin and Liu (2020).

prices of capital and labour. In an economy where capital is relatively expensive and labour is relatively inexpensive, as represented by isocost lines C and C1, the adoption of technology A to produce the given amount of output will cost the least. When the relative price of labour increases, as represented by the isocost lines D and D1, production will cost the least if technology B is adopted.

Viability

“Viability” is the expected rate of profit of a normally managed firm in an open, free and competitive market. Although affected by management, the expected profitability of a firm depends primarily on its industry/technology choice. If, without any external subsidies or protections, a normally managed firm is expected to earn a socially acceptable profit in a free, open and competitive market, the firm is viable. Otherwise, the firm is non-viable.

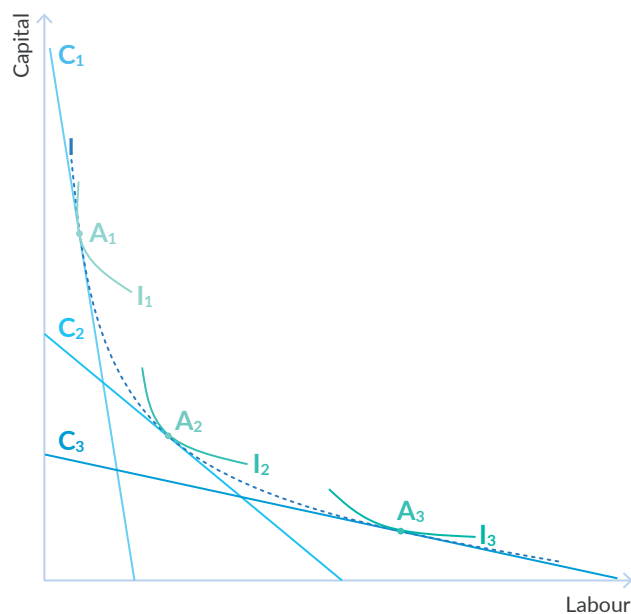
In figure III.2, if the relative prices of capital and labour can be presented by letter C in a free, open and competitive market economy, a firm adopting technology A costs the least and is viable. The adoption of any other technology, such as B, will cost more. Market competition will make firms that adopt technologies other than A non-viable. Therefore, with the relative prices of labour and capital determined by a competitive market, the viability of a firm depends on its technology choice.

This discussion can be extended to an economy with one industry that has many different products and an economy that has many different industries. As shown in figure III.3, lines I1, I2, and I3 represent the isoquants of three different products that have the same output value in industry I. The average relative capital intensity of the three products is increasing from I1 to I3. As shown in figure III.3, the viability of a firm is determined by whether or not its product and technology choices are on the least-cost line, which is determined by the relative factor endowments of the economy.

Comparative advantage

An industry can be represented by an isovalue line, which is the envelope of the isoquant curves of all different kinds of products in the industry. On the isovalue line of an industry, each point represents a specific product in the industry that is produced by a specific technology and has the same value as any other product in the same line. Figure III.4 shows an economy that has three different industries, represented by the three industrial isovalue lines I, J, and K, respectively. These three lines have the same value. If labour is relatively

Figure III.3
Product choice in an industry



Source: Lin and Liu (2020).

subsidy to compensate for losses incurred (Lin, Cai, and Li, 1998; Lin and Tan, 1999).

How large the subsidy needs to be to compensate for the policy burden in the real world depends on how distant the promoted industry/technology is from the economy's comparative advantages. If the distance is small, the Government can rely on tax incentives or direct fiscal transfer to subsidize the firm. However, this distance is often very large when the Government in a developing country pursues a CAD strategy and special institutional arrangements are required for achieving the strategic goal.

In pursuing a CAD strategy, the most frequently adopted arrangement to subsidize a project is the reduction of capital costs through a regulated suppression of interest rates. In addition, the equipment for the CAD project, in general, cannot be produced domestically and needs to be imported from developed countries. Therefore, access to foreign exchange is also required for the CAD project. However, foreign exchange in a developing country is generally scarce and expensive because the exports of developing countries are limited and consist mainly of low-value agricultural products and resources. To lower the costs of equipment imports for the CAD project, Governments also tend to overvalue domestic currency and undervalue foreign exchanges.

On the one hand, the distortions in the interest rate and foreign exchange rates will stimulate firms in both the priority and non-priority sectors to demand more capital and foreign exchange. On the other hand, distortions will suppress the incentives to save and export, thus reducing the availability of capital and foreign exchange in the economy. This will lead to shortages in capital and foreign exchange, and the Government will need to use administrative measures to ration capital and foreign reserves in order to guarantee that the CAD projects will have the resources to perform strategic tasks that Governments assign. The resource allocation function of markets is thus constrained, or even replaced, by direct government rationing.

Theoretically, the Government that adopts a CAD strategy

is only responsible for giving a subsidy to compensate for the loss arising from the policy burden. Given information asymmetry, however, the Government cannot distinguish losses induced by the policy burden from operational losses. The firms will use the policy burden as an excuse and use resources to lobby the Government for ex ante policy favours—such as access to low-interest loans, tax reductions, tariff protection, legal monopolies, and so on—to compensate for policy burdens. In addition to policy favours, if the firms still incur losses, they will also request that the Government offer some ex post, ad hoc administrative assistance, such as more preferential loans. The economy will be full of rent-seeking or unproductive profit-seeking activities. Since the firms can use the policy burdens as an excuse to bargain for more government support and given it is hard for the Government to shun such responsibility, firms' budget constraints become soft. When a soft budget constraint exists, the manager of a firm will have no pressure to improve productivity and will have more on-the-job consumption and other moral hazards. The subsidies could actually end up much higher than those required to compensate for the original policy burdens.

The comparative-advantage-following strategy

The Government in a developing country could adopt the CAF strategy to encourage firms to (i) enter the industries for which the country has comparative advantages and (ii) adopt the specific production technology during production that would make these firms viable. As discussed above, the industries for which the economy has comparative advantages and the technologies that are appropriate for production are determined by the country's relative factor endowments. However, the managers of firms, as micro agents, have no knowledge or concern regarding the actual endowments. Their only concerns are the prices of their outputs and the costs of their production. They will enter the industry and choose the technology of production appropriately only if the relative factor prices correctly reflect the relative factor abundances, which can be achieved only if the markets are competitive. Therefore, when the Government in a developing country adopts a

CAF strategy, its primary policy is to remove all possible obstacles to the functioning of free, open and competitive product and factor markets, and to facilitate firms' entry into industries with comparative advantage by providing soft and hard infrastructure.

COMPARATIVE-ADVANTAGE-FOLLOWING STRATEGY FOR FAST CATCH-UP

Choice of development strategy matters in the catch-up process. Compared to the CAD strategy, CAF strategy would prompt faster economic growth through the channels of physical and human capital accumulation, technology progress, openness, and macroeconomic stability (Lin, 2009).

Physical capital accumulation

An economy's optimal industry/technology structure is endogenously determined by its endowment structure. Therefore, if a developing country wants to attain the industry/technology structure of a developed country, it first needs to narrow the gap between their respective factor endowment structures. The upgrading of the factor endowment structure means an increase in physical capital relative to labour. Commission on Growth and Development (2008) also argued that high saving and high investment are important conditions for high growth.

Physical capital accumulation depends on the size of surplus/profits accrued by firms and the rate of savings of economic agents in the economy. When, following the CAF strategy, a firm in an economy enters an industry in which that economy has a comparative advantage and adopts the least-cost technology for its production, the firm will be competitive and have the largest surplus/profits. Meanwhile, the capital in the economy employed in the industries that follow comparative advantage will have the highest possible rate of return. Therefore, economic agents' incentives to save will be highest.

Moreover, the Government will not distort the prices of factors and products, nor will the Government use administrative powers to create legal monopolies.

Therefore, there will be no scope for wasteful rent-seeking activities. Firms will have hard budget constraints and will need to earn profits by improving management and competitiveness.

The CAD strategy will result in just the opposite of what the CAF strategy promises regarding competitiveness, rates of return, rent-seeking activities, and the softness of budget constraints facing firms in the priority industries. Therefore, accumulation of physical capital and upgrading of the endowment structure will be faster under the CAF strategy than under the CAD strategy.

Human capital accumulation, entrepreneurship and commitment to growth

Many empirical studies that attempt to explain cross-country income differences have found that human capital has a positive effect on economic growth (Mankiw, Romer, and Weil, 1992; Caselli, Esquivel, and Lefort, 1996; Barro, 1997). Human capital is complementary to physical capital. If a developing country adopts a CAF strategy, more workers would have access to on-the-job training and the opportunity to learn by doing, thereby improving their skills continuously and quickly. As a consequence, labour productivity would increase, and the ongoing improvement of labour force competence would match the need for increasingly sophisticated physical capital goods.

Entrepreneurship is one example of human capital that is critical in both developed and developing countries. Entrepreneurs mobilize resources and take risks to pioneer the upgrading of industrial/technological structure. Under a CAF strategy, there are no market distortions, and those with entrepreneurship can easily organize small-and-medium viable firms. The potential entrepreneurship of the country will be fully tapped, and capabilities of managers will improve in the process of technological/industrial upgrading.

The impact of human capital on economic growth is determined by both education and the initiative of each individual worker. The ideology of catch-up—that is, the true commitment to growth—is essential for mobilizing

human capital and entrepreneurship and for economic growth, as argued by the Commission on Growth and Development (2008). Under a CAF strategy, relatively labour-intensive industries and firms will provide more jobs and opportunities for people to improve their lives, and the jobs and opportunities are allocated by competition rather than government rationing. A commitment to growth can easily emerge and flourish under a CAF strategy.

Contrary to the CAF strategy, a CAD strategy would block access to the opportunity to learn by doing for most workers, and also impede the emergence of viable small and medium-sized firms. The job opportunities within prioritized projects would be limited and rationed by Government. Although those who are employed in prioritized sectors would have the chance to accumulate certain kinds of sophisticated skills, these skills do not easily transfer to other sectors. The ideology of catch-up may not emerge, and the full potential of human capital, labour productivity and the entrepreneurship of the country may not be realized.

Technology progress

Accumulation of physical and human capital in an economy will provide the basis for upgrading the industrial/technological structure (Basu and Weil, 1998). The targeted industry/technology will be new to the firms in a developing country and will need to be transferred from developed countries. The learning costs will be smaller under the CAF strategy than under the CAD strategy because the distance between the targeted new industry/technology and the old industry/technology is smaller under CAF than under CAD (Barro and Sala-i-Martin, 1992).

Moreover, the patent protections for many of the targeted technologies under the CAF strategy may have already expired. Even if a technology is still under patent protection, the licence fee will be lower with CAF than with CAD because the targeted technology for the CAF strategy is older.

In some cases, the firm utilizing the CAD strategy will not be able to obtain the technology from developed countries and will need to “reinvent the wheel” through making its

own investment in costly and risky R&D of the technology. Therefore, the acquisition costs of the technology will be lower under the CAF strategy than under the CAD strategy.

Openness in international trade

A number of empirical studies show that countries that are more open catch up faster than closed countries (Dollar, 1992; Warr, 1994; Ben-David, 1993; Sachs and Warner, 1995; Harrison, 1996; Michaely, 1977; Frankel and Romer, 1999; Commission on Growth and Development, 2008). International trade is expected to facilitate technology diffusion among countries. A developing country adopting a CAF strategy will rely on importing products for which it does not have a comparative advantage and exporting products for which it has comparative advantage. For this country, openness is endogenously determined by the country's factor endowment structure instead of by an exogenously determined policy for imports and exports.

If the Government in a developing country adopts the CAD strategy and attempts to substitute the importation of capital-intensive manufactured goods by domestic production, not only will the country's import trade be reduced but also its export trade will be suppressed. The latter consequence results from the transfer of resources away from the industries for which the economy has a comparative advantage. Also, exchange rates may be overvalued to facilitate the development of priority industries, effectively hampering export opportunities.

The Government in a developing country may adopt the CAD strategy and, at the same time, encourage its firms in the priority capital-intensive industries to export. In this case, exports will be unprofitable even though the firms may have a high ratio of exports to foreign markets and may achieve fast technology improvements. The firms' survival relies on the protection of domestic markets, preferential loans from banks, and other policy support. The country will have poor external accounts, accumulate foreign debt, and be easily affected by external shocks. It may be better for a developing country to adopt a CAD strategy that encourages exports rather than a CAD strategy that encourages import

substitution. However, the overall economic performance of an economy that adopts the export-promotion strategy will be poorer than that of an economy that adopts the CAF strategy.

Macroeconomic stability

The bulk of empirical studies shows that macroeconomic stability is one of the important conditions for long-term growth (Barro and Sala-i-Martin 1997; Commission on Growth and Development, 2008). If the Government in a developing country adopts the CAD strategy, firms in priority industries will not be viable and will rely on preferential loans, trade barriers, and other policy support for their survival. Because existing comparative advantages are not utilized, the economy as a whole will not be competitive, no dynamic changes in the economy's comparative advantage can be sustained, and the economic performance of the economy will be poor. The economy will have a weak financial sector and poor external accounts. Fiscal deficits, debt burdens, and financial fragility will accumulate, and macroeconomic stability will become unsustainable.

A developing country that follows the CAF strategy will have better external accounts, healthier financial and fiscal systems, and will be better equipped to resist external shocks, and will have a much better record of macroeconomic stability.

Comparative-advantage-following strategy for inclusiveness

The relationship between income distribution and economic development is one of the oldest subjects in development economics. Simon Kuznets (1955) proposed an inverted-U hypothesis, suggesting that inequality tends to widen during the initial stages of economic development with a reversal of this tendency in later stages. There is mixed evidence for this hypothesis. A number of cross-sectional studies support this hypothesis (Paukert, 1973; Cline, 1975, Chenery and Syrquin, 1975; Ahluwalia, 1976). However, the study of 43 episodes in 19 countries by Gary Fields (1991) finds that there is no tendency for poorer countries to yield increased rather than decreased inequality, or for richer countries to yield decreased rather

than increased income inequality, while a case study by Fei, Ranis, Kuo (1979) shows that Taiwan Province of China achieved growth with equity. Milanovic (2016) and Piketty and others (2018) summarized the change of income and wealth distribution in recent decades. To reconcile the original version of the Kuznets hypothesis with the increase of inequality in the rich world, Milanovic (2016) introduced Kuznets Cycles. He also distinguished between two kinds of forces that drive inequality down: "malign" forces (wars, natural catastrophes, epidemics) and "benign" forces (more widely accessible education, increased social transfers, progressive taxation). Piketty and others (2018) found that, in recent decades, income inequality has increased in nearly all countries, but at different speeds, suggesting that institutions and policies matter in shaping inequality. We think that the most important and persistent benign force for alleviating income inequality in a developing country is adoption of the correct development strategy—the CAF strategy. Conversely, the adoption of the CAD strategy will aggravate income inequality.

More job opportunities, higher wages and upward mobility

To make the catch-up process of developing countries inclusive, the income of the poor must grow faster than that of the rich. The endowment structure of developing countries is typically characterized by a relative scarcity of capital and an abundance of labour. In developing countries, the most important asset that the poor have is their own labour. Therefore, only by adopting the CAF strategy and encouraging the development of labour-intensive industries and labour-intensive sections of capital-intensive industries can a developing country (i) create more job opportunities for the poor; (ii) increase wage rates; (iii) allow the poor to have a share in the benefits of growth; and (iv) keep the income gap low in the primary distribution.

Under the CAF strategy, workers have more opportunities to learn industrial skills and more accesses to on-the-job learning. Their human capital, skill and productivity can advance as quickly as possible. These factors significantly advance the upward mobility of the whole country.

Moreover, with the CAF strategy, the Government does not need to distort the product and factor markets to subsidize non-viable enterprises and restrict labour migration. In the long run, wage gaps across industries and regions will converge as a result of labour migration. Entrepreneurship will also be fully activated in an economic context that is not distorted. More small and medium-sized enterprises would emerge and have the chance to grow.

If the CAD strategy is chosen and capital-intensive industries are promoted in developing countries, job opportunities would be much less than what a sizeable work force needs. As a result, many people with labour as their only source of income would face unemployment and be unable to benefit from economic development. They would also have less access to on-the-job learning; this means their skills cannot improve rapidly, which in turn limits the accumulation of human capital and lowers upward mobility.

In addition, Governments of developing countries often create factor segmentations in markets to facilitate the development of non-viable firms. This would lead to the widening of income gaps among sectors. Wage rates for the priority sectors would be higher than those of the non-priority sectors. Subsidies to what are considered the priority industries could result in “reverse transfer payments” (i.e., the poor subsidizing the rich), which in turn increases income differences. Moreover, to obtain investment funds, non-viable enterprises would try every means to lobby the Government, wasting resources in non-productive rent-seeking activities (Krueger, 1974). Once the rule of law and administration fail to operate, corruption would arise. Corruption and rent-seeking would create a privileged class and a so-called bad market economy. Under the CAD strategy, growth will not be sustainable and when the economy breaks down, the poor will suffer the greatest hardship, as evidenced by the East Asian financial crisis (Stiglitz, 1998).

Pro-growth redistribution

Governments have the responsibility of supporting (i) people who are not able to participate in the labour force, including

the disabled, young children, the aged, and the temporarily unemployed; and (ii) households whose income levels are below the poverty line. The CAF strategy promotes growth, thus generating more resources for redistribution, while the CAD strategy leads to fewer resources for redistribution due to its lower efficiency and slower economic growth.

Income gaps arising from the primary distribution also influence the marginal tax rate and scale of the required transfer payments in redistribution. If the CAF strategy is followed, income gaps arising from the primary distribution are relatively small, and the marginal tax rate and transfer payments could be kept at low levels. The negative impact on incentives would therefore be smaller and taxes would be easier to levy. The financial sustainability of the redistribution system could be ensured. Further, the government budget could focus on financing public goods rather than on subsidizing non-viable enterprises.

However, if the CAD strategy is followed, income gaps arising from the primary distribution would be larger. To narrow the income gaps, the marginal tax rate and transfer payments would have to be high enough to fulfil the Government’s promises. High marginal tax rates would not only distort incentives, but also encourage taxpayers to evade taxes, making tax collection more difficult. Eventually, high transfer payments promised by the Government would not be financially sustainable and the Government could lose credibility. If the Government has to incur high levels of fiscal deficits in order to finance high expenditure on social security and transfer payments, it will be hard to maintain a stable macroeconomy; high inflation, which hurts the poor, would then be unavoidable.

Ability to cope with external shocks

If a country adopts the CAF strategy instead of a CAD strategy, its Government will be in a much better position to cope with external shocks, such as a global financial crisis, climate change, and pandemics. This is because the Government will have a stronger fiscal position due to (i) larger fiscal revenues from higher growth; (ii) larger foreign reserves from more exports; and (iii) less need to subsidize

non-viable firms and pay for unemployment benefits. Therefore, when an external shock occurs, the Government will be in a better position to adopt measures to mitigate the impacts of the shock on its economy and citizens.

FACILITATING INDUSTRIAL POLICIES FOR A CAF STRATEGY

Inclusive catch-up is a process of structural change with continuous technological innovation, industrial upgrading, and improvement in infrastructure and institutions. By spontaneous market forces alone, without government taking a facilitating stand, the structural change in the process of inclusive catch-up will happen either not at all or very slowly. To make the upgrading process faster and smoother, Governments should facilitate industrial upgrading by improving hard and soft infrastructure that matches the needs of new industries. The Government may either coordinate firms' efforts to improve infrastructure and institutions or provide those improvements itself.

Information, coordination, first-mover risks, and exiting

When factor endowment structure changes, developing countries need first movers that are willing to upgrade from a less capital-intensive industry to a relatively more capital-intensive industry; that are consistent with changing comparative advantages; and that are eager to use more advanced and more capital-intensive technologies. One of the preconditions of upgrading is having accurate information regarding viable technologies and what are expected to be the latent comparative-advantage industries in the next stages of the upgrade. Such information may not be readily available. It is therefore necessary to invest resources to search for, collect, and analyse industry, product, and technology information. If a firm carries out the activities on its own, it will keep the information private, and other firms will be required to make the same investment to obtain the information, creating duplication in the investment in information gathering. The information has a public goods aspect, however. After the information has been gathered and processed, the cost of information

dissemination is close to zero. Therefore, the Government can collect the information about the new industries, markets and technology and make it available to all firms through the introduction of industrial policy.

The upgrading of technology and industry in a developing country often requires coordination of different firms and sectors in the economy. For example, the human capital or skill requirements of new industries and technologies may be different from those used with older industries and technologies. A firm may not be able to internalize the supply of the new requirements and will need to rely on outside sources. Therefore, the success of a firm's technological upgrade also depends on the existence of an outside supply of new human capital. In addition to human capital, the firms that are upgrading may also require new financial institutions, trading arrangements, marketing, distribution facilities, and so on. More sophisticated and stricter intellectual property regulations should also be phased in. Therefore, the Government may also use industrial policy to coordinate firms in different industries and sectors in the upgrading process.

The upgrading of industry and technology is an innovation, and it is risky by nature. In some cases, the risks for first movers might be prohibitively high. If they fail, they bear all the losses, and if they succeed, other firms will immediately follow them into the industry. The resulting competition will eliminate any monopoly profits (Aghion, 2009; Romer, 1990). There is an asymmetry between the losses of failures and the gains of successes for the first movers (Hausmann and Rodrik, 2003). To compensate for the externality and the asymmetry between the possible costs and gains, the Government may provide some forms of subsidy, such as tax incentives or loan guarantees, to the firms that initially follow the Government's industrial policy. Otherwise, there will be little incentive for firms to be first movers in technological innovation and industrial upgrading (Rodrik, 2004; Lin and Wang, 2009; Lin and Monga, 2011; Harrison and Rodriguez-Clare, 2010).

It is natural that, in the process of endowment structure upgrading, there would be industries losing comparative

advantage and firms no longer viable that need to exit market. Social security policies would serve as buffers of the exiting of these industries and firms. But the process of industrial upgrading in countries that have successfully caught up tends to be faster than in developed countries; the speed at which industries and firms exit market also tends to be faster, and the scale tends to be bigger. Unfledged social security systems in developing countries are not enough to make the exiting smooth. So complementary policies, such as training and reorienting workers to new jobs, would be necessary for maintaining the inclusiveness of upgrading processes in developing countries.

Growth identification and facilitating industrial policy

To adopt and implement a CAF strategy, Governments of developing countries need first to identify new industries in which a country may have latent comparative advantage, and then remove the constraints that impede the emergence of industries with such advantage and create the conditions that allow them to become the country's actual comparative advantage. Here, we propose a six-step process (Lin and Monga, 2011).

First, the Government in a developing country can identify the list of tradeable goods and services that have been produced for about 20 years in dynamically growing countries that have similar endowment structures and a per capita income that is about 100 per cent higher than their own.

Second, among the industries in that list, the Government may give priority to those that some domestic private firms have already entered spontaneously, and try to identify (i) the obstacles that are preventing these firms from upgrading the quality of their products; or (ii) the barriers that limit

entry to those industries by other private firms. This could be done through the combination of various methods such as value-chain analysis or the Growth Diagnostic Framework suggested by Hausmann and others (2008).¹ The Government can then implement policies to remove these binding constraints and use randomized controlled experiments to test the effects of this, so as to ensure the effectiveness of scaling up these policies at the national level (Duflo, 2004).

Third, some of those industries in the list may be completely new to domestic firms. In such cases, the Government could adopt specific measures to attract foreign direct investment from benchmark countries in step one, or organize a new firm-incubation programme so as to take advantage of the lower labour costs. The Government may also set up incubation programmes to catalyse the entry of private domestic firms into these industries.

Fourth, in addition to the industries identified on the list of potential opportunities for tradable goods and services in step one, developing-country Governments should pay close attention to successful self-discoveries by private enterprises and provide support to scale up these industries.

Fifth, in developing countries with poor infrastructure and an unfriendly business environment, the Government can invest in industrial parks or export processing zones and make the necessary improvements to attract domestic private firms and/or foreign firms that may be willing to invest in the targeted industries. Improvements in infrastructure and the business environment can reduce transaction costs and facilitate industrial development. However, because of budget and capacity constraints, most Governments will not be able to make the desirable improvements for the whole economy within a reasonable time frame. Focusing on improving the infrastructure and business environment

¹ Growth diagnostics is a strategy for identifying the most binding constraints on economic activity and, hence, the set of policies that is likely to provide the biggest effect on economic growth. It can be conceptualized as a decision tree. Policymakers can start by asking what keeps growth low. Is it inadequate returns to investment, inadequate private appropriability of the returns, or inadequate access to finance? If it is a case of low returns, is that due to insufficient investment in complementary factors of production? Or is it due to poor access to imported technologies? If it is a case of poor appropriability, is it due to high taxation, poor property rights and contract enforcement, labour-capital conflicts, or learning and coordination externalities? If it is a case of poor finance, are the problems with domestic financial markets or external ones? And so on.

in industrial parks or export processing zones is, therefore, a more manageable alternative. Industrial parks and export processing zones also have the benefits of encouraging industrial clustering.

Sixth, the Government may also provide incentives to domestic pioneering firms or foreign investors working within the list of industries identified in step one in order to compensate for the non-rival public knowledge created by their investments. These incentives should be limited both in time and in financial cost. They may take the form of a corporate income-tax holiday for a limited number of years, direct credits to cofinance investments, or priority access to foreign reserves to import key equipment. The incentives should not and need not be in the form of monopoly rent, high tariffs or other distortions. The risk of rent-seeking and political capture can therefore be avoided. For firms in step four that discovered new industries successfully by themselves, the Government may award them special recognition for their contribution to the country's economic development.

The industries identified through the above process should be consistent with the country's latent comparative advantage. Once the pioneer firms come in successfully, many other firms will enter these industries as well. The Government's facilitating role is mainly restricted to provision of coordination of hard and soft infrastructure improvement, and compensation for externalities. Government facilitation through the above approach is likely to help developing countries (i) tap into the potential of the advantage of backwardness in industrial upgrading; (ii) realize dynamic and sustained growth; and (iii) avoid backwardness becoming a disadvantage due either to over ambition of the industrial policy or the inaction of the Government in coordinating hard and soft infrastructure improvement and compensation for externalities in industrial upgrading.

CONCLUDING REMARKS: INCLUSIVE CATCH-UP INITIATIVE FOR THE SUSTAINABLE DEVELOPMENT GOALS

World inequality can be measured by between-country income gaps and within-country income gaps, the former being the dominant factor. Developing countries are suffering from both lower average income and higher within-country income inequality when compared to developed countries. Inclusive catch-up of developing countries, especially low-income countries, should therefore be the priority in the near future for the international community to fulfil the Sustainable Development Goals.

To this end, we propose that the United Nations and its funds and programmes put in place the Inclusive Catch-up Initiative, a feasible and easy-to-do agenda. Two interrelated parts are needed to effectively implement the Initiative. First is the Knowledge Initiative. To help developing countries adopt the CAF strategy, the United Nations can summarize the experiences and lessons learned of those countries that are successfully converging toward developed countries and of those countries that are still trapped in poverty and middle-income status. A country-specific facilitating industrial policy package will also be very helpful for developing countries, especially those striving to escape the middle-income trap. This knowledge-aid would be a central element in helping developing countries make feasible plans for kicking off and sustaining industrialization.

The other part is the Coordination Initiative. Industry and technology transfer are indispensable in order for each developing country to upgrade its economic structure and increase its income level. Although the transfer can be done through free markets, international cooperation would allow faster and smoother transition. An industry and technology bank operated by the United Nations may benefit both parties in the transfer.

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CHAPTER IV



**Sustainable financing for (an owned)
sustainable development: time for Africa to give
the driver's seat to domestic resource mobilization**

by Cristina Duarte



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Photo credit: Mr. HE Long, Shenzhen Special Zone Daily*

Sustainable financing for (an owned) sustainable development: time for Africa to give the driver's seat to domestic resource mobilization



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OVERVIEW

This chapter is intended to contribute to the debate about financing for African sustainable development.

First, it argues that sustainable development in Africa requires, above all, a change in paradigm—a long-needed shift that has still not happened. The change in paradigm will require policymakers to understand that, before addressing sustainable development, they need to tackle sustainable financing. Consequently, the policymaking focus must be adjusted. Sustainable development is only possible if there is internally driven sustainable financing. Three key issues are important in this approach:

- I. Debt management and control (or lack thereof) of economic and financial flows, a question of political leadership in Africa;
- II. Strong domestic institutions and global value chains—the route to minimizing risk in investing in the Sustainable Development Goals (SDGs) and maximizing the impact of SDG investment;

III. Sustainable finance for sustainable development—in particular, private sector engagement versus de-risking strategies, an opportunity for African countries.

Second, in order to tackle sustainable financing, African policymaking needs a reboot in the sense that it is now time to stop equating the business of managing poverty with development. Africa will not achieve structural transformation by relying only on external financing for poverty reduction. African policymaking for development finance will have to give the “driver's seat” to domestic resources mobilization (DRM). In this context, this paper uses an extended concept of DRM, which includes budget (both sides of the budget) and non-budget resources: (i) public expenditures; (ii) budget revenues/tax revenues; (iii) domestic savings; (iv) capital markets; and (v) illicit financial flows.

Third, the paper argues that African sustainable financing for sustainable development requires the rescue of multilateralism as the only global platform able to lead a fundamental shift in the international financial system,

enabling the United Nations system to address urgent global threats and restore trust in international cooperation. The United Nations Secretary-General has made a strong call: “Action is needed at all levels. Our shared challenge is to make the international trading and financial systems fit for purpose to advance sustainable development and promote fair globalization” (United Nations, 2019).

INTRODUCTION: SETTING THE STAGE

In the past 15 years, much has been written about sustainable development. It may therefore be easy to conclude that everything that could be said and written by this point has been, and that what has been missing is action and implementation—in other words, we have not yet made things happen. However, while at a global level, this supposition might be valid, at an African level, clearly not everything has been said and written. Certain issues remain to be stated and/or restated, and sustainable development in Africa requires, above all, a change in paradigm. This has not happened and is still not under way. A change in paradigm will require policymakers to understand that, before addressing sustainable development, they need to tackle sustainable financing. The policymaking focus needs to be adjusted. In fact, and particularly after the 2008 international crisis, unsustainable financing (scarcity, unpredictability, cost and mismatch) is leading to unsustainable development, in the sense that long-term structural transformation is not occurring despite increasing levels of public debt.

Sustainable financing (i.e., long-term and endogenously controlled) is a required condition for sustainable development. Statements such as this might appear to be a matter of simple semantics, but this is not at all the case. The recognition that sustainable financing is the key issue in delivering development will significantly and positively impact policymaking in Africa. First, it will force policymaking

to pay attention not only to stocks but, more importantly, to flows. Second, it will bring to light how the decision-making process in Africa lacks ownership over financial, fiscal and natural resources flows. Third, it will point out the amount of domestic resources available for Africa to finance its own development, and how this has been prevented due to institutional weakness resulting from a deficit of leadership.

Regarding the first issue, policymaking in Africa has been—apparently—focused on stocks rather than flows. The public debt management framework is a good example. The public debt-to-gross domestic product (GDP) ratio has become one of the main indicators used in evaluating public policies; in most cases, this disregards the global picture in terms of economic and financial flows, particularly flows relating to the creation of debt. Certain questions arise: What economic flows will be impacted? How (in which conditions) is money mobilized? How is the money spent (low quality of public expenditures)? How is future money pledged (future receivables)? Are the conditions in place to assure that the impacted economic flows will be duly captured by domestic resource mobilization (DRM) mechanisms? Most of the time, these questions are barely considered by different actors. There are painful examples in Africa, particularly linked to commodity-export flows.

The second issue refers to how the non-exercise of ownership over economic and financial flows puts Africa in a position of begging for its own money and, despite its wealth,¹ being unable to provide for its own people.² Most of the African countries, particularly those engaged in commodity export, have the fundamentals to run positive primary balances on a consistent basis; the reality, however, has been the opposite (International Monetary Fund, 2018). Persistent negative primary balances over time are a very good indication of the lack of control over economic flows and, as a result, can signal the existence of channels through which domestic savings outflow the

¹ A third of the mineral wealth of the planet, nearly two thirds of its remaining arable land, a fifth of the global landmass and about 15 per cent of its forests.

² According to United Nations projections, a quarter of the world’s population will be African by 2050, and by the end of the century, half of the young people on the planet will live in Africa. This demographic dividend could, potentially, place Africa at the centre of the global economy.

country instead of financing national development. Most known examples of such outflow are pension funds and international reserves. The combination of the demographic dividend, the increasing level of economic formalization and a growing middle class provides Africa with incredible sources of financial liquidity, long-term capital, and a strong development financing mechanism. Again, the potential is not being realized. Most of this liquidity is placed in developed countries' financial centres, and, through market intermediation, African countries have been borrowing at a high cost.

The third issue, related to the first and second, refers to the weakness of DRM institutions and systems. The contrast between the amount of illicit financial outflows from Africa versus Africa financing its own needs for sustainable development is, partially, a result of such weakness. This has become a trap supported by a paradox: Africa loses money with its "right hand" and begs for it with its left. Usually, it takes two to four years of begging to get concessional financing; commercial financing—surprisingly—is much faster. In the end, Africa borrows its own money, and sometimes at absurd interest rates with mismatched maturities. Illicit capital outflows from sub-Saharan Africa are huge—about 6.1 per cent (Kar and Spanjers, 2015, p. viii) of the region's GDP—and enter the international financial system "just down the road," from where African countries have been borrowing resources—namely, through Eurobond issuance. This is the reason why the main purpose of this chapter on sustainable financing for sustainable development advocates that, in the second quarter of the twenty-first century, African policymaking should be led by DRM, from public expenditures and taxes to pension funds, sovereign wealth funds, insurance, international reserves and illicit financial flows (IFFs).

Most of the literature about development financing assumes that the SDG financing gap is huge because of an "absolute" deficit of financial resources in developing

countries. This assumption might have misled policymaking in Africa. This is the perfect assumption if the goals are to keep African countries (i) begging for official development assistance (ODA); (ii) ignoring the development of their individual financial systems—which could lead to, for example, capturing the liquidity of national pension funds; and (iii) allowing (if only by not combating) illicit financial flows. There is another perspective advocated, namely that global financial assets, on an aggregate basis, are more than enough to meet the financing needs of the 2030 Agenda for Sustainable Development (hereafter, 2030 Agenda), particularly African financing needs.

In reality, there is money, but it is not where it should be, it is not used as it should be, and does not benefit whom it should, geographically and sectorally. In fact, while global savings are indeed sufficient in an aggregate sense, they are often not well matched to specific SDG investment needs and consequently not channelled to the most vulnerable. The public good nature of many of the SDGs, combined with their risk/return profile as per international markets evaluation, has been the most common explanation of this mismatch: there is money to finance the 2030 Agenda, but due to the risk/return profile of certain investments, the money goes elsewhere else. This explanation might be misleading, however, as the risk/return profile of different investment options is measured in relative terms, not in absolute terms. For instance, if the 195 countries in the world decided to close all fiscal paradises and offshore centres, and leveled fiscal exemptions, the risk/return profile of most African SDG investments would change due to the fact that, in some specific situations,³ cancelling those most profitable (and unfair) investment options would make SDG investments appear to be better alternatives to international capital in terms of the creation of shareholder value.

Therefore, the question is not scarcity of resources, but rather their distribution and allocation, based on fair and

³ Global savings invested in negative-interest bearing instruments should be excluded. These very risk-averse investors will not easily be convinced to invest in developing countries.

transparent rules in areas where mechanisms such as fiscal paradise locations negatively impact the allocation of resources to SDGs. Stated in this way, it might sound like a clear problem with a simple solution. But it is not. More balanced distribution and allocation of financial resources interpellates multilateral finance institutions and the potential role they are supposed to play in achieving this balance globally.

From a public investment standpoint, the risk/return profile of the SDGs has not been preventing Governments from recognizing the need to invest in them—particularly in the context of young African democracies with increasingly assertive civil societies and a growing middle class. Within certain limits, democracies in Africa have pushed for SDG financing and SDG investment from a public standpoint, consequently promoting good governance. In other words, the imperative to deliver under democratic regimes has been a source of a more balanced distribution and allocation of resources. But public financing/investment is not enough;⁴ to close the gap, private financing must join the effort. How Governments can best leverage public investments to stimulate and crowd-in long-term, sustainable investments from the private sector, without necessarily offering costly tax and other fiscal incentives, remains the question.⁵ An intense debate within the United Nations system is attempting to address this subject.

From a private investment standpoint, the perceived risk/return of the SDGs by international markets has been preventing the mobilization of private financing. As an important complement to public financing, private financing needs to understand that SDG investment is not an option, given the issue of sustainability of the planet as a whole and, consequently, private investors' own continuity. Most of the official/government documents about SDG financing, as far as the private sector is concerned, have a “begging” attitude towards private financing, creating an unbalanced

starting point. It is time to adopt, worldwide, the following common ground: the implementation of the SDGs is no longer exclusively a challenge for public policies and Governments, but—due essentially to climate change, unsustainable natural resources management, and increasing wealth concentration—is now also a requirement for sustainable and ethical business. A dangerous situation has been reached where competition no longer fuels economic growth; it might instead fuel destruction and global instability. So, how do we move from competition to collaboration? What is the role of multilateralism? How can multilateralism, essentially a collaborative approach, be reconciled with globalization, a competitive approach? What is the “SDG common ground” where multinationals are also in charge of and responsible for delivering development for all, not only profits and shareholders' value? The answers to these questions will create the necessary common ground upon which global economic policies and financial systems can align with the 2030 Agenda. We are all aware, however, that finding answers is a complicated exercise in an environment characterized essentially by a pronounced geopolitical transition and a quasi-vacuum in terms of a global governance framework.

In the case of Africa, a special discussion of the domestic private sector is warranted. Africa is the frontier market for international capital. Because of globalization pressures, the domestic private sector will undergo an integration/formalization process. How should African Governments leverage such an opportunity from a DRM standpoint? Is there room for a “positive complicity” between African Governments and the emergence of a more formalized domestic private sector? Will policymakers be able to build domestic win-win situations around Africa's next frontier market opportunity? There is hope that African policymakers and the domestic private sector will recognize that the time has come for a national compact in terms of DRM, empowering national institutional investors,

⁴ Many of the Sustainable Development Goals (SDGs), ultimately, have to be publicly financed, because they have no returns associated with them for equity reasons, and/or because the cost of private finance would be too high for them, such as infrastructure, growth, etc.

⁵ High-level Advisory Board on Economic and Social Affairs.

combating illicit financial flows and actively promoting the development of national financial systems.

SUSTAINABLE FINANCING FOR SUSTAINABLE DEVELOPMENT

In Africa, sustainable financing is not one among other requirements for sustainable development; it is the core challenge. As the end of the first quarter of the twenty-first century draws near, sustainable financing is clearly the major missing piece of the sustainable development puzzle. There are other issues of course: (i) the nature of the political regimes (dictatorship versus democracy); (ii) the quality of governance; and (iii) peace. But all of these have been or are being addressed. Most African countries have adopted Western-type democratic regimes; good governance is becoming the rule; and endogenous efforts to promote peace in the continent have increased. In spite of this, Africa's paradigm still has not changed.

It is logical and advisable to conclude that something is missing in Africa's sustainable financing in terms of the sustainable development factor. "Africa is at the crossroads. The waning of the Africa rising scenario seems to be prompting a new sense of soul searching about the future of the continent. The rapid growth of the first 15 years of the 21st century led to renewed optimism about future prospects. Growth was high and the continent was hailed as the last frontier, overflowing with opportunities. Despite the exuberance, the quality of the growth was doubtful. Today, it is hard to point to many African countries that have successfully transformed their economies and that are on the path of sustained growth and development" (Duarte and Adesida, 2017b).

In order to tackle sustainable finance and fill in the missing piece of the sustainable development puzzle, policymaking in Africa needs to go beyond its technicalities and focus on its strategic and long-term dimensions.⁶ It is not only a

question of calibrating monetary, foreign exchange, fiscal or other policies; African policymaking needs a reboot in order to change the paradigm. It is now time to stop equating the business of managing poverty with development:

Africa must now shift its focus to retaining and creating wealth, better managing its own resources and fostering inclusiveness. This is a significant challenge. African policymakers over the years have become comfortable with managing poverty with the support of their development partners. The result is that the focus on poverty management has not left space for public policy to focus on growing and retaining Africa's wealth and to break the "business as usual" cycle in terms of public policies in Africa, particularly those related to development financing (Duarte and Adesida, 2017a, p. 4).

In the context of rebooting African policymaking in order to tackle sustainable financing for sustainable development, there are three key issues that need to be addressed: (i) debt management and the lack of control of economic and financial flows, a question of political leadership in Africa; (ii) strong domestic institutions able of changing Africa's position in the regional/global value chains (R/GVCs), as a requirement for sustainable financing; and (iii) the adoption of de-risking strategies to enable the private sector to fully engage in terms of SDG financing and investment.

Key issue one: debt management and the lack of control of economic and financial flows—a question of political leadership in Africa

Africa's indebtedness is again at the centre of the debate. Various attempts coming from various actors have tried to draw attention to the emergence of a déjà vu risky situation, particularly in sub-Saharan Africa. The general perception is that the debt crisis of the 90s is coming back, and that probability has increased with the Covid-19 crisis. According to the United Nations Conference on Trade and Development (UNCTAD) (United Nations Conference on

⁶ The Bretton Woods Institutions also need to understand that sustainable financing for sustainable development goes beyond the technical dimension of policymaking.

Trade and Development, 2016, p. 2), in 2011–2013, the annual average external debt stock of Africa amounted to \$443 billion⁷ (22.0 per cent of gross national income (GNI)). Africa's external debt stock grew rapidly—by, on average, 10.2 per cent per year in 2011–2013, compared with 7.8 per cent per year in 2006–2009. The median debt ratio as a percentage of GDP has risen from 31 per cent in 2012 to 53 per cent in 2017 (Coulibaly, Ghandi, and Senset, 2019, p. 2). As a result, the World Bank has classified one third of the countries in sub-Saharan Africa as being at high risk of debt distress.

As Coulibaly, Ghandi and Senbet pointed out, “[t]o assess whether this time is different, it is important to examine the drivers of this debt buildup, the composition of debt, and its design features” (Coulibaly, Ghandi, and Senset, 2019, p. 2). According to them, two main factors, among others, explain the increase in debt since 2008: (i) the global financial crisis, and (ii) the 2014 terms-of-trade shock. As a result, economic activity declined, budget revenues fell, and primary fiscal balances turned negative. African countries had to begin dealing with huge financing restrictions and great difficulty in making ends meet. “Meanwhile, the low interest rate environment in the aftermath of the global financial crisis and investors’ search for yield facilitated access to capital markets for many countries for the first time. Large infrastructure needs, amid rapidly growing populations, also led several countries to issue debt to fill the financing gaps. Additional contributing factors included exchange rate depreciations and, in a few countries, poor governance and corruption” (Coulibaly, Ghandi, and Senset, 2019, p. 2).

To cope with the 2008 global financial crisis, the terms-of-trade shock, lower economic activity, negative primary balances, and huge infrastructure needs, policymakers in Africa adopted, as expected, debt issuance as one of the

main financing mechanisms. According to some literature, the pace at which debt has been accumulating is not sustainable and, consequently, the advice is to reduce it. This might be a misleading conclusion. The unsustainability does not stem from the pace and the size of the indebtedness process. Public debt was and is an unavoidable ingredient in coping with the global financial crisis and it is crucial as far as development finance is concerned. The debt unsustainability stems from the lack of control by African policymakers of the financial, fiscal and economic flows. This lack of control overflows is an indicator of the leadership profile that characterizes policymaking in Africa. The 53 per cent median debt ratio in 2017 is appropriate, in the sense that it is an expected result, taking into consideration the financial crisis in a context of huge infrastructure financing needs and strong population growth. What has not been appropriate is the lack of control over economic, fiscal and financial flows generated domestically.

A simulation could be done assuming that all IFFs, for example, are channelled to African revenues authorities for SDG investment purposes only. The “negative” assessment of the African indebtedness process would change radically. The median debt would be much lower. The control of economic and financial flows would allow developing countries—especially commodity-exporting economies—to make their external debt more manageable, increase the indebtedness space as well as create additional fiscal space for social expenditures, particularly human capital.

This different approach would deliver a change in paradigm. The first step, in order to stop misleading African policymaking, is to adopt a new conceptual framework for debt sustainability analysis (DSA). The DSA “black box”⁸ should become a DSA “open box”. Under the sensitivity analysis block, scenarios should be built⁹ assuming a hypothetical situation where IFFs become domestic

⁷ All dollars are US dollars, unless otherwise noted.

⁸ As identified by the World Bank/IMF DSA System.

⁹ In the same way other scenarios are built, for instance, assuming terms-of-trade shocks or the worsening of financial conditions.

resources. The increase in fiscal space¹⁰ associated with such calculations would help explain how DRM can play a determinant role in building sustainable financing for sustainable development. The debt measures and indicators used as early warnings of an impending debt crisis would change accordingly –a small but important detail.

Key issue one conclusion: For African policymaking to generate sustainable financing, the paradigm of debt management should change in this way: move the epicentre from the stock approach—the debt-to-GDP ratio—to the flow approach, which would allow control over economic and financial flows, generated domestically, that are needed to service the debt. To better understand this, it is important to make a distinction between debt management and debt calculation. From a debt calculation standpoint, there are three ratios used most of the time to classify a country’s (a) debt/GDP, which has a stock nature; and (b) debt service/budget revenues and (c) debt service/export revenues, which have a flow nature. However, the country debt classification is mainly based on the debt-to-GDP ratio versus a threshold, which means it essentially has a stock nature. Such a debt classification approach does influence debt management, in the sense that, once a country is classified, a set of policy recommendations is attached to it—most of the time with high levels of conditionality. Usually, economic and financial

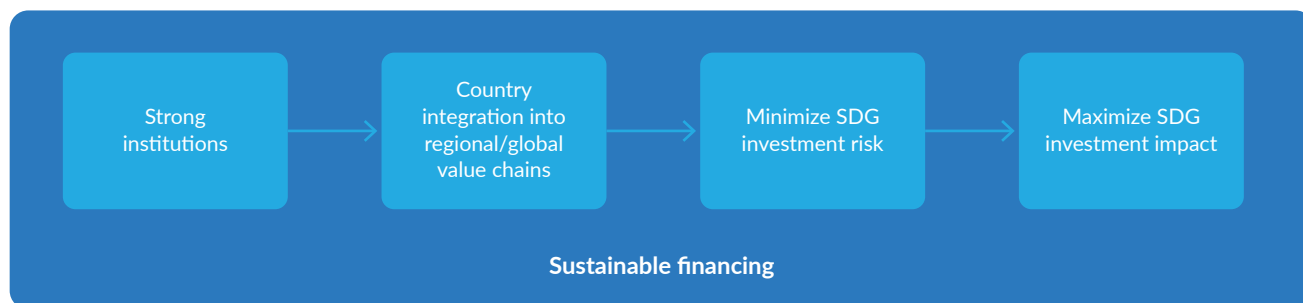
flows are not duly factored in. Otherwise, the African debt analysis would take into consideration IFFs and associated policy recommendations. African policymaking should be aware of this subtle issue and act accordingly, particularly with respect to socioeconomic infrastructure financing to unlock economic growth. Addressing this issue requires leadership that exercises ownership and is willing to move away from rent-seeking.

Key issue two: strong domestic institutions and regional/global value chains—the route to minimizing SDG investment risk and maximizing SDG investment impact

Key issue two contends that sustainable SDG financing requires minimizing SDG investment risk and maximizing SDG investment impact at the national level. It goes further, arguing that both require, among other elements, (i) a better and fair integration in the global value chains (GVCs) by African countries; and (ii) the active promotion of regional value chains (RVCs) by a consistent vision of Africa’s economic integration. Both demand strong national, regional and continental institutions (figure IV.1).

When addressing the potential of R/GVCs, the focus should be on both boosting domestic value added and improving access to resources and technology while also

Figure IV.1
From SDG investment risk to SDG investment impact



Source: Cristina Duarte, 2019.

¹⁰ The most immediately relevant would be the tax impact of reducing illicit financial flows.

advancing development goals. The integration into R/GVCs—by allowing the boosting of domestic value added and improving access to resources and technology—plays an important mitigating role in terms of minimizing SDG investment risk. In fact, R/GVCs are production and export diversification tools, giving African countries the possibility of moving away from the traditional export of unprocessed raw materials, which has proved to be a highly vulnerable growth model. The de-risking mechanism stems from the fact that a better and fair integration¹¹ in the R/GVCs enables African countries not only to position themselves into a specific phase of the production chain without having to produce a complete, final good, but also to be associated with higher domestic value added processes, which minimizes investment risk and catalyses investment impact.

Some developing countries, duly integrated into R/GVCs, have been able to leverage their integrated position to achieve rapid productivity growth, which is an important factor in assessing and mitigating investment risk. By de-risking SDG investments, their risk/return profile will improve, consequently making them more attractive to the private sector. The scaling up of private investment into SDG sectors and goals as a result of a de-risking strategy increases the potential of SDG investment impact.

It has not been easy for African policymaking to overcome the R/GVC entry barriers. According to the Global Value Chain Development 2017 Report, “[f]or the involvement of developing countries in GVCs, geography clearly matters. The world seems to have three interconnected production hubs for the extensive trade in parts and components...: one centered on the United States, one on Asia (China, Japan, Republic of Korea), and one on Europe (especially Germany)... Most African countries are far from existing hubs” (World Bank Group and others, 2017, p. 6). Trade

costs, weak transportation links, inefficient customs clearance, bureaucracy, and red tape combined with poor social and economic infrastructure have been impeding the development of a well-structured productive sector as well as the access to trade and consequently to GVCs.

The creation of the African Continental Free Trade Area (AfCFTA) could not be timelier. Overcoming today’s obstacles to regional economic integration, beyond the removal of tariff and non-tariff barriers, is definitely the route “to increase self-reliance and promote an endogenous and self-sustained development”.¹² Africa’s uncompetitive and marginal value added position in the GVCs, combined with a low intra-African trade (14.8 per cent in 2017) (United Nations Conference on Trade and Development, 2019), has been preventing the continent from the necessary mechanisms to mobilize financial resources for its own development. To give strategic priority to RVCs is not only obvious but smart, considering Africa’s resources and demographics as well as its growing middle class. Within this context, the role of domestic and regional institutions comes into play in driving AfCFTA and making sure African Union decisions are indeed implemented, rather than being added to the list of decisions without action. Improving institutions (Johnston, 1998, pp. 43-62) and lowering trade costs across the board through better infrastructure, control of corruption, reduction of red tape, and zero tariffs on imported inputs (including services) is a risk mitigant to SDG investment and consequently to SDG financing.¹³

Key issue two conclusion: To de-risk SDG investments in order to scale them up and be in a position to generate SDG impact, policymaking in Africa should invest heavily in strong developmental institutions aiming for fair and better integration in the R/GVCs. As the UNCTAD 2019 report states, “[d]evelopmental regionalism (a development-based

¹¹ Africa as a whole is already involved in GVCs. However, much of Africa’s participation in GVCs is in upstream production, with African firms providing primary inputs to firms in countries further down the value chain. Therefore, Africa should work for a fair and better integration.

¹² The Treaty Establishing the African Economic Community (Abuja Treaty). Available from https://au.int/sites/default/files/treaties/37636-treaty-0016_-_treaty_establishing_the_african_economic_community_e.pdf.

¹³ Putting in place strong domestic institutions such as revenue authorities, regulatory bodies, PPBES processes, Court of Accounts, banking systems, financial markets, innovation ecosystem, etc., has become a matter of survival for the SDGs in Africa.

approach to regional integration) in Africa is necessary to ensure sustainability in the continent's regional integration process, in order for it to culminate in the creation of an African economic community. Africa needs deeper integration that goes beyond preferential tariff liberalization alone" (United Nations Conference on Trade and Development, 2019, pp. 15–16).

Key issue three: sustainable finance for sustainable development—private sector engagement versus de-risking strategies, an opportunity for African countries

The implementation of the SDGs calls for a radical change in development finance. The SDG conceptual framework is a break from traditional development thinking. It not only puts together economic, social and environmental goals; the framework is structured to reflect its main and most important feature—the fact that the SDGs call for collaboration, not competition. This applies not only to States, but all stakeholders, particularly the multinationals, reflecting the complexity of the twenty-first century. This is a major shift in paradigm. Therefore, the challenge is much greater and more complex than a search for private finance.

As Mawdsley (2018) points out, "[t]he previous focus on raising donor contributions in the form of Official Development Assistance (ODA, or 'foreign aid') is being surpassed by the call for private finance to fund the SDGs". This new approach in the international policymaking area might signal too narrow a vision. The private sector should be seen as more than a provider of financing. It can bring more than financial resources. There is a set of intangible assets that belongs to the private sector's DNA which is strategic for SDG implementation: efficiency, productivity, global reach and technological innovation. The fact that private sector financing has not been approached along these lines might help explain why private sector mobilization is not happening at the required scale and why "private investments in the infrastructure of developing countries, at \$43 billion, are lower than they were in 2012" (United Nations, 2019, p. iii). Instead of decreasing, the financing gap is increasing.

If indeed private sector financing must become an important SDG financing source in moving from "billions to trillions," what is needed is private sector full engagement where private financing is just one of the results. For this to happen, the private sector should be given an SDG stakeholder status. A private sector with an SDG stakeholder status is an important precondition for the de-risking process of SDG finance and investment. It cannot be perceived sequentially; de-risk first and then mobilize the private sector. The private sector should be a major player in the re-risking process together with all stakeholders. The Business Roundtable, America's most influential group of corporate leaders, might have signalled this direction in its 2019 Statement of Purpose (box IV.1).

As Winston noted, "Shareholder primacy has been the core operating principle of public companies for about 50 years, since economist Milton Friedman famously declared 'the social responsibility of business is to increase its profits'. These ideas have been promoted for decades by a very well-funded and widely successful effort...to make free-market, shareholder-primacy, neoliberal philosophy the dominant global economic model" (Winston, 2019). He goes further, explaining why shareholder primacy can't solve current problems (box IV.2)

The new Business Roundtable's Statement of Purpose might signal a turning point in terms of private sector social responsibility towards development and the United Nations principle of leaving no one behind. Again, we might here be facing an opportunity wherein the private sector can be an SDG stakeholder. In fact, it seems that the "Business Roundtable is pulling from the idea of 'conscious capitalism,' which proposes that a company has a broader responsibility to society, which it can better serve if it considers all stakeholders in its business decisions" (MacLellan, 2019). The new statement of purpose "affirms the essential role corporations can play in improving our society when CEOs are truly committed to meeting the needs of all stakeholders.... [I]t is more critical than ever that business in the 21st century is focused on generating long-term value for all stakeholders and addressing the challenges we face,

Box IV.1 Business Roundtable Statement of Purpose

On August 19, 2019, the Business Roundtable, America's most influential group of corporate leaders, announced the release of a new Statement of Purpose signed by 181 CEOs who committed to leading their companies for the benefit of all stakeholders—customers, employees, suppliers, communities and shareholders. Since 1978, the Business Roundtable has periodically issued Principles of Corporate Governance. Each version of the document issued since 1997 has endorsed principles of shareholder primacy—that corporations exist principally to serve shareholders. The new Statement supersedes previous statements and outlines a modern standard for corporate responsibility. The 181 CEOs commit to:

- Delivering value to our customers. We will further the tradition of American companies leading the way in meeting or exceeding customer expectations;
- Investing in our employees. This starts with compensating them fairly and providing important benefits. It also includes supporting them through training and education that help develop skills for a rapidly changing world. We foster diversity and inclusion, dignity and respect;
- Dealing fairly and ethically with our suppliers. We are dedicated to serving as good partners to the other companies, large and small, that help us meet our mission;
- Supporting the communities in which we work. We respect the people in our communities and protect the environment by embracing sustainable practices across our businesses.

Source: Business Roundtable (Aug. 19, 2019).

Box IV.2 Rethinking the role of corporations

Business leaders are feeling pressure to rethink the role of business in society for a number of reasons. First, social norms are changing, and expectations from employees, customers, and even investors are rising fast. Second, there's a growing realization that a focus on one key stakeholder or metric is as flawed as using your cholesterol level as the only measure of your health. Third, investors...are increasingly pressing companies to focus on their purpose and how they contribute to society.... [F]ourth, and perhaps most importantly, the world faces enormous, thorny challenges that business is feeling: climate change, growing inequality (and awareness that these CEOs make hundreds of times more than their employees), water and resource scarcity, soil degradation and loss of biodiversity, and more. These issues require systemic efforts, cooperation, and pricing of those "externalities" (like pollution and carbon emissions) that business has been able to push off to society. The current shareholder-obsessed system is not fit for this purpose. Individual profit-maximizing businesses will not be incentivized to tackle shared global challenges.

Source: Winston (2019).

which will result in shared prosperity and sustainability for both business and society” (Business Roundtable, 2019). According to some global CEOs, “[c]ompanies must demonstrate their commitment to the countries, regions, and communities where they operate, particularly on issues central to the world’s future prosperity”¹⁴. This same idea is reinforced by Tomlinson and Tulay: “Companies are being asked by both investors and customers to better articulate their plans for making a profit and to do so in a way that doesn’t damage the planet. These demands are taking on new urgency as the implications of climate change become more severe and disruptive technologies transform industries” (Tomlinson and Tulay, 2018).

In this context, African countries, as suppliers of raw materials and consumers of manufactured goods, are big corporations’ stakeholders. Maybe this new statement of purpose creates the possibility to think “outside the box” in terms of fair and better participation in GVCs, as well as in terms of Africa’s marginalization from international finance markets. Both are critical issues in formulating de-risking strategies and consequently in mobilizing private financing. It is known that the drivers of private finance are distinctly different from the motivations of domestic public finance. Private sector firms seek investment opportunities based on risk/return considerations. To be effective in mobilizing private finance, African Governments need to master international finance market rules either to decrease perceived and actual risk or increase anticipated returns. Governments play a critical role in providing a conducive investment climate through (a) supportive governance structures; (b) transparency and accountability; (c) competition policy; (d) hard and soft infrastructure; and (e) instruments that foster healthy, commercially sustainable markets—all of which are important de-risking measures, but they are not enough. Most African countries, at different rates of speed, are on this same path towards building good governance. Nevertheless, access to international markets, in a sustainable way, is still out of reach.

“De-risking” remains the magic word, and the question of how to achieve it remains also. It can be stated upfront that de-risking involves much more than buying insurance, entering the derivatives and hedge instruments world, or hiring a financial consulting firm. Despite the fact that accessing international markets by African countries is an external challenge, a set of domestic conditions is required to meet it. African countries need to be internally prepared to play their role as SDG stakeholders at the same level as non-African stakeholders.

From an African domestic perspective, the first step under a de-risking strategy is the adoption of integrated national financing frameworks linked to Planning-Programming-Budgeting-Evaluation Systems (PPBES). The Financing for Sustainable Development Report 2019 (FSDR), spells out very well the importance of this approach: “Such country-owned financing frameworks bring together financing and related policies most relevant to addressing a country’s financing challenges. They look at the full range of financing sources and non-financial means of implementation that are available to countries, and lay out a financing strategy to raise resources, manage risks, and achieve sustainable development priorities” (United Nations, 2019, p. 11). In short, before having a de-risking strategy that indicates which international market instruments to buy in order to pass through sovereign risk, African countries need to have a country-owned financing strategy linked to PPBES, based on which they will be in a much better position to build win-win partnerships, particularly with the private sector.

The FSDR presents in a clear way the benefits of such an integrated approach. “By connecting financing and related policies with longer-term objectives, integrated financing frameworks can help overcome short-term oriented decision-making. They allow policymakers to exploit synergies and manage possible trade-offs across different policies. They help countries manage an increasingly complex financing landscape, and help mobilize different

¹⁴ Larry Fink’s 2019 Letter to CEOs, titled “Purpose & Profit”. Available from <https://www.blackrock.com/corporate/investor-relations/2019-larry-fink-ceo-letter>.

types of financing appropriate for country-specific characteristics and risks” (United Nations, 2019, p. 11).

This issue has become a matter of survival as far as sustainable financing for sustainable development is concerned. To tap international financial markets without having in place national institutional frameworks that allow African Governments to understand the full picture and control the process will not result in de-risking national environments for private SDG financing.

A last word about the role of ODA in the de-risking process: It has become clear that ODA amounts fell short when compared to Africa’s SDG financing needs. A growing role for ODA would be helping to set up strong institutions in charge of delivering PPBES and national integrated financing frameworks, and indirectly leveraging investment from business, venture capital, sovereign wealth funds, and other non-state sources.

Key issue three conclusion: The implementation of the SDGs calls for a radical change in development finance, where private sector full engagement (beyond financing) is

crucial for moving from billions to trillions. The rethinking of the role of corporations towards societies might be an opportunity to leverage the call for a radical change in development finance. In order to do so, and within the efforts to implement de-risking strategies, African countries should adopt integrated national financing frameworks linked to a PPBES, based on which they will be in a much better position to build win-win partnerships, particularly with the private sector.

DOMESTIC RESOURCE MOBILIZATION: A MATTER OF SURVIVAL FOR SDG FINANCING IN AFRICA

Any debate about sustainable financing for sustainable development in Africa should have as its starting point three simple and obvious facts: (i) Africa is resource-rich and has a huge base of potential financial resources, which, if harnessed, are sufficient to meet a significant portion of the continent’s development needs; (ii) in spite of its beneficial impact over the years, ODA is not only insufficient to meet

Table IV.1
Financial flows and tax revenues to Africa, 2004–2016
(Billions of United States dollars, current)

		2004-08	2009	2010	2011	2012	2013	2014	2015e	2016p	
Foreign	Private	Inward foreign direct investments (FDI)	42.8	55.1	46.0	49.8	49.7	54.2	49.4	57.5	66.3
		Portfolio Investments	7.5	1.2	32.7	21.0	32.3	22.8	23.1	13.4	15.2
		Remittances	36.7	44.9	52.5	57.0	61.9	61.2	63.8	64.6	66.4
		Commercial bank credit (net)	0.5	-1.3	-1.7	0.8	1.8	4.5	3.8	0.5	-1.2
	Public	Net official bank credit flows (bilateral and multilateral)	-1.0	11.0	14.8	14.5	14.0	23.3	17.8	16.0	21.0
		Official development assistance (net total, all donors)	39.0	48.0	47.7	51.5	51.1	56.7	54.2	56.4	58.7
		Total foreign flows	125.5	158.9	192.0	194.8	210.7	222.8	212.2	208.3	226.5
Domestic	Tax revenues	281.0	302.9	367.8	453.2	458.8	468.5	461.2			

Notes from the source: i) ODA estimates (e) and projections (p) are based on the real increase in country programmable aid (CPA) in OECD (2016). The forecast for remittances is based on the projected rate of world growth according to the World Bank; ii) Authros’ calculation based on IMF (2014b, 2015c), OECD (2016) and African Economic Outlook data, World Bank (2015b)

Source: AfDB, OECD and UNDP (2016), page 53.

Africa's development needs, it will not be the route to Africa's transformation; and, therefore, (iii) the continent must break with the past and look within, relying on its own domestic financial¹⁵ resources for sustainable solutions to its development finance needs (Elhiraik and others, 2019).

Rebooting development finance in Africa has become the core challenge. Africa will not achieve structural transformation relying only on external financing because such transformation depends on getting and preserving policy space. Africa's policymaking for development finance will have to give the driver's seat to domestic resources mobilization. Despite the conventional wisdom that Africa's own resources are marginal in terms of development financing, there is evidence that the fundamentals for mobilizing more domestic resources exist in Africa. "Evidence" is the important word here. Some African countries are heavily dependent on aid. However, the aggregated numbers tell a different story. The largest source of financing for the continent's development programmes is domestic resources, including taxes and savings. Aid is not the dominant source of development finance for the continent. Table IV.1 shows that tax revenues are a substantial source of financing, and it represents more than two thirds of the total financial resources (African Development Bank, Organization for Economic Cooperation and Development and United Nations Development Programme, 2016, p. 53). In 2014, for example, \$461.2 billion was collected in tax revenues against only \$54.2 billion in ODA (table IV.1).

Despite the 500 billion dollars (ODA plus tax revenues), the gap in development financing in Africa is huge and has become a major constraint to socioeconomic transformation. We can even go further and state that the lack of sustainable development stems from the lack of sustainable finance. To understand this link is crucial to addressing the challenges posed as a result of its inadequate infrastructure, which has become a major obstacle to investments, regional integration, intra-Africa trade, and technological innovation.

The question therefore is "What should African policymakers do in order to substantially increase domestic development financing over a sustained period of time?" (Duarte and Adesida, 2017a, p. 5).

First, African policymakers should be conscious of the following: Sustainable financing is not the ability to issue Eurobonds every two to four years and get them oversubscribed by international financial markets due to positive outlooks by Standard and Poor's. Development finance is not a technical problem; it is not a question of creating or adopting innovative financing mechanisms proposed by investment banks. Development finance is essentially a political and strategic challenge. Independent of technical solutions, policymakers must have a consistent political commitment and take a long-term strategic approach.

Second, African policymakers must understand that development cannot be outsourced and proceed accordingly. African leadership must lead effectively and, in order to lead, must exercise ownership to build the necessary and indispensable institutions for domestic resource mobilization—a challenge that requires vision, strong institutions, accountability and transparency.

Third, Africa's development environment has the key elements or fundamentals to support a robust drive to mobilize domestic resources. The Addis Ababa Action Agenda accurately states that domestic resource mobilization is first and foremost generated by economic growth. But, in the case of Africa, such a statement cannot be adopted as a starting point for DRM policies; it might push for a "let's grow first and mobilize internal resources later" approach. With high informal economies and huge illicit financial outflows, this approach might take policymaking in the wrong direction.

Achieving sustainable finance for sustainable development in Africa also demands an intangible dimension: developmental institutions (figure IV.2).

¹⁵ Not only financial, but also natural resources physical flows.

Figure IV.2

The domestic resource mobilization value chain



Source: Source: Duarte (2020).

Note: Infrastructure financing is not the only contributing factor in the DRM value chain. But, it does play a major role in unlocking the development and economic growth of Africa.

Countries must lead in mobilizing and spending their domestic resources. Most of the available literature on DRM analyses the revenue/inflow side but not the expenditure/outflow side. This chapter argues that any DRM process should start by setting up efficient public expenditure and treasury management systems. Mobilizing resources entails not only obtaining “fresh” money (e.g., more budget revenues), but also generating savings within the budget through better expenditure management (e.g.,

cutting oil subsidies). Therefore, to measure the efficiency and effectiveness of DRM systems from a development finance standpoint, policymaking needs to tackle not only the aspects related to the revenue (budget and non-budget) mobilization process (tax revenues, domestic savings, capital markets and IFFs) but also, and even more important, the quality of the expenditures undertaken with the financial resources mobilized must be improved. Otherwise, we might find ourselves “pouring water in a basket full of holes”.

Box IV.3 Best allocation of resources leads to pro-development financing: the case of Cabo Verde

The 2008 international financial crisis hit Cabo Verde strongly by shrinking its external demand and consequently affecting budget revenues. The first-year plan to cope with the immediate effects of the crisis was centered on the expenditure side of the budget, focusing on how to free resources and channel them to support families, particularly the most vulnerable, and how to support the private sector, particularly small and medium-sized enterprises (SMEs). To get a short-term result in terms of generating budget savings, unnecessary and distorted subsidies are usually a good route, and this is what Cabo Verde did. Oil subsidies were cut by aligning domestic oil prices with international ones, which generated a savings of 8 per cent of the recurrent expenditures. These budget savings were allocated to social expenditures, benefiting the most vulnerable people; to the reduction of corporate and income taxes, to help the private sector and families to cope with the international crisis; and to capital expenditures for socioeconomic infrastructure, as follows:

- I. Increase of social expenditures:
 - a. increase of the social pension by 285 per cent;
 - b. enlargement and consolidation of the social security system (no contributive component) by 50 per cent;
 - c. universalization of the contributive component of the social security system by incorporating all civil servants, their family members, housekeepers, householders farmers, and SMEs; and
 - d. increase of scholarships, school transportation, school feeding, and school kits;
- II. Reduction of corporate and income taxes:
 - a. decrease corporate tax from 30 per cent to 25 per cent;
 - b. decrease SME tax from 20 per cent to 15 per cent and;
 - c. decrease income taxes from 45 per cent to 35 per cent (highest bracket) and from 15 per cent to 11 per cent (lowest bracket)
- III. Increase the domestic financing component of capital expenditures in order to better leverage external concessional financing for infrastructure investment.

These policy measures have been successfully implemented because they were combined with the reengineering of the public financial systems, namely: (i) full digitalization of budget execution; (ii) reinforcement of the financial control function of the ministry of finance; (iii) consolidation of treasury single-account principle.

Source: Duarte, 2014.

In this context, this chapter uses an extended concept of DRM (budget (both sides of the budget) and non-budget): (i) public expenditures; (ii) budget/tax revenues; (iii) domestic savings; (iv) capital markets; and (v) illicit financial flows.

(i) The quality of public expenditures: a source of pro-development finance. The first route to expand the budgetary resources available for development financing is to improve the efficiency of government spending by cutting poorly designed public expenditures. The adoption of well-structured and customized PPBES based on performance metrics and monitoring, as well as the set-up of independent oversight structures, is unavoidable. In most situations, the way to turn a primary balance positive in the short term is through better government spending. Cabo Verde provides a good example of how the re-engineering of public finance management systems, through best allocation of resources, can lead to pro-development financing (box IV.3).

The International Monetary Fund (IMF) has knowledge of Cabo Verde’s policy response to the 2008 international crisis in the following way: “The authorities have responded to the global crisis by easing fiscal policy and tightening monetary policy. They have reduced income and corporate taxes, accelerated public investments, and increased priority spending. At the same time, to partly compensate for the impact on revenues from tax cuts, lower import duties on fuel, and weaker activity, they improved tax collection. They have also reduced nonpriority current spending” (International Monetary Fund , 2009, pp. 4–5).

(ii) Budget/tax revenues and tax administration: need to act on the “low-hanging fruit”

Tax revenues are a determinant factor in achieving the SDGs—not as much for the potential amount of financing they generate compared to financing needs, which can never be underestimated, but for the fact that tax revenues

Table IV.2
Infrastructure investment needs versus institutional investors/African pension funds

Infrastructure investment needs	Institutional investors/African pension funds
<ul style="list-style-type: none"> • Africa-associated SDG investment needs are estimated at about \$600 billion-\$700 billion a year • About \$130 billion-\$170 billion would need to be invested annually into African infrastructure up to 2025 	<ul style="list-style-type: none"> • Global institutional investors have about \$120 trillion in assets under management • Within Africa, the assets under management of domestic institutional investors are expected to rise to \$1.8 trillion by 2020 from \$1.2 trillion in 2017 • African pension funds’ assets under management in 12 African markets will rise to about \$1.1 trillion by 2020, from \$676 billion in 2017 • Based on asset size as a percentage of GDP, the top three pension funds on the continent are in South Africa (87.1%), Namibia (76.6%) and Botswana (47.3%). Currently South Africa holds about \$207 billion in assets, but strong growth is coming from other parts of the continent. In Nigeria, where regulatory changes were implemented in 2006, pension funds have managed to accumulate over \$20.2 billion in assets, and Ghana’s pension fund resources reached \$1.6 billion in 2016
<p>Conclusions:</p> <ol style="list-style-type: none"> 1. The \$75 billion currently invested yearly is therefore insufficient. There is still an estimated infrastructure funding gap of about \$67.6 billion-\$107.5 billion (average \$94 billion a year over 2017-2027) 2. Only about 0.1 per cent of the global assets and 12.0 per cent of African institutional investors’ assets would be needed to bridge the continent’s annual \$107 billion infrastructure gap 	

Source: Author’s table with information taken from Juvonen and others, 2019.

are a key factor in ensuring national ownership of public policies and of domestic physical, fiscal and financial flows (Duarte, 2015). Importantly, these revenues allow a country to move towards financial control and to expand its policy space. To achieve this, leadership needs to be exercised in order to set up the required institutions with a high level of committed human capital. It is much more than creating a national revenue authority, and the traditionally high level of informality is not an obstacle to raising revenues in the short term. In fact, to further increase their tax revenue, African countries do not need to rely on raising the tax rate to compensate for the level of informality. The first step is to improve tax administration and consequently increase the taxpayer base by combating fiscal evasion in the formal side of the economy. The second step is to rationalize tax exemptions so that the tax system is linked to the country's growth engines, particularly the tax exemptions granted to multinational corporations in the extractive sector. These "simple" statements require, above all, combating inefficient public policies and ineffective and illicit administrative practices, and moving away from excessive reliance on trade taxes.¹⁶

(iii) Domestic savings: generation vs mobilization

The common perception is that domestic savings in Africa are low, as a result of a multitude of factors, and consequently investment rates are also low. According to World Bank data, Africa's gross savings-to-GDP ratio was about 18 per cent in 2018, compared to 43 per cent in East Asia and the Pacific and 31 per cent for middle-income countries.¹⁷ This perception must be challenged because it entails a two-fold contradiction: first, if Africa produces a huge amount of illicit financial flows, it should not have such a low rate of domestic savings; second, despite reasonable pension fund assets (table IV.2), Africa is viewed as not producing adequate long-term capital to feed infrastructure investment. This perception, however, does not match reality. Africa is able to generate reasonable levels of long-term savings but unable to mobilize them towards development finance. It is important to distinguish the causes behind the generation of savings from those behind the mobilization of savings. Therefore, any explanation for the low level of savings that points to the high level of informality in African economies might mislead policymaking. The possibility of formalizing the informal is not low-hanging fruit from a domestic savings standpoint. Before focusing on the informal sector,

Table IV.3
Illicit financial flows from developing countries, by region, 2004–2013
 (Billions of nominal US dollars or average share of total illicit flows)

Region	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Cumulative	Average Share
Sub-Saharan	32.5	51.9	56.4	77.0	78.6	85.0	78.0	74.3	66.7	74.6	675.0	8.6%
Asia	174.6	191.9	209.1	236.5	277.5	277.1	381.7	361.1	456.7	482.0	3,048.3	38.8%
Developing Europe	107.3	118.4	133.8	190.6	233.8	204.9	221.8	295.5	242.5	250.4	1,998.9	25.5%
MENA+AP	29.9	31.0	33.3	57.4	80.3	51.9	53.0	81.1	68.2	70.3	556.5	7.1%
Western Hemisphere	120.9	131.4	111.0	137.7	157.8	128.1	172.0	195.8	201.8	212.8	1,569.3	20.0%
All Developing countries	465.3	524.6	543.5	699.1	828.0	747.0	906.6	1,007.7	1,035.9	1,090.1	7,847.9	

Source: Kar and Spanjers, 2015, p. 5.

¹⁶ Nearly 45 per cent of tax revenues come from import-based taxes, particularly for countries that are not resource rich, despite the high level of trade mis-invoicing.

¹⁷ World Bank data, accessed on April 21, 2020.

Table IV.4
Illicit financial flows to GDP
(Percentage of GDP)

Region	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
Sub-Saharan Africa	5.4	7.3	6.9	8.0	7.1	8.1	6.1	5.2	4.4	4.7	6.1
Asia	5.0	4.7	4.3	3.9	3.8	3.4	4.0	3.2	3.6	3.5	3.8
Developing Europe	6.2	5.5	5.2	5.8	5.8	6.4	6.0	6.8	5.5	5.4	5.9
MENA+AP	2.4	2.0	1.9	2.7	3.1	2.2	1.9	2.5	2.0	2.1	2.3
Western Hemisphere	5.4	4.8	3.5	3.6	3.6	3.1	3.4	3.3	3.5	3.6	3.6
All Developing Countries	5.0	4.7	4.1	4.3	4.2	4.0	4.0	3.8	3.7	3.7	4.0

Source: Kar and Spanjers (2015), p. 12.

in terms of savings mobilization, African Governments should tap into other savings sources that are already in the formal side of the economy and producing a huge amount of lost and hidden flows. Capital flight does indicate a low level of savings mobilization but a high level of savings generation. By tapping into these formal sources of savings, Governments would make a major contribution to the liquidity of the banking system, crowding in private sector financing/investment—the only route to formalization and consequently to unlocking additional sources of savings (Ndikumana, 2015).

(iv) Capital markets: a paradox

Socioeconomic transformation requires long-term capital. Most of the long-term capital in Africa has been provided by external sources of financing, where multilateral development banks have played a leading role. More recently, some African countries have been tapping international capital markets, through bond issuance, particularly after the 2008 international crisis. Private equity financing and commercial banking finance are still marginal alternatives, except for financing from China. Here is another paradox: Africa needs long-term capital for its socioeconomic and structural transformation. The financing

gap is huge, more than \$70 billion annually (table IV.2). At the same time, Africa possesses various long-term financial resources locked in different entities such as pension funds, sovereign wealth funds, central bank reserves, and remittances. While these funds are placed in capital markets around the world, Africa is busy “begging” for financing, neglecting the development of domestic financing markets (capital markets and banking systems), an important tool in galvanizing domestic savings.

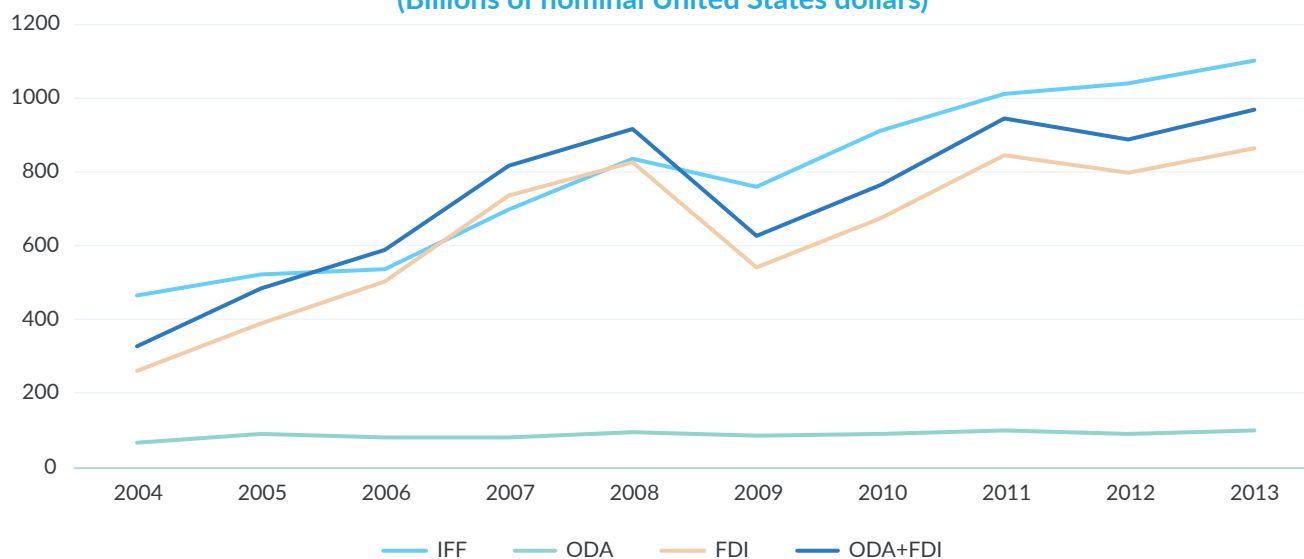
The low capital market capitalization,¹⁸ which results from a low level of financial intermediation and DRM, carries a huge opportunity cost from a development financing standpoint. To promote credible and well-structured capital markets, namely at a regional level due to economies of scale, based on strong and effective regulatory institutions as well as pragmatic public policies, is now a policymaking priority for capturing the liquidity of African institutional investors. The availability of long-term development finance will significantly benefit from the emergence of robust capital markets, including stock and bond markets in Africa.

(v) Illicit financial flows: an avoidable issue

After an ambiguous period, where the subject was avoided

¹⁸ Africa’s market capitalization grew from \$300 billion to \$1.4 trillion between 1996 and 2017.

Figure IV.3
IFFs, ODA and FDI, 2004–2013
(Billions of nominal United States dollars)



Source: Kar and Spanjers (2015), p. 15.

in public forums, the phenomena of illicit financial flows are now recognized worldwide as an important obstacle to development finance. According to the Global Financial Integrity 2015 study (Kar and Spanjers, 2015, p. 5), in the period 2004–2013, the developing world as a whole lost \$7.8 trillion (table IV.3).

There is no single, agreed definition of IFFs. The United Nations Economic Commission for Africa considers IFFs to be all money that is illegally earned, transferred, or utilized, including the proceeds of theft, bribery and other forms of corruption by government officials; proceeds of criminal activities, including drug trading, racketeering, counterfeiting, contraband and terrorist financing; and proceeds of tax evasion and laundered commercial transactions (Elhiraika and others, pp. 25–26). In a recent paper, Cobhan and Janský (2017) have presented the following definition: “Illicit financial flow’ (IFF) is an umbrella term for a broad group of cross-border economic and financial transactions, of which the common element is not illegality but the use of financial secrecy to remain hidden from public

and regulatory view” (Cobhan and Janský, 2017, p. 2). According to them, “[to] take a specific example, commercial tax evasion affecting a low-income country where the tax and customs authorities have limited administrative capacity is much less likely to be either uncovered or successfully challenged in a court of law than would be the same exact behavior in a high-income country with relatively empowered authorities. A strictly legal definition of IFF is therefore likely to result in systematically—and wrongly—understating the scale of the problem in lower-income, lower-capacity states. For this reason, a narrow, legalistic definition of IFF should be rejected” (Cobhan and Janský, 2017, p. 2). From a policymaking standpoint, this last definition provides a highly effective concept.

The 6.1 per cent proportion of IFFs to GDP gives the real dimension of this phenomenon in sub-Saharan Africa (table IV.4). IFFs were above ODA flows in the period 2004–2013; in 2009, they were above ODA and foreign direct investment (FDI) flows combined (figure IV.3).

In 2013, \$1.1 trillion flowed illicitly out of developing countries, while those countries received \$99.3 billion in ODA. In 2013, for every dollar in ODA and FDI flows entering the developing world, over \$10 exited illicitly. This has held true since 2010, underscoring the fact that illicit financial outflows remain a central challenge for developing countries (Kar and Spanjers, 2015, p. 15).

Everybody knows that IFFs are “invisible” mechanisms, negatively affecting domestic resource mobilization and hindering Africa’s efforts in terms of development financing and limiting Africa’s chances for structural transformation. According to the World Bank, “IFFs pose a huge challenge to political and economic security around the world, particularly to developing countries. Corruption, organized crime, illegal exploitation of natural resources, fraud in international trade, and tax evasion are as harmful as the diversion of money from public priorities. Illegal logging, fishing, and mineral extraction are strongly connected with deforestation, the depletion of fishing stocks and environmental degradation as well as the impoverishment of individuals and communities who rely on those resources to sustain their existence” (World Bank, 2017). In short, IFFs impact negatively on collection of tax revenues and perpetuate Africa’s economic dependence on external aid. As such, effective DRM cannot be discussed or resolved without curtailing IFFs. The fact that it is difficult to precisely measure IFFs, or that they have various definitions, cannot be an excuse for the lack of a global compact—particularly given that there are emitters and receivers for fighting IFFs.

In the light of discussing DRM and IFFs, the opportunity to mention the current global health and economic crisis caused by COVID-19 should not be missed. In the past three months, international organizations, consulting companies, academics and think tanks have engaged in dedicated communication regarding the pandemic situation. Most of them believe that the impact in Africa could be devastating, to lives, livelihoods, SMEs, corporations, national budgets, debt burden, balance of payments and international reserves; this list could go on. The truth is that, once again, Africa faces, in a painful way, the probability of

losing what it has achieved in the past 20 years because the strong economic growth of the past has not resulted in human capital investment or, consequently, in structural transformation. Despite a clear identification of what to do, the reality is that the majority of countries in sub-Saharan Africa have no money and no institutions to cope with the health and economic crises.

McKinsey & Company, in its last article about COVID-19, has displayed some striking figures. “African health systems are ill prepared for a widespread outbreak. The entire continent may have just 20,000 beds in intensive care units (ICUs), equivalent to 1.7 ICU beds per 100,000 people. By comparison, China has an estimated 3.6 ICU beds per 100,000 people—while the United States of America has 29.4. And while there are shortages of ventilators in many parts of the world, that shortage is particularly acute in Africa. There are an estimated 20,000 ventilators across the continent, far too few to manage large numbers of COVID-19 cases; excluding North Africa and South Africa, the rest of sub-Saharan Africa might have as few as 3,500. By comparison, the United States, with one third of Africa’s population, has up to 160,000 ventilators” (Jayaram and others, 2020).

Globally, the health crisis is evolving into a financial and economic crisis. Africa is the least prepared continent for both. The impact in terms of jobs, household incomes, malnutrition, extreme poverty, and social stability might be huge. Completely unexpected, a virus could push Africa into a socioeconomic recession much more severe than that of 2008.

It seems that the short-term measures to cope with this double crisis are well identified. African countries need to mobilize a huge amount of financial resources in a very short period to finance not only the health system to cope with the virus (\$100 billion) but also the fiscal stimulus package to cope with the economic crisis (\$100 billion). This also begs the question of what to do after the short term. Africa now regrets not having strong DRM systems, having allowed huge IFFs, not having quasi-universal social protection systems, not having dynamic domestic or

regional capital markets. Again, the list could go on. Crises test policymakers' and leaders' ability to think and plan long term and the quality of governance in terms of consistency and persistency of policies. Some African countries are much better prepared than others; usually, those are the countries where human capital investment—that is, in education, health, water and sanitation, social protection, housing and electricity—has been a priority.

As important as financial resources, Governments need functional institutions and country systems in place to deal with the devastating impact, socially and economically. Otherwise, the negative short-term impact becomes a long-term recession. African policymakers need to be conscious that short-term measures address short-term needs and not long-term vulnerabilities. Therefore, the root of the problem remains the lack of resilience of African households to cope with any type of shock. Going further, Governments do not have to cope with crises, societies do. Governments should, through policymaking, make societies resilient.

Having said that, and considering the size of the crisis, African policymakers might be facing the imperative of a policymaking reboot. The imperative becomes the opportunity. Disruption of GVCs, demand-side shocks, a decline in commodity prices, decrease in FDI, increase in capital flight, strong budgetary pressures (revenues and expenditures) and job losses (again, the list could go on) makes the change in policymaking an imperative. Otherwise, the short-term negative impact of COVID-19 could translate into a long-term socioeconomic recession, erasing the achievements of the past 20 years. Africa should not miss this opportunity to reshape its development.

AFRICAN SUSTAINABLE FINANCING NEEDS A DIFFERENT MULTILATERALISM

On one hand, the international context has been adverse for multilateralism; on the other, multilateralism, duly rebooted, is absolutely essential to overcoming the adverse international context. This is becoming a trap.

In the FSDR 2019, the United Nations Secretary-General noted that

[g]lobal growth has peaked at 3 per cent, and debt risks are rising. Real wages have risen only 1.8 per cent, the lowest in a decade, and most of the world's people now live in countries with increasing income inequalities. Trust in the multilateral system itself is eroding, in part because we are not delivering inclusive and sustainable growth for all.... Given these broad trends, it is clear that the world will not achieve the Sustainable Development Goals without a fundamental shift in the international financial system that enables us to address urgent global threats and restore trust in international cooperation. Action is needed at all levels. Our shared challenge is to make the international trading and financial systems fit for purpose to advance sustainable development and promote fair globalization (United Nations, 2019, p. iii).

This idea is further reinforced in the FSDR Overview: "The international community should make use of this opportunity to reshape both national and international financial systems in line with sustainable development. If we fail to do so, we will fail to deliver the 2030 Agenda" (United Nations, 2019, p. xvii).

Due to the COVID-19 pandemic and its ramifications, the above statements have taken on greater import. A global threat such as this puts pressure on a multilateral system—a system in whom trust has eroded due to the fact that it has failed to deliver inclusive and sustainable growth over the past 40 to 50 years.

Given this context, how should African policymakers position themselves? This question poses a serious challenge, considering that African sustainable financing requires not only addressing globalization as a source of distrust, but also embracing multilateralism as a key success factor.

Regarding globalization, it is widely accepted that it has not delivered fair outcomes, and there is a lack of accountability from global players. According to some literature, the 2008 financial crisis was a result of more than 30 years of unfair globalization. The prevailing sentiment is that citizens have been betrayed by Governments that not only failed to prevent the crisis, but also failed to implement a

fair, transparent and accountable recovery plan; and that democratic institutions have been hijacked by financial capital, marginalizing vulnerable people to an even greater degree. Distrust, particularly in the international trade arena, is more-than-expected outcome. After five years into the implementation of the SDGs with very few results, it has become clear that “globalization will not receive sustained, broad support unless it is based on free and fair trade and investment practices. That means being willing to update rules and institutions commensurate with the growing sophistication and complexity of the global economy” (Lipton, 2018). Building common ground around this understanding is imperative. To do so, a set of important observations may help.

First: Globalization reflects the essence of the capitalist system, where markets shape humanity. The market cycle—invest, produce, sell, realize the profit, accumulate and invest again—needs ever-increasing economic space to keep going. The emergence of Africa as the new market frontier is a result of this ongoing need.

Second: Poverty alleviation is not an inherent of globalization but a by-product. In the process of “conquering” new economic space and generating economic growth, populations are transformed when workers can access a permanent income that allows them to move above the poverty line. But at the same time, the value added that is created through globalization mechanisms is subjected to a process of wealth concentration that pushes billions into poverty. This explains why, at the same time, globalization has opposing effects: billions of people have gained from globalization (“workerization”) and billions of others have been left behind (wealth concentration).

Third: By its nature, capitalism, does not produce checks and balances, so globalization does not either. Leaving it completely free, as has happened in the past 40 years, globalization is a mechanism of producing imbalances. Assuming that globalization will not change nature, these imbalances need to be managed at a global and national level through strong global and national governance frameworks.

These observations are important to understanding the relationship between globalization and multilateralism and how international policymaking has been structured to play a double function:

- I. The first function is to pave the way to globalization. This has been done essentially by the international finance players within the multilateralism arena; and
- II. The second function is to take care of the imbalances, particularly poverty, inequality, inclusion, income distribution, and most recently, climate change and environmental sustainability. This has essentially been done by the United Nations system.

Multilateralism is organized around these two functions. The second function results from the first, in the sense that globalization needs international policymaking mechanisms to keep it within certain sustainable borders. Once these sustainable borders are not respected, imbalances find fertile ground to grow and threaten world stability, creating a strong sentiment of distrust towards the second function of multilateralism, fulfilled in large part by the United Nations system.

Regarding the “paving-the-way” function, multilateralism has worked very well through, essentially, the IMF, the World Bank, the World Trade Organization, and the adoption of massive (neo) liberal policies that have resulted in the building of GVCs dominated by multinational companies. In fact, by 2008 trade was already 60 per cent of world GDP.

Regarding the “taking care of the imbalances” function, things have not worked so well, which explains the MDGs as unfinished business and the slow pace of the SDGs. In fact, it has not worked so well for either developing or developed countries. Since 1970, inequalities have increased in the advanced economies, which have seen strong economic growth, a strong productivity increase, and stagnant labor income. For instance, for 90 per cent of the population in the United States, income has grown less than 0.5 per cent per year on average between 1979 and 2013, despite the fact that the productivity of goods and services in the grew

by over 240 per cent. In Europe, there has been a structural increase in the ratio of capital to income since World War II. And the 2008 international crisis did not revert this trend: \$4 out of every \$5 of the increase in global wealth in 2017 accrued to the top 1 per cent of the population. Income concentration between 2000-2010 was equal to income concentration in the period of 1910-1920. "From 1990 to 2010, after accounting for population size, the average income inequality in developing countries increased by 11 per cent. A substantial majority of households in developing countries—more than 75 per cent of the population—live in societies where income is more unequally distributed than in the 1990s" (Prabhu and Iyer, 2019, chap. 5).

According to available literature, the reasons behind the low performance of the "take care of the imbalances" function are well known, such as

- The deficit in the international regulatory framework which paves the way to vested interests to consolidate their advantage;
- The lack of global collective political leadership combined with a lack of global accountability towards the millions of people below the poverty line. Multilateral bodies have not been empowered to address this, and consequently are not accountable,

which might explain the MDGs as unfinished business and the slow implementation of the SDGs;

- The huge difference between the pace of decision-making between multilateral bodies and multinationals. The fastest shapes the world. Multilateral organizations have been held hostage by inflexible and inefficient decision-making processes which, in reality, are a silent mechanism to prevent the acceptance that a new international economic order is emerging and changing the global governance framework;
- Without a global collective political leadership and inefficient decision-making processes, distrust has emerged in bedrock institutions, global and national.

Distrust is one of the indicators of the mismatch between the Bretton Woods multilateralism model and the emergent new international economic order. As we all know, multilateralism does not create international economic orders; economic orders emerge from the historical correlation of forces. Multilateralism manages those forces. The United Nations system is just in the middle of this "hurricane".

The High-level Advisory Board on Economic and Social Affairs has been debating these issues. The questions under

Box IV.4: African Union reforms and the reinforcement of multilateralism

A road map based on five pillars was approved by the African Union (ASU) Summit in January 2018 in order to build a more relevant African Union (AU) and consequently a strong global player in the multilateral arena:

- The AU should focus on four strategic areas: political affairs; peace and security; economic integration and development; and global representation and voice.
- The AU Commission should be restructured to fit for the purpose: Agenda 2063 and improve its efficiency and effectiveness.
- The New Partnership for African's Development (NEPAD) should be fundamentally repositioned
- The Kigali Summit's financing recommendations should be implemented to ensure AU financial sustainability.
- The AU and the regional economic commissions should have explicit and complementary roles within the new strategic agenda

debate reflect very well what challenges multilateralism faces:

- What are the most effective means for promoting inclusive and sustainable globalization?
- How can the United Nations promote new global rules and solutions to make globalization more equitable, inclusive and environmentally sustainable?
- What are the key challenges for multilateralism today?
- What specific steps and means of implementation are needed to revitalize multilateralism?
- What would be the most effective, and politically feasible approach for the United Nations to restore confidence in the multilateral system?

There is a sense of urgency to rescue the “take care of the imbalances” function as a means to rebuild the trust of the United Nations system in the international policymaking arena, with the hope that this rescue would entail a fundamental shift in the international financial system and help pave the way to Africa’s sustainable financing. It is easy to say but it is difficult to do it. It might be advisable to start with a set of principles that, once accepted, would help build a convergence movement towards a common ground:

First, acknowledge the emergence of a new international economic order and the need to build the associated new global collective political leadership. **Second**, with a new global collective political leadership, the accountability principle would find fertile ground for returning to the international policymaking field, creating space for new global rules and solutions to deliver the 2030 Agenda. **Third**, this transition should be structured adopting the mutual gain principle, to be able to generate win-win situations and not zero-sum results. **Fourth**, the advances in technology should be treated as an ally and not as a threat. These advances are in a position to feed the emergence of this new international economic order bringing in a decentralization dimension to the process. In this respect, the African Union (AU) reform process might be a good example of how the reinforcement of regional multilateralism might contribute to reinforcing

global multilateralism. The AU reforms embodied in the Johannesburg and Kigali financing decisions, the January 2017 AU Declaration, and the Peace and Security reform process will be a positive contribution to the reinforcement of multilateralism, by reinforcing Africa’s one voice and the building of a global collective political leadership based on mutual gain. After undertaking various constraint analysis studies, the AU was able to clearly identify a road map (box IV.4) for organizational reform. It was important to understand why recommendations in studies and decisions by Heads of State were not implemented. Three main reasons have been identified: (i) poor stakeholder buy-in at all levels; (ii) insufficient monitoring and evaluation: and most critically (iii) the lack of a structured implementation process within the AU. To unlock the AU, Heads of State selected four main challenges to address: (i) AU fragmentation into too many focus areas; (ii) the complicated structure and limited managerial capacity of the AU, leading to inefficient working methods, poor decision-making, poor top leadership and lack of accountability; (iii) AU lack of financial sustainability, relying instead on partner funding for much of its financing; and (iv) inefficient coordination between the AU and the regional economic commissions.

SUMMARY: POLICY RECOMMENDATIONS

Sustainable development in Africa requires a change in paradigm. Sustainable development will be only achievable if African countries make internally driven sustainable financing the epicentre of policymaking. African policymaking needs a reboot in the sense that it is now time to stop equating the business of managing poverty with development. The result is that the focus on poverty management has not left space for public policy to focus on growing and retaining Africa’s wealth and to break the business-as-usual cycle in terms of public policies in Africa, particularly those related to development financing.

For sustainable finance to happen, five policy issues comprise the key success factors:

- I. **Stop equating the business of managing poverty with development.** “Africa must now shift its focus to retaining and creating wealth, better managing its own resources and fostering inclusiveness. This is a significant challenge. African policymakers over the years have become comfortable with managing poverty with the support of their development partners. The result is that the focus on poverty management has not left space for public policy to focus on growing and retaining Africa’s wealth and to break the ‘business as usual’ cycle in terms of public policies in Africa, particularly those related to development financing” (Duarte and Adesida, 2017a, p. 4);
- II. **Changing the paradigm of debt management.** Move the epicentre from the stock approach—debt-to-GDP ratio—to the flow approach, to get control over economic and financial flows, generated domestically, that are needed to service the debt, in order to make debt management an endogenous developmental and transformational tool. For this to happen, the adoption of integrated national financing frameworks linked to a Planning-Programming-Budgeting- Evaluation Systems is recommended;
- III. **De-risking SDG investments in order to scale them up and be in a position to generate SDG impact.** This requires policymaking in Africa to invest heavily in strong developmental institutions aiming for better and fair integration in the R/GVCs. By climbing the R/GVC path and boosting domestic value added, a country’s risk/return profile will improve the chances of attracting SDG financing.
- IV. **Fully engaging the private sector (globally and beyond financing) for a radical change in development finance.** Opportunity was created in 2019 when multinationals changed their purpose from shareholders’ value to stakeholders’ value, and identified environmental sustainability and prosperity for all as imperatives.
- V. **Recognize domestic resource mobilization as an unavoidable route,** as far as reclaiming policy space is

concerned, and by acknowledging and acting on these 5 realities:

- i. The need to recognize Africa’s huge base of potential financial resources, which, if harnessed, are sufficient to meet a significant portion of the continent’s development needs;
- ii. The quality of public expenditures as a source of pro-development finance;
- iii. The need to take advantage of the “low-hanging fruit” in terms of tax revenues, which will improve tax administration as well as rationalize tax exemptions. Informality is not an obstacle to increasing revenues in the short and medium term. There is plenty of room to do so in the (hidden) formal side of the economy;
- iv. The need to distinguish between domestic savings generation and domestic savings mobilization. Africa generates long-term savings. The challenge is to mobilize them. Such a distinction is crucial to handling the paradox of not having developed capital markets despite a reasonable amount of long-term financial assets.
- v. The need to curtail illicit financial flows to unlock domestic resource mobilization and move away from dependence on external aid. The COVID-19 crisis should serve as a global reminder of the urgency to do so.

All these policy issues are pre-conditions to

- I. Situating African countries as strong SDG stakeholders from an SDG investment risk and SDG investment impact standpoint;
- II. Presenting African countries as one voice in the geopolitical arena, calling for a different multilateralism where new global leadership paves the way to a fundamental shift in the international financial system that recognizes Africa’s sustainable financing as a global beneficial outcome.

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CHAPTER V



Decoupling: a key to achieving the Sustainable Development Goals

by Izabella Teixeira, Yi-Ann Chen and Victor Valido



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Photo credit: Mr. Predrag Vasic, UN DESA

Decoupling: a key to achieving the Sustainable Development Goals



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A NATURAL RESOURCES PERSPECTIVE ON THE SUSTAINABLE DEVELOPMENT GOALS

Almost all human activities depend on natural resources to a greater or lesser extent, directly or indirectly. However, in our pursuit of social and economic development, natural resources are not put sufficiently in focus. In reality, a long-term vision for the responsible management of natural resources is critical in ensuring socioeconomic resilience, and strategic to conceiving and achieving sustainability objectives in the twentieth century (International Resource Panel, 2020a). Current trends in natural resource use

determine future possibilities for meeting our basic needs and achieving the Sustainable Development Goals (SDGs). As we continue to disrupt critical Earth system processes, there will be ever-decreasing possibilities for realizing our ambitions of eradicating poverty and ending hunger.

For a long time, resource use was conceptually confined to the environmental domain. Fortunately, the research community increasingly recognizes that natural resource use is influenced by and involved in the complex patterns of interactions with socioeconomic, institutional, and human behavioural factors that cross over local, regional, and global scales of operation.

A report by Chatham House concludes that “[r]esource systems are closely interlinked at the local level and—through markets, trade and the global environment—increasingly at the global level too” (Lee and others, 2012, p. 4). For example, studies regarding the effects of food production and water stress on extractive activities in fragile regions show that armed conflict tends to rise among significant global suppliers of resources, which may then generate detrimental effects on industries along the entire supply chain (see Bleischwitz and others, 2013). This is but one illustration of the substantial interplay between natural resources and socioeconomic and geopolitical processes at various levels. Such interplay implies that challenges and opportunities involving the use of natural resources must be taken into consideration in policy processes and that global cooperation is required for the sustainable development of integrated socioecological systems.

Policymakers are also taking natural resource management into account in international forums and policymaking. For instance, the Group of Seven (G7) and Group of Twenty (G20) countries have, respectively, established the G7 Alliance for Resource Efficiency and the G20 Resource Efficiency Dialogue specifically to discuss these issues at the global level, and have requested specific scientific advice.

Five years after the adoption of the 2030 Agenda for Sustainable Development, progress can be seen among some of the global ambitions captured by the 17 SDGs, while many others are lagging behind. For example, while extreme poverty is diminishing (SDG 1), hunger is rising again, with 770 million people enduring severe food insecurity in 2017 (SDG 2). As we see a decreasing share of the population living in slums in urban areas, we also see a growing number of cities globally that are consuming unsustainable amounts of resources with high greenhouse gas (GHG) emissions; and more than half of the people living in cities around the world have experienced deteriorating air quality from 2010 to 2016 (SDG 11). Global health (SDG 3) is increasingly threatened by non-communicable diseases, which are affected by increasing severity of air pollution and insufficient water and sanitation (SDG 6), as

well as zoonotic diseases such as COVID-19, which alert us to the importance of preserving nature and biodiversity.

Since 2015, the share of waters enclosed in marine protected areas under national jurisdiction grew by 12 per cent, yet it is still not enough to overcome the negative impacts on socioecological systems related to overfishing and increasing ocean acidification caused by climate change (SDG 14). While key biodiversity areas covered by protected areas also increased, there are still about one million species threatened by possible extinction (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2019), many before 2030 (SDG 15). Regardless of the positive progress in climate finance flows, climate change is taking place at a rapid pace, with GHG concentrations reaching a record high since measurements began in 1958, and the impacts of climate change being felt around the world (SDG 13).

The year 2020 marks the deadline for 21 of the 169 SDG targets. Many of these targets are maturing due to their alignment with other United Nations agreements and plans that have a set 2020 time frame, such as the Convention on Biological Diversity (CBD). However, current global assessments demonstrate that the maturing targets cannot be fully reached. For example, the *Report of the Secretary-General on SDG Progress 2019: Special Edition*, published in conjunction with the SDG Summit 2019, held in New York in September 2019, clearly states that “...the 2020 targets of Sustainable Development Goal 15 are unlikely to be met, land degradation continues, biodiversity loss is occurring at an alarming rate...” (United Nations, 2019 p. 25).

Besides those covered by SDG 15, the majority (14 targets) of these 21 maturing targets are environment related. They fall into seven general areas: food security (SDG 2), clean water and sanitation (SDG 6), sustainable cities and communities (SDG 11), responsible consumption and production (SDG 12), climate change (SDG 13), life below water (SDG 14), and life on land (SDG 15). All these areas are underpinned and crosscut by the sustainable use of natural resources.

While the design of the SDG framework recognizes the interrelations between economic growth, well-being, and a healthy base of natural resources, the actual progress thus far has shown an insufficient focus on natural resources. This chapter focuses on six resource categories, namely (i) fossil fuels (coal, gas and oil); (ii) metals (such as iron, aluminium and copper); (iii) non-metallic minerals (including sand, gravel and limestone); (iv) biomass (wood, crops—including for food, fuel, feed and plant-based materials—grazed biomass, wild catch and harvest); (v) water and (vi) land.

We are used to a world where labour is the limiting factor in productivity, and we tried hard to boost labour productivity at the cost of material productivity (the efficiency of material use, as discussed further below). Looking back at past trends, we see an increase in labour productivity, while material

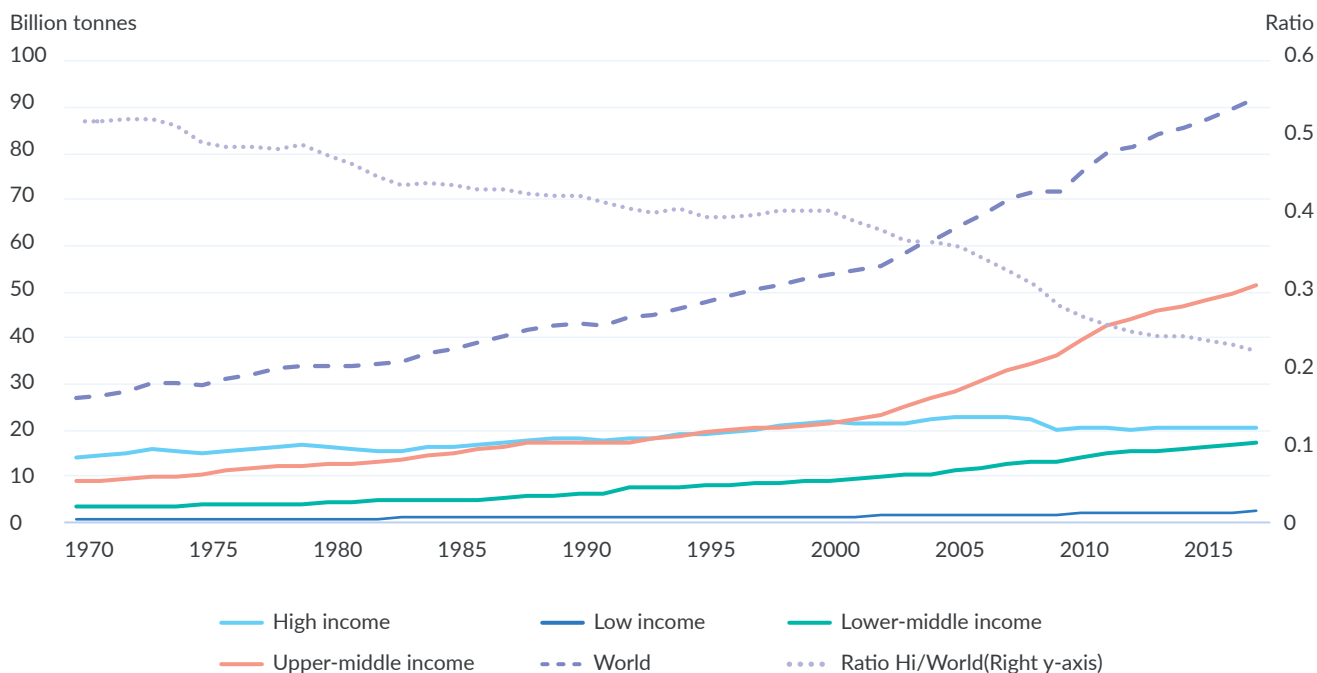
productivity—which is critical to reducing environmental pressure and impacts related to almost all the SDGs—grows rather slowly. We therefore now find ourselves in a world where natural resources and environmental impacts are greater limiting factors in production.

For all these reasons, it is high time that natural resources management becomes embedded in any plans for socioeconomic development, as it fundamentally affects and binds together social, economic and environmental issues. A healthy base of natural resource use is a prerequisite for sustaining economic development and well-being for all.

DYNAMICS OF NATURAL RESOURCE USE

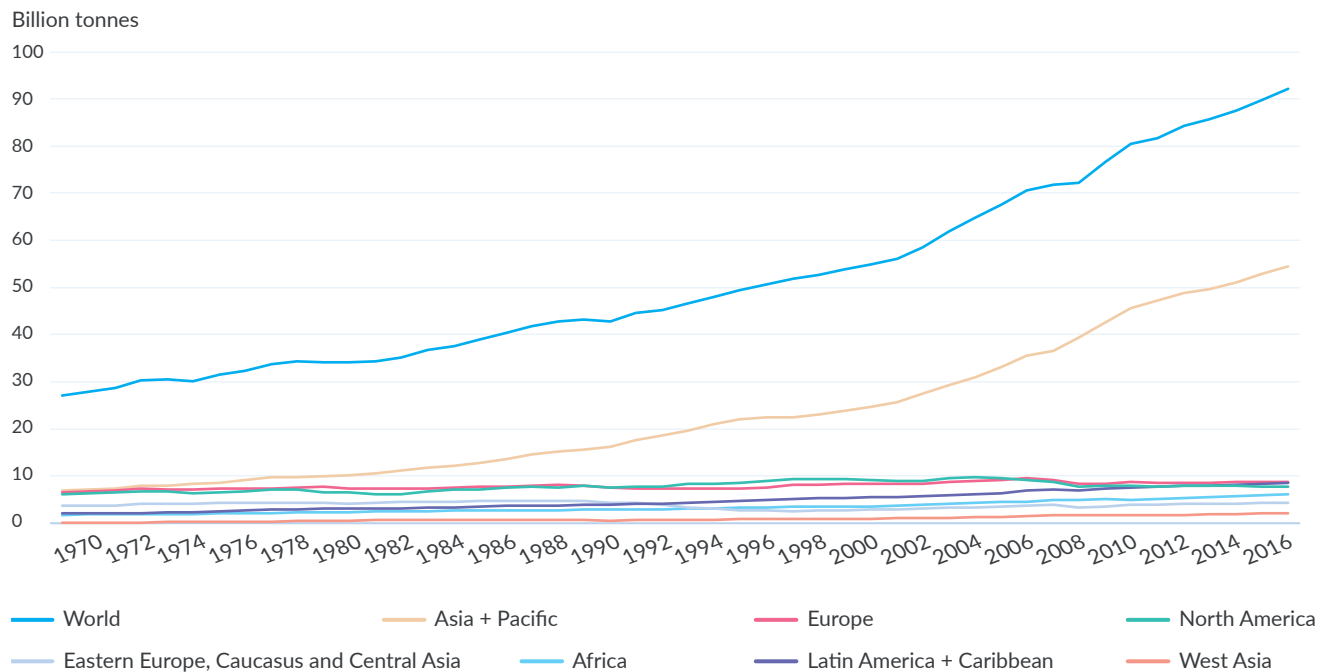
A large part of today’s economic development is fuelled by a relentless demand for natural resources. In 2017,

Figure V.1.A
Domestic material consumption by four national
income bands and world total, 1970–2017
Billion tonnes, with ratio of high-income group to world total



Source: IRP, 2019.

Figure V.1.B
**Domestic material consumption by seven world
regions, 1970–2017**
Billion tonnes



Source: IRP, 2019.

worldwide extraction and consumption of materials¹ reached 92.1 billion tonnes, up from 27 billion in 1970 (International Resource Panel, 2019). This is a staggering tripling of consumption rates in less than half a century in a world dominated by the linear pattern of “buy, use, and throw”. Technology also plays a role here in determining the intensity of environmental impacts.

A close look into global trends reveals new dynamics among countries beginning in the late twentieth century, as well as an unequal distribution of the benefits and burdens related

to natural resource use. Since the 1990s, and especially in the 2000s, the share of upper-middle-income countries and, to a lesser extent, of lower-middle-income countries in global material consumption² has grown rapidly (figure V.1). Upper-middle-income countries dominate the extraction of resources, at 56 per cent of the global total. At the same time, the share of domestic material consumption of high-income countries has fallen, and that of low-income countries has remained unchanged at 3 per cent of the global total (International Resource Panel, 2019).

¹ Biomass, fossil fuels, metals and non-metallic minerals.

² Domestic material consumption (DMC = domestic extraction + material imports – material exports) indicates the amount of materials used in a country. It includes those directly extracted within its territory (domestic extraction indicator) as well as the country’s physical trade balance (i.e., the import of materials and products, minus the country’s export of materials and products (measured in net weight)). Domestic material consumption allows us to understand the dynamics of direct material use within and across countries, and constitutes SDG indicators 8.4.2 and 12.2.2.

A similar development can be observed when assessing countries' material footprints.³ Upper-middle-income countries (especially driven by nations in Asia and the Pacific) surpassed the high-income group's footprint during the 2008 financial crisis. High-income countries experienced a more moderate material footprint increase since 1990, and today account for 35 per cent of global material consumption while representing 16 per cent of the global population.⁴ The lower-middle-income and low-income countries only account for 18 per cent of the material footprint worldwide (International Resource Panel, 2019).

There are two underlying dynamics that explain the growing share of upper-middle-income countries in global material consumption. The first is the build-up of new infrastructure in the context of their economic development. We can also expect to see developing countries follow this pattern in the future (International Resource Panel, 2019). Therefore, policy actions are required to maintain the impacts of resource use within planetary boundaries while still allowing for development and build-up of infrastructure in developing and emerging economies. It should be noted that the disparities in resource use described here do not only occur between countries, but also within them—both between regions and socioeconomic groups. These intranational disparities must be considered when developing national policy actions.

The second dynamic is the relocation of material and energy-intensive stages of production from more resource-efficient to less resource-efficient countries, which has two implications. The first is that producing the same output requires more natural resources. Because this relocation of economic activities has happened faster than resource-

efficiency gains in the countries, material productivity—that is, the value of products and services produced per unit of materials used (measured as gross domestic product (GDP) per domestic material consumption)—started to fall around the year 2000 and has stagnated in recent years, despite improvements in other productivity factors (figure V.2).

The second implication is that outsourcing production is linked to outsourcing the production-related environmental impacts. Per capita environmental impacts caused by consumption of high-income countries are between three and six times larger than those of low-income countries. Unfortunately, the value created through these traded materials in the countries of origin can be relatively low. It should be noted that, while high-income countries show lower rates of resource use overall, the per capita footprint of consumption gives quite a different picture. High-income countries across regional groupings have historically had the highest material footprint on a per capita basis: in 2017, it was approximately 27 tonnes per capita. This is 60 per cent higher than the upper-middle-income group and more than 13 times the level of the low-income group (at only 2 tonnes per capita) (International Resource Panel, 2019). For instance, Europe and especially North America had a much higher material footprint per capita (21.8 and 67.0 tonnes per capita, respectively, in 2017) than the Asia and Pacific region (11.4 tonnes per capita).⁵

IMPACTS OF NATURAL RESOURCE USE: POTENTIAL THREATS TO GLOBAL ISSUES

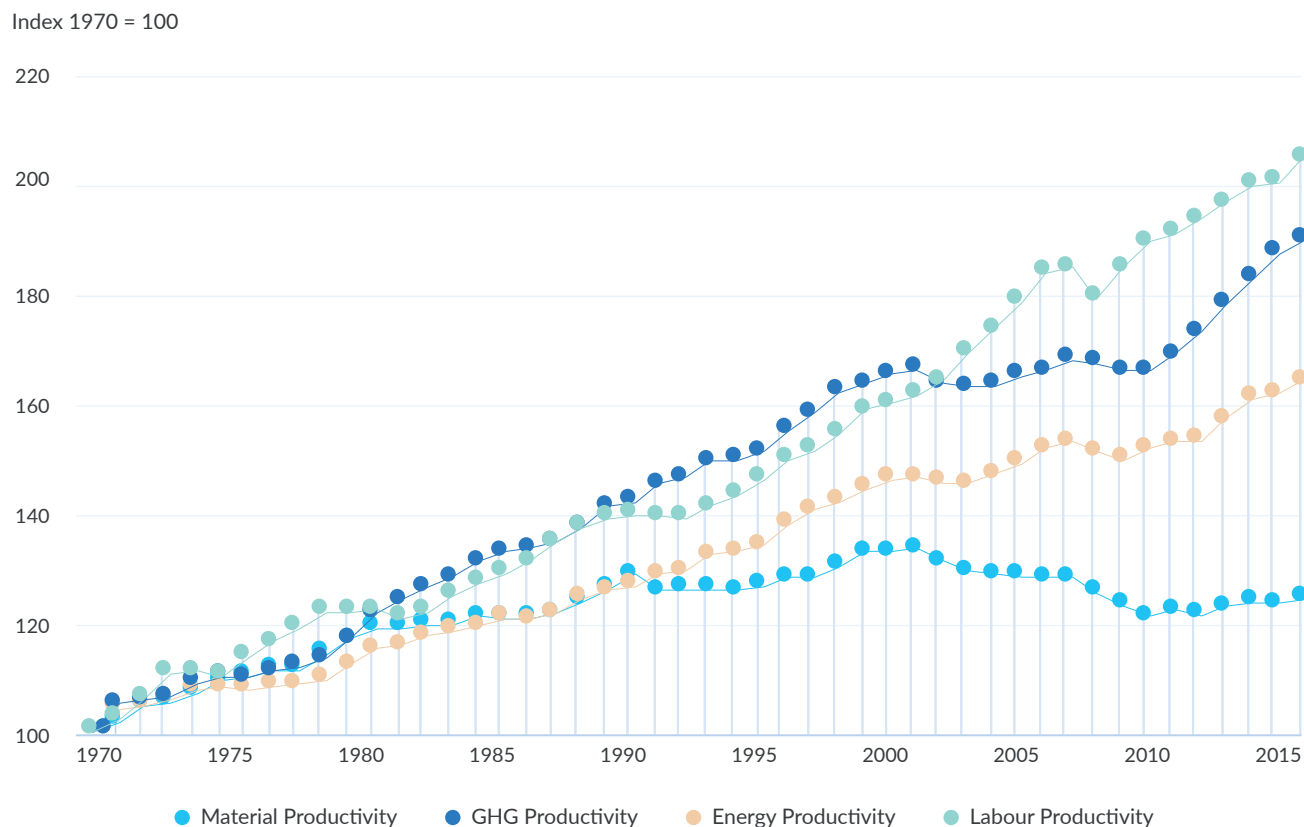
According to research by the International Resource Panel (IRP), the extraction and processing of materials already account for more than 90 per cent of our biodiversity loss and water stress, and approximately half of our climate

³ The material footprint indicator (MF = domestic extraction + raw material equivalents of imports – raw material equivalents of exports) complements domestic material consumption by providing a full picture of the impacts of that country's consumption in other parts of the world across global supply chains. It does so by taking into account the materials extracted in other parts of the world and embodied in the country's trade balance (either as production inputs or final products). Material footprint is addressed in SDG indicators 8.4.1 and 12.2.1.

⁴ World Bank population data in 2018. Available from <https://data.worldbank.org/?locations=XD-1W>.

⁵ United Nations Environment Programme, International Resource Panel. Global Material Flows Database. Available from <https://www.resourcepanel.org/global-material-flows-database>.

Figure V.2
Global resource productivity (material, energy and CO² emissions) and labour productivity (1970-2017)



Source: IRP, 2019.

change impacts (not including climate impacts related to land use). If we do not take urgent and concerted action now and allow these trends to continue under a business-as-usual scenario, global material use could more than double, reaching 190 billion tonnes by 2060.

As a new build-up of buildings and infrastructure for an increasingly urban population is anticipated, the use of non-metallic minerals, such as sand and gravel, would increase by 2.2 per cent annually and reach 59 per cent of overall material extraction by 2060. Biomass, such as wood and crops, would end up constituting 23 per cent of the total share. This is followed by fossil fuels and metal ores, which would each account for 9 per cent of total global extraction. One of the outcomes of these trends is that GHG emissions

would increase by 43 per cent, seriously damaging any efforts to effectively combat climate change (SDG 13).

To meet the needs of a growing population, global cropland would expand by 21 per cent from 2010 to 2060 (mostly in Africa, Europe and North America). Pasture area would expand by 25 per cent globally, with Africa and Latin America and the Caribbean seeing the largest increase. Water withdrawal would also rise with the development of agriculture, industries and the expansion of cities around the world. In the face of climate change, water supply and distribution would face uncertainty.

If sustainability is not placed at the core of urban planning (SDG 11), the expansion of cities would directly compete with the availability of cropland (especially in Asia and

Africa) and with the significant water needs of the agricultural sector, currently the main consumer of water. Indeed, urban demand for water is expected to rise by 80 per cent by 2050.

In addition, food security (SDG 2) would be threatened as the projected growth in yield would not be enough to satisfy food demand, especially for Africa.

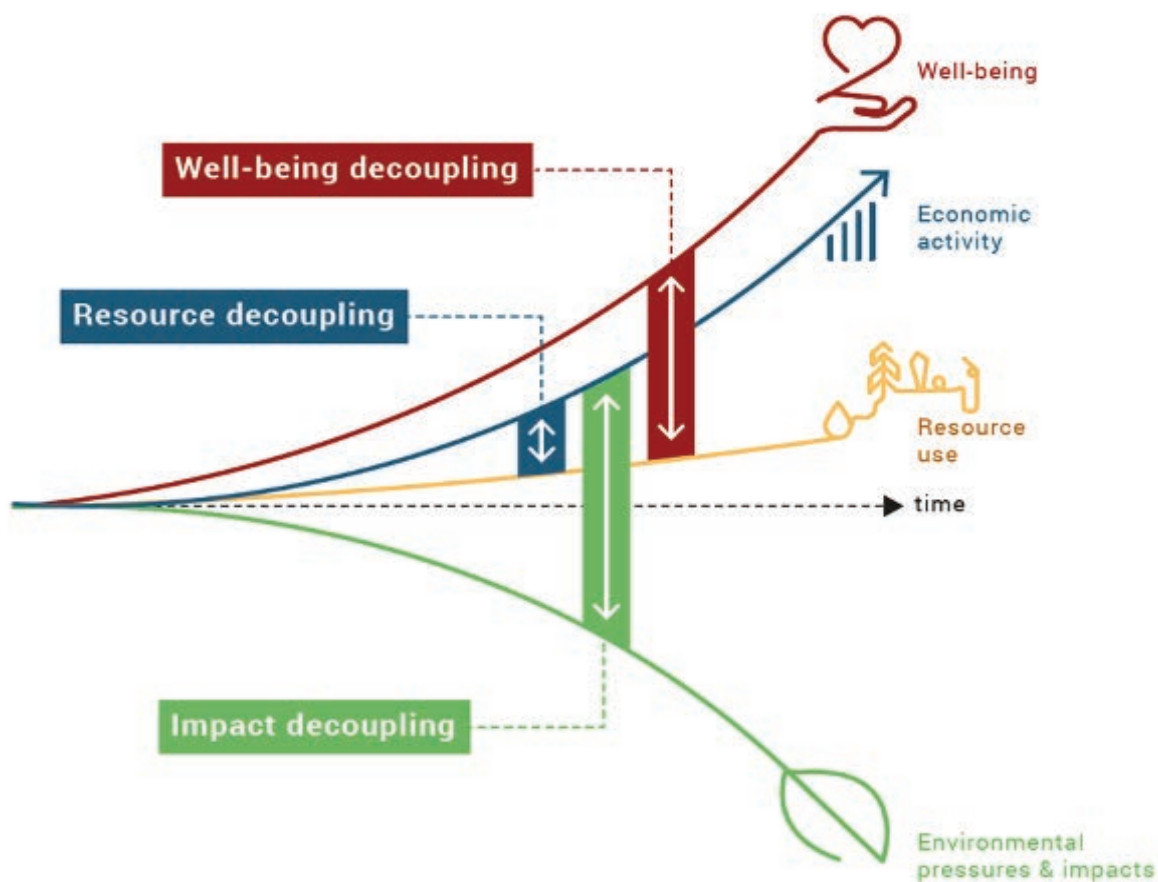
A loss of global forest area of about 10 per cent is anticipated, with deforestation hotspots located in Africa, Latin America and the Caribbean, and Asia. Global grasslands, shrub land, and savannahs would also decrease by 20 per cent with significant losses taking place in Africa, Latin America and

the Caribbean, and Europe. It is not difficult to conclude that these trends will directly threaten terrestrial (SDG 15) and marine (SDG 14) biodiversity, which is contingent on the conservation of natural ecosystems (International Resource Panel, 2019).

DECOUPLING IS KEY TO DEFINING NEW PATHS OF SUSTAINABLE DEVELOPMENT

The priorities of policymaking and other actions should focus on promoting decoupling of economic activities and human well-being from resource use and environmental impacts. Indeed, decoupling strategies offer a holistic

Figure V.3
Decoupling for sustainable development



Source: IRP, 2019.

vision for an action-oriented agenda based on scientific knowledge. Such a vision integrates economic growth and a reduction in resource use by addressing both the production and consumption patterns of the economy.

We typically distinguish between two types of decoupling: relative and absolute, and it is possible to break the former down to two further concepts. As shown in figure V.3, relative well-being decoupling and relative resource decoupling take place when human well-being (i.e., satisfaction of human needs) and economic activity, respectively, increase while resource use grows at a much slower rate. Absolute impact decoupling occurs when economic activity continues to grow while negative impacts on the environment decrease. Decoupling can be achieved through a substantial improvement in resource efficiency and sustainable consumption and production.

Resource efficiency means improving outputs while lowering the number of inputs and harmful impacts; this is at the heart of decoupling. However, to transit to a sustainable future, resource efficiency alone is not enough. It needs to be combined with a shift from linear to circular flows of resource use through a mix of processes that includes extension of product life cycles, sustainable product design and standardization, and reuse, recycling, and remanufacturing; actions including climate mitigation, biodiversity protection, and changes in societal behaviour are also fundamental to facilitating a sustainable transition (International Resource Panel, 2019). In addition, it is critical that the benefits of resource-efficiency measures are accessible to all without geographic or economic obstacles.

Such concepts—decoupling, resource efficiency, equity, and sustainable consumption and production—are so essential and fundamental for the fulfilment of the SDGs that they are not only central to a specific Goal (SDG 12) but are also given an overarching status that covers critical aspects, including food (SDG 2), water (SDG 6), energy

(SDG 7), climate (SDG 13) and life on land (SDG 15). They are explicitly called for in SDG target 8.4—“[i]mprove progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation”⁶—as well as in target 12.2—“[b]y 2030, achieve the sustainable management and efficient use of natural resources.”⁷

Decoupling is also a means to equitable development among nations. As we have discussed above, the use of natural resources and the resulting impacts on the environment and human health are unevenly distributed throughout the world. The tripling of resource use over the past 50 years is strongly related to the economic development of (especially upper-) middle-income countries and their role in international trade. Practically none of this massive growth has taken place in high-income countries, which still display the highest per capita footprint of consumption of materials (often extracted and processed elsewhere). However, not much of it has occurred in the poorest countries either, which make up the group in the most urgent need of higher material living standards.

Resource-efficiency policies to decouple economic growth from natural resource use must therefore be adapted to the different development contexts. They can be implemented in low- and middle-income countries to reduce the growth rate of consumption of natural resources while still allowing for the achievement of socioeconomic development objectives (relative decoupling). There are huge opportunities for these economies to “get it right” from the start by adopting sustainable practices to avoid becoming locked in outdated technologies that many high-income countries are seeking to replace. High-income countries should instead aim for an absolute reduction in their demand for materials (absolute decoupling) (International Resource Panel, 2019).

⁶ See <https://sustainabledevelopment.un.org/sdg8>.

⁷ See <https://sustainabledevelopment.un.org/sdg12>.

HOW CAN WE ACHIEVE DECOUPLING?

Science and policy-oriented action is reflected in crucial knowledge products, political agreements, policy plans and legislation. It urgently needs to be taken up through innovative economic and business models, services and products that can produce positive impacts that address the needs of society.

In its *Global Resources Outlook 2019 report*, the IRP proposed policies and actions needed to achieve decoupling. These much-needed changes include three policy packages: (i) resource-efficiency policies; (ii) climate mitigation policies; and (iii) land and life-on-earth policies—as well as a societal behavioural shift.

Regarding the first package, the implementation of resource-efficiency policies requires incentives that promote the adoption of innovation and sustainable technologies. One aspect is to set new frameworks in which to operate by changing regulations, technical standards and public procurement policies, especially among top resource use sectors. This should be coupled with investments in research and development in the public and private sectors in order to foster innovative responses (in terms of new technologies and institutional arrangements) to the new frameworks. These measures facilitate the reduction of overall amounts of materials used and the resource intensity among economic activities without sacrificing growth and well-being. Even better, such resource-efficiency approaches may improve the quality of services and amenities. As resource efficiency goes hand-in-hand with circularity, necessary innovations include, for example, well-designed infrastructure for the management of waste, incentives for product design that aims to prolong product life cycle and sustainability, or removal of barriers to value-retention development within current policies and practices (International Resource Panel, 2019).

It is important to recall that resource-efficiency strategies make a substantial difference in the fight against climate change, and using a material lens truly provides a new approach. For example, in the case of passenger cars, it

is estimated that higher manufacturing yields, scrap use and end-of-life recovery can reduce GHG emissions by approximately 37 per cent in G7 countries by 2050, and can be further improved by building cars with lighter materials. The consumer can strongly contribute by resorting to smaller vehicles (11–14 per cent reduction in GHG emissions in the G7 by 2050) and especially by shifting to car-sharing and ride-sharing practices (13–20 per cent reduction in GHG emissions in the G7 if a quarter of residents of all seven nations were to adopt these practices extensively by 2050). These benefits would come before even considering shifting away from fossil fuels towards clean energies (International Resource Panel, 2020b).

However, the increased material efficiency enabled by the above measures might induce a reduction in costs on the supply side, driving up demand and therefore resource use. Such a rebound effect can cancel out the intended benefits of decoupling. It can be compensated for by increasing the production costs again and incentivizing the efficient use and reuse of materials, for example, by shifting taxation from income and consumption to resource extraction. As discussed, we need to differentiate between countries' development levels, with low- and middle-income countries reducing the growth rate of their consumption of natural resources, while high-income countries aim for an absolute reduction of the demand for materials.

The second policy package focuses more specifically on climate policies and includes two measures: first, to reduce GHG emissions, and second, to further facilitate decarbonization, carbon neutrality and reduction of GHG concentrations in the atmosphere. GHG reduction involves a carbon levy covering all countries and emission sources at a level aligning with the climate goals of the Paris Agreement. Revenues collected through such policies should then be shared equally among households and Governments, framed as a uniform per capita carbon dividend payment. In the context of nature-based solutions, such as biodiversity protection and forest and land restoration, a subsidy could also be given per ton of carbon sequestration.

The third policy package relates to landscape and biodiversity

policies. Considering that the multiple SDGs often involve significant interrelations and sometimes trade-offs, we need to make sure that policies aimed at climate mitigation and energy sustainability are consistent with goals revolving around land use and food systems. Integrated approaches include the administration of a carbon levy over emissions from land clearing so as to prevent deforestation and forest degradation, and restrict biosequestration payments to activities that enrich biodiversity. Measures should also be taken to protect native vegetation and critical biodiversity areas; to constrain the increase of agricultural lands while boosting its productivity and biodiversity; and to diminish certain agricultural trade barriers.

Furthermore, shifting to healthier diets and diminishing food waste along the entire supply chain are much needed for decoupling to take place. Information on the detrimental links between meat consumption and environmental impacts should be highlighted to alter the heavy meat consumption in many societies. More ambitious effort should also be made to reduce food waste, which provides multiple benefits, including alleviating environmental pressures, increasing food availability, and bringing cost savings to producers, processors and consumers (International Resource Panel, 2019).

Finally, we must point out that cities play a central role in the global economic system. They produce more than 80 per cent of global GDP; harbour more than half of the population; account for about 60 per cent of material consumption and 75 per cent of GHG emissions; and produce a significant amount of waste. Most supply chains are directly or indirectly linked to cities. Projections estimate that in three decades, almost two thirds of the global population (66 per cent) will live in cities, whose resource requirements and environmental impacts will continue to grow. The urbanization of the coming decades will mostly take place in middle- and low-income countries, especially in Africa and southern Asia. These belong precisely to the group of countries in need of socioeconomic development, which includes the build-up of new infrastructure.

Urbanization in middle- and low-income countries is

therefore both an unavoidable challenge and an immense opportunity. The impacts of urbanization have been mentioned in the section on the impacts of natural resource use above. But building new, large-scale infrastructure allows urban planning to begin with a consideration of the criteria for environmental sustainability and quality of life—for example, through street planning; neighbourhoods with a mixture of housing as well as economic and leisure activities; public transportation; resource efficiency in buildings and systems that provide services such as electricity and sewage treatment; etc. (International Resource Panel, 2019). Recent research on residential buildings underlines once again how the holistic approach of decoupling strategically addresses the linkages between natural resource use and climate change. For example, in China and India, designing lighter buildings with less carbon-intensive materials (e.g., steel, cement and glass) could reduce GHG emissions by 12–20 per cent by 2050 (production side), while reducing floor space demand (e.g., individuals living in multifamily residences, co-housing, or moving to smaller homes when children move out) can save up to 59 per cent of emissions over the same period of time (consumption side) (International Resource Panel, 2020b). With appropriate action at the national and local levels, the middle- and low-income countries of today are best placed to implement large-scale solutions to the problems associated with urbanization.

The shift towards a more circular economy implies changes both on the supplier and the consumer sides, thus allowing ordinary citizens to take ownership of innovative solutions. Because of the role of cities in the global economic system, solving issues at the urban level will have large positive outcomes at the global level.

WHAT ARE THE RESULTS OF SUCH DECOUPLING MEASURES?

With careful scenario analysis and modelling, the IRP projected that with the three above-mentioned policy packages, a shift to healthier diets, and food waste reduction, we can slow down the use of resources (i.e., a relative decoupling of resource use from GDP). We can also bring about a decline in environmental impacts while

affluence and well-being continue to grow (i.e., absolute decoupling of environmental impacts from economic growth and resource use).

In such a scenario, by 2060, the extraction of materials⁸ would reach approximately 143 billion tonnes per year instead of 190 billion tonnes under a business-as-usual scenario (SDG 12), while GDP could reach 8 per cent above the business-as-usual scenario in the same year, especially in low- and middle-income countries (SDG 8). This would compensate for the near-term economic costs of following a 1.5° Celsius path and lead to higher equality in income distribution and resource access.

The growing resource use among emerging and developing economies could be offset by the reduced use in high-income countries, which would lower annual global extraction by 25 per cent as compared to the business-as-usual scenario. With well-designed policies and practices in place, global resource productivity could increase by 27 per cent over the 2015 level by 2060. This could not only lift environmental pressures and impacts, but also double per capita increase in GDP. Scientific analysis has shown that decoupling can moderate the plague of inequality (SDG 10) by merging the gap of resource use across different country groups (more research is needed on the relationship between decoupling and socioeconomic groups within a country). Per capita resource use in high-income countries would drop to 13.6 tonnes and that in low-income countries would rise to 8.2 tonnes.

In addition to the decoupling of resource use, intelligent policy mixes could also lead to absolute decoupling between economic activities and global environmental pressures and impacts. This includes a substantial decrease of GHG emissions by 19 per cent compared to the business-as-usual trajectory, and a fall of 90 per cent if combined with other climate actions (SDG 13). This is a dramatic improvement compared to the projected rise of 43 per cent if we do not make policy and behavioural changes. Furthermore, such

policies may give rise to significant restoration of forest areas and other natural habitats; instead of losing 1.3 billion hectares of these important ecosystems, 450 million hectares of forests could be restored by 2060 (SDG 15) (International Resource Panel, 2019).

WHAT ARE THE NEXT STEPS?

We may have failed to achieve many of the environment-related SDG targets maturing in 2020; but we still have the chance to meet our sustainability objectives, if well-designed policies are put in place and concerted actions are taken by countries, business, and everyone who shares the planet. Perhaps the most important point is that the notion of resource scarcity should be integrated into economic decision-making. With that in mind, how can we ensure that we set out on the right path?

It is easy to recognize that we live in a fragmented world. Yet, global issues across the social, economic and environmental pillars of sustainability cannot be truly addressed through fragmented agendas and actions. We need innovative approaches to develop new global governance systems that foster consensus in order to define paths towards sustainability with concrete objectives that allow coordination of those various agendas. Now more than ever, these objectives must be ambitious, pragmatic and forward-looking. They should be based on emerging scientific knowledge and business and innovation models.

Decoupling strategies can help conceive pragmatic sustainability objectives and achieve them by engaging the various stakeholders. Through such coordination, decoupling can work effectively on local and national realities within a wider context, bringing together stakeholders who are motivated by innovation and achieving positive impacts at all levels, from governance systems to the provision of goods and services. Pragmatic agendas must ultimately aim at addressing the actual needs of society.

In practical terms, we need to be able to measure change, or

⁸ Biomass, fossil fuels, metallic and non-metallic minerals.

the lack thereof. At both national and international levels, targets for resource efficiency and sustainable resource consumption are being monitored by various countries in cooperation with the United Nations (chiefly, the indicators for SDG targets 8.4 and 12.2). Data gaps still exist, and we need to progressively refine these mechanisms at national, regional and municipal levels. This should continue to be facilitated by United Nations agencies in close cooperation with government bodies. Periodic reporting will continue to be essential in measuring progress over indicators on resource use and efficiency, and to further advise policy development and improvement. The private sector also plays an important role here. Measuring and disclosing companies' environmental and social impacts can not only inform global and national reporting, but also help companies develop business strategies that respond to the needs of consumers in a more comprehensive manner—that is, including the need for a healthy environment.

Principles of coordination and integration allow for the maximum impact of policy actions. The IRP has proposed a wide set of concrete solutions that have already been discussed here. These solutions combine natural resource use strategies with climate and biodiversity regulations. They are not without challenges and require fundamental changes in our consumption and production patterns to be more resource efficient and inclusive. As certain industries and jobs may be affected in the transition towards more sustainable technologies and practices, it is important for Governments to provide transitional support such as education and training programmes to facilitate better adjustments of labour skills.

In addition, the public and private sectors as well as civil society can cooperate to explore innovative approaches to improve efficiency and transform the current linear resource use regime to a circular one where value retention underpins economic activities. Leapfrogging can be particularly interesting for developing countries. As indicated earlier, low- and middle-income countries have the opportunity to “get it right” from the start by bypassing

resource-inefficient pathways or technologies. In this way, they can use fewer natural resources while meeting their development objectives, taking advantage of the fact that many of the technologies needed for a sustainable development path are proven and available right now.

The United Nations system can support countries in developing and implementing sustainable resource management policies and provide transitional support in an integrated way through technical recommendations and capacity-building, based on the wealth of knowledge and worldwide networks it has developed over the past decades. It can also work with local communities and national Governments on pilot projects to explore innovative solutions to critical resource problems. Furthermore, the United Nations is the most suitable forum for facilitating coordinated action by the international community.

It is only realistic to recognize that achieving a just and sustainable transition will bring about enormous benefits in the long run (including higher gains in total and per capita GDP, as modelled by the IRP), even if in the short term it involves important investments. Intelligent tax regulations, various types of green bonds, or a carbon levy (described above as part of the second policy package) are just some examples of what can be developed to facilitate decoupling-oriented projects. Financing tools provided by the private sector are also important sources for activating transitions at the local level.

Our vision and narratives cannot be static; they must be based on a vision of evolving processes as new knowledge emerges and societies evolve. Whatever objectives we may attain, we should never rest on our laurels, at the serious risk of backsliding on these crucial issues. The technologies and practices for meeting our objectives are available. Now we need to close the gap in political innovation and in business models. We can clearly see the impacts of past practices and most current ones. Now, we need to tell new stories and create new visions based on the future, not on the past.

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CHAPTER VI

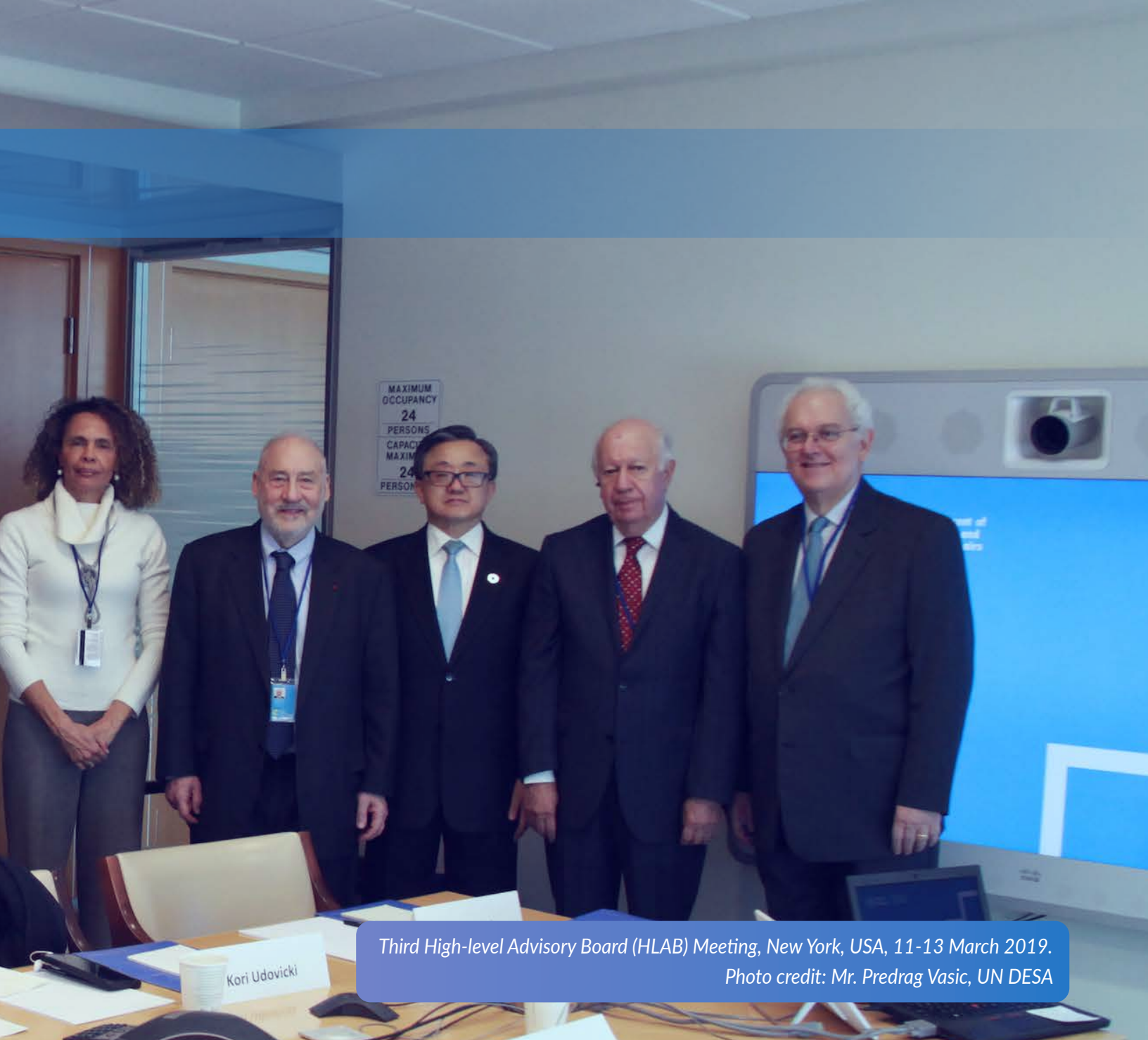


Production structures for sustainable development: shaping them from the bottom up

by Kori Udovički, Ph.D.

"...most economists oddly enough don't focus on economic development and most people in development have sparse or no training in economics, endlessly surprising..."

Comment by a reader reviewer of *Strategies of Economic Development* by Albert O. Hirschman



Third High-level Advisory Board (HLAB) Meeting, New York, USA, 11-13 March 2019.

Photo credit: Mr. Predrag Vasic, UN DESA

Production structures for sustainable development: shaping them from the bottom up



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OVERVIEW

Now that industrial policy has returned to the international policy mainstream, policymaking could greatly benefit from a practical body of knowledge built eclectically and systematically to inform the more operational efforts. I use the productive capabilities paradigm to argue that such knowledge would be particularly valuable as policymakers affect production structures all the time, including through the direct allocation of their efforts and resources. These actions, even when limited, can have snowballing effects on the evolution of production structures over time. I use the case of Serbia to illustrate the complexity and uniqueness of each development planner's problem and to illustrate the kind of information she needs: systematically collected and processed bottom-up information, including data, stylized facts and case studies on specific aspects of production structure and how they evolve. The United Nations is uniquely positioned to spur such a knowledge-building effort with a programme that would build on, pulling together and enriching, the significant work already under way in the system.

INTRODUCTION

In this chapter, I call for an eclectic but systematic study of production structures as a critical element in the global community's effort to meet the Sustainable Development Goals (SDGs). Only by accomplishing a structural transformation, and thereby steering the evolution of production structures, can we meet the compound challenges of deepening global inequalities and environmental degradation. To these—the COVID-19 pandemic has now shown—we need to add the challenge of fragile global value chains and a consequently fragile global integration. The international community has nearly two centuries of modern development experience from which to learn about steering structural change; it should use this experience to shape the productive structures that will accomplish its goals.

What countries make (including the quantity and how they make it) greatly matters to all dimensions of their development. Not only does this determine countries' total income, it is also of key importance to (i) international and intranational income distribution; (ii) the quality of

employment; (iii) the quality of the environment; and, arguably (iv) the development of their institutions (Kosack and others, 2018). Critically, as discussed below, a country's production structure is also of key importance to its prospects for future growth and development. It is therefore not surprising that policymakers spend much time thinking about precisely what they would like their countries to produce. Yet, the study of production structures receives relatively limited attention in the academic and policy literature.

To be sure, there is a vast, older literature on industrial policy and structural change in development. Although the decades leading to the global financial crisis of 2008-2009 were dominated by liberal orthodoxy, important analytical work was nevertheless conducted and policy debate remained alive throughout.¹ This work focused on the justifications of industrial policy,² as well as its feasibility from the point of view of the political economic factors framing the likelihood of success (Cimoli and others, 2009). In the aftermath of the global financial crisis, the topic has enjoyed a much welcome revival and the literature has gradually been shifting from justification to the elaboration of alternative analytical frameworks (see, for example, Andreoni and Chang (2016), discussed below, or Nübler (2013))³ as well as the derivation of policy lessons from empirical analysis.

Presently, there are several strands of work that aim to throw light on the contents of the "black box" of production. One is the new developmental agenda championed by Andreoni and Chang (2016), among others, that seeks to understand production within the specific structural, organizational, institutional and political economic features of productive organizations. The agenda reflects a synthesis of Chang's long-standing argument that development rests on structural change brought about by industrial policies

(Chang, 2002) and Andreoni's analysis of the dynamics of production within a framework of "interdependent relationships among capabilities, tasks and materials" (Andreoni, 2013, p. 1. Most recently, they are joined by a number of other authors in Andreoni, Chang and Scazzieri (2018) to offer the building blocks for the comparative study of the way in which political economy shapes industrial policy, as defined by, and defining, structural and institutional dynamics. They argue that the new generation of industrial policies should go beyond responding to "market failures," and beyond being a tool to respond to emerging climate or new technology challenges. Instead, they offer a more comprehensive perspective on industrial policy that views "production organizations—not markets—as the main structures in which the polity and the society are embedded" (Andreoni and Chang, 2018, p. 6).

Another strand of work, advanced by Ricardo Hausmann, Dani Rodrik, César Hidalgo and others (Hidalgo and others, 2007; Hausmann and Rodrik, 2006), studies multidimensional production structures understood solely as the composition of baskets of goods produced by individual countries. They observe the patterns and regularities that appear in the shape of the network-theory-based concept of a "product space," in which all products are positioned depending on how closely they are related to each other—their relatedness being determined by the similarity in the requirements to produce them. Key insights are that higher income-earning countries tend to produce and export goods that require greater knowledge and complexity to be produced (Hausmann and Rodrik, 2006), and that the knowledge needed to produce different groups of goods can be quite specialized. Insightful inferences can be made about the process of development from these two observations. Also, a web-based tool has been developed to help interested parties assess a country's growth prospects

¹ For a review of different traditions in the treatment of structural policies, see Salazar-Xirinachs and others (2014); for an even more recent critical historical review of the industrial policy debate, see Andreoni and Chang (2018). The latter would need to be complemented with, at least, Ocampo (2014) in order to include Latin American structuralism.

² For a review of the arguments within the neoclassical framework, see Harrison and Rodriguez-Claire (2010).

³ See also Ocampo (2005) for an earlier contribution integrating structural and macroeconomic considerations.

based on observed relationships between a country's production structures and levels of income.⁴

All of this literature offers important but broad strategic lessons, but there are limitations in their accessibility as well as applicability to policymakers. Policy recommendations need to percolate through the many interpretation layers that separate analytical work from practice. They are likely to be applicable only to the extent that they can translate into sufficiently simple and broadly applicable messages. For example, the message "high inflation affects the poor more than the rich" is simple, clear, and applicable. "Get prices right and markets will do the work" is another such message encapsulated within the Washington Consensus and one reason why still has such a hold on the imagination of so many. It greatly helps, of course, if the messages resonate with ideological priors. In the case of industrial policy, one such message would be that the development of manufacturing is important for the long-term sustainability (and, after the COVID-19 crisis, one should add "resilience") of a country's development.

Hence, relatively few of the more detailed and specific policy findings of academic literature—and even much policy literature—will support policymakers in terms of operations. In most cases, the rigorous treatment of extremely complex, context-specific and multidimensional realities will result in either very abstract or extremely complex conclusions. Moreover, as has been well argued (World Bank, 2005; Hausmann and Rodrik, 2006), policymakers inevitably and regularly make discretionary decisions. This means that policymakers frequently need to resolve unique, context-specific problems. For instance, if a country should decide to act on the recommendation to build a manufacturing sector, in which industry should it start? How far should it aim to diversify? The answers are likely to differ from country to country. It would help decision makers if they could rely on some stylized facts in their considerations. For example,

what is "normal," regarding the extent of diversification at their level of development and size? Can the participation in certain global value chains (GVCs) be extended to other GVCs? Which GVCs are more "desirable"?

Discretionary decision-making needs to be informed by the sort of accumulated experiential knowledge that expands policymakers' own experience and allows them to internalize massive complexity into intuitive, tacit, knowledge. The development of such a body of knowledge will typically require a knowledge-processing agency in addition to established research processes. Within countries, these are its economic ministries and development institutions and institutes, whose institutional memory is essential for good development governance.

International development organizations, especially the United Nations agencies and the Organization for Economic Cooperation and Development (OECD), provide such agency in general, and recently their work on production structures in the context of the study of GVCs has surged. Their role in providing integrated statistical information as well as international benchmarks and stylized facts on key aspects of production has been unique. Moreover, they have remained consistent proponents of the importance of structural policies throughout the decades (United Nations Conference on Trade and Development, 2006; United Nations Industrial Development Organization, 2013), resulting in a more eclectic, but also more applicable strand of policy research than those described above. Salazar-Xirinachs and others (2014) has been put together by the United Nations Conference on Trade and Development (UNCTAD) and the International Labour Organization (ILO). In UNCTAD discussion papers, Fortunato and others (2015) work on the further practical application of the concept of product space. Efforts are under way that aim for production-structure shaping know-how, such as, for example, the International Trade Commission branding

⁴ For instance, Hausman and Hidalgo (2011) find that an increase of one standard deviation in complexity of Thailand's economy between 1970 and 1985 is associated with a subsequent acceleration of the country's long-term growth rate of 1.6 percent per year—more than would have been expected from mineral wealth and global trends.

itself the “architect of sector development”. A particularly notable and promising initiative (discussed below in the section on bottom-up collaboration for better answers) are the country studies on production transformation and upgrading trajectories (Primi, 2016) in the context of the OECD country policy peer review practice.

Finally, numerous individual contributions can be found fragmented across different strands of economic literature, offering usually isolated answers to particular questions of relevance to the evolution of production structure. For example, the studies by Imbs and Wacziarg (2003) and Szirmai, Naude and Alcorta (2013) throw very insightful light on what are usual, or “normal,” patterns of diversification and industrial development.

However, all these insights on the patterns and evolution of production structure cannot yet be considered as abundant, and they do not quite amount to an integrated and systematic body of knowledge. Their insights are of key importance to policymakers, but an effort to codify and integrate the experiential (tacit) knowledge available in United Nations agencies and other development organizations could greatly increase their applicability.

In this chapter, I propose that the international development policy support community should experiment with building integrated, experiential and actionable knowledge—which entails sacrificing policy complexity and analytical rigor to produce systematic and robust applicable information on the regularities in the evolution of production structures. “Production structure” includes the composition and amounts of goods and services (“products” hereafter) in the basket produced by a country, as well as how they are produced. The “how” refers equally to the technology (and, therefore, the employee skill profiles), the equipment and other inputs used in producing these products. Beyond this basic sectoral multidimensionality, the production structure should selectively include only those additional organizational or institutional characteristics that are identified as central to the problem or context at issue. One can expect these to generally include size and ownership of companies and possibly market structure (competitive,

monopolistic) as well as complementary non-market institutions directly involved in a product’s value chain (e.g., quality infrastructure).

In the following section, I present the productive capabilities paradigm that underlies, or frames, the literature on structural change. Using Serbia as an example, the next section elaborates on the questions that policymakers need to, can and ought to address, and that the proposed programme of research can help them answer. The section on bottom-up collaboration discusses how such a programme would change the information environment for policymakers, followed by concluding remarks.

OPENING THE “BLACK BOX” OF PRODUCTION

Production factors versus the productive capabilities paradigm

In the neoclassical paradigm, what is produced and how is determined by the availability of factors of production and the technologies that combine them to produce an output, while market prices determine what combination of factors is most profitable. This paradigm does not actually deal with the multidimensionality of production, and whether and how changes in the product structure happen—or if they matter. Unobstructed trade and market prices will ensure that each country produces those goods in which it has a comparative advantage, realizing the maximum gains from trade. This suffices as a policy recommendation. However, this framework has difficulty dealing with the fact that comparative advantage is observed at a moment in time, but that it can (and should) change and evolve over time. If there is development, the factors available to a country are not static. A process of accumulation of physical and human capital ought to be happening, which changes comparative advantage.

It has typically been thought that a country’s comparative advantage changes with the accumulation of capital (the less available factor of production). This has more recently been expanded to include learning as a form of accumulation of human capital. In fact, however, both the accumulation of

capital and learning are needed to result in what we think of as development. The capabilities paradigm chooses to put the process of learning in focus.

Learning is time-consuming and complex. Moreover, the cumulation of knowledge happens along a multitude of product dimensions. In neoclassical parlance, the human capital needed to produce top-class shoes is a different factor from that needed to produce mechanical components. However, the neoclassical paradigm also has difficulty dealing with such multidimensionality.

The productive capabilities paradigm focuses exactly on these two issues: that learning takes time, and that learning to produce different things requires different processes. Ultimately, this means that structural change is path dependent. A country's options today depend on its decisions in the past, and the options tomorrow will depend on actions taken today. Moreover, this means that sometimes very small actions that gently shift the direction of a cumulative learning process today may have far-reaching implications on productive structures a number of years from now. As argued below, policymakers in particular affect this learning process all the time.

If structural change is path dependent, and if policy actions are not neutral with regard to the direction the paths take, it becomes clear why the evolution of production structures needs to be studied and understood much better.

Path dependence of capability accumulation

Learning how to make each specific product requires the gradual cumulation of a diverse set of capabilities, many of which are specific to the given product. Generally, these capabilities are not interchangeable with the capabilities needed to produce other products. For example, for a country to produce and sell clothing globally it needs to have a labour force skilled in sewing, concentrated around organizational structures capable of maintaining quality, sourcing and delivery standards, as well as adequate machinery and premises, and basic but sufficiently reliable transportation infrastructure. More complex products will require the institutional capability to test and attest that

they meet the required quality and performance standards.

While switching from sewing clothes to shoemaking might be relatively easy, a switch to producing optical equipment would require years of investment in building know-how, and may still not prove successful. This is because the building of specific capabilities requires the preexistence of certain other capabilities. Not only does it take time to replicate an existing capability and to build new ones, but in each case the pre-existence of certain capabilities is necessary. For example, it is not enough to impart knowledge to an individual to turn her into a car mechanic. It takes practice and the conveyance of tacit knowledge through collaboration alongside experienced car mechanics. Developing the capabilities of the first car mechanics is the key challenge.

Profit opportunities and dead ends

Only if they see a profit opportunity will new investors enter a market. They may produce more of the products already available in it, or they may invest in expanding the available capability configuration—that is, “stretch it”—to produce or develop a new product. Often, the new product will be of a higher complexity than those already produced. In that case, the entry of the new product will increase the country's overall knowledge and productive capacity. Not only will comparative advantage have evolved, but with increased productivity, the rewards to labour, and possibly to capital, will have increased. Development will have happened.

However, a regional or small national economy can reach a dead end (these are the steady states or equilibria in the neoclassical paradigm). Investors may earn just enough profit to keep them doing what they are doing, but there is no incentive to do anything more or differently (e.g., expand production or invest in new, more sophisticated products). Everyone is employed at the current wage level, but investors do not see a profit opportunity in investing in the development of additional capabilities, and there is no external agency generating a process of learning that may increase potential productivity in the current or

new activities. This can happen even under an excellent institutional environment (assuming that this does not include public investment in the development of new capabilities, as it should not) and even before a country reaches the frontier of known products and technologies in an industry.

It is in these circumstances that resource allocations driven by considerations other than immediate likelihood of profit extraction becomes of utmost importance. Only thus can new profit opportunities be generated. Public investment into, for instance, infrastructure or education may take place in response to an evident probability that it will be justified by a consequent increase in market stakeholder profits. But in many circumstances the results may be very uncertain. This may be the case with the construction of infrastructure in least developed countries, as well as with developed-country allocations into innovation such as those described by Mazzucato (2013). Take, for example, the investment in the revitalization of the Bilbao metropolitan area, after the economic collapse following the closure of its shipyards. The construction of the Guggenheim Museum was and continues to be an interesting example of a risky and costly investment—in this case, an allocation of public resources that appears to have done much to enhance the profit opportunities in a private (tourism) industry sector (Center for Advanced Economic Studies, 2019).

I will call this kind of resource allocation an “out-investment”—an investment undertaken outside of market relations (i.e., for reasons other than profit-seeking, or at least not reasonably safe and short-term profit-seeking).⁵ Note that visionary business leaders with access to capital may also dream up big, highly uncertain ideas, and whether we consider these as out-investments or not depends on our assessment of the likelihood that they will earn a profit. It is important, however, to recognize that such allocations may end up wasted, both in the case of the private and

public sector. Still, out-investments may be the only way to jumpstart development when it reaches a dead end, or, hopefully, steer the evolution of production structures away from actually reaching a dead end.

The inevitable and non-neutral role of policymakers

Policymakers can crucially affect the evolution of a production structure even if they do not engage in what is usually understood as industrial policy practices. In addition to their role in shaping the institutional and incentive systems that frame the behaviour of market agents, policymakers regularly have a direct effect on production structures when they allocate resources and effort, with ultimate effect on building capabilities. This can happen through the development and maintenance of infrastructure, education, research, and innovation. As I illustrate later, they also steer private sector allocations through cooperation and complementary allocations with the private sector.

Investment in infrastructure, education or research is not done in a vacuum. Each of these areas normally has a spatial⁶ (including sectoral) aspect that will support the development of some capabilities more than others—for example, those whose early manifestations are located closer to the new transport infrastructure, or those more closely dependent on the selected curricula. Besides, “investment in infrastructure” means not only the construction of transport infrastructure or energy transmission lines, but also the provision of industrial zones, feeder roads and the educational and organizational infrastructure, such as the development of the quality infrastructure, that ensure a country’s producers reach and maintain the standards necessary to sell sophisticated or regulated products. None of this is industry or location neutral.

Moreover, while “good governance” presumes the responsiveness of policymakers to the needs and demands

⁵ Similar distinctions are made in the literature, for example, between complementarities and innovations made in Ocampo (2014); my emphasis is on the uncertainty, and, hence, the need for such decisions to be made on a better-informed basis.

⁶ Examined by a significant body of economic geography literature. See, for example, World Bank (2009) or Ottaviano (2008).

of the country's market actors, there is no way to distribute this responsiveness equally. Efforts explicitly aimed at private sector development require proactive capability development on the part of policymakers. As their efforts and resources are not endless, they will have to choose areas of focus. Take, for example, the attraction of foreign direct investment (FDI). In practice, policymakers target investors to inform them and get them interested in what they have to offer. Some bargaining may even be involved in the determination of how much of the cost of the zone development and employee training is borne by whom. Once foreign investors bring established technologies to less developed countries, even if they are doing so because they find that there is favourable availability of capabilities, they will still need to train new employees in applying the new technology. Furthermore, technology and other knowledge spillovers might happen, meaning that new additional capabilities will have been created, and this opens new opportunities for new market entrants. Inevitably, the focus chosen by policymakers will help determine the shape the productive structure will take.

It is of particular importance, however, to note that policymakers have a critical role in making and encouraging out-investments. To have a sustainable and fast-growing economy requires certain entrepreneurial enthusiasm and risk-taking. This means that market actors also will be undertaking some very uncertain and open-ended investments. But in the earlier stages of development, and as long as high growth expectations have not gripped the imagination of the majority of market actors, the role of policymakers' out-investment is likely to be indispensable, if capability development is to branch out in new and increasingly demanding directions.

WHAT POLICYMAKERS NEED TO KNOW: THE CASE OF SERBIA

Production structures are multi-dimensional, and the questions opened by the possibilities of their evolution are context specific. Hence, an effort to obtain a generalized description of policymaker information needs would, at best,

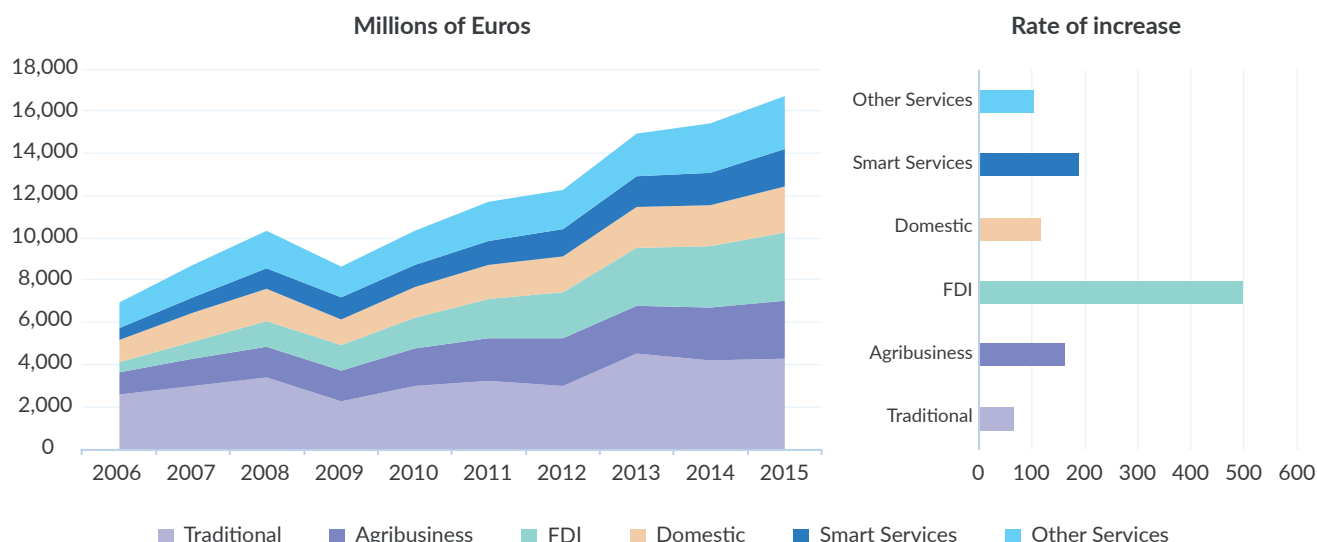
give impractical and overly abstract results. Instead, I use the case of Serbia to illustrate the questions and dilemmas faced by policymakers in an upper-middle-income, post-socialist economy. Serbia emerged from a decade of conflict and hyperinflation in the 1990s with a ravaged economy, and its gross domestic product is estimated to only recently have returned to 1989 levels. Looking into this country's experience also offers us the opportunity to gauge structural change amid radical institutional change and environmental pressure. Finally, it also gives us the opportunity to recast a narrative that is quintessentially about building market institutions and incentives, into the capabilities paradigm.

Background: key features of Serbia's production structure

The policymaker in Serbia has been faced with sluggish growth amid low activity levels, with total employment standing at just below half of the working-age population. Nearly a third of those employed are in vulnerable (informal and agricultural) jobs. In this context, the policymaker is faced with what appears to be an unusual production structure that I qualify as dispersed—reflecting what appears to be a map of diversified but individually isolated and uneven capabilities. This is a result of an excessively protracted reassembly of capabilities built during socialism, after the break-up of linkages during the 1990s. The economy has a small but strongly performing modern sector, with its capital, Belgrade, able to export a significant amount of sophisticated services—including media, entertainment and information technology—and upper mid-level technology manufactured goods, but a large share of export proceeds comes from low value added and simple products, such as grains, frozen fruit and steel cable sets. Serbia's challenge is to support the development of profit opportunities around the more promising existing capabilities. The risk is that without further nurturing, the islands of capabilities will vanish.

The figure below shows the value of Serbia's exports broken down by ownership and product type from 2006-2015 (the period for which data is available).

Figure VI.1
Export performance by product and company ownership in Serbia, 2006–2015



Source: Serbian Business Registry Agency, Chamber of Commerce, CEVES calculations.

Note: Traditional = comprised of merchandize exports of all currently or formerly state-owned (privatized) companies, excepting those registered under agricultural activities, food, tobacco and beverage processing. Agribusiness = comprised of merchandize exports of all companies registered under agricultural activities and food, tobacco and beverage processing, regardless of ownership and origin. FDI = comprised of merchandize exports of all greenfield foreign-owned companies. Domestic = comprised of merchandize exports of all de novo domestically-owned companies. Smart services = comprised of exports of services classified by the author as knowledge-intensive. Other services = comprised of exports of services not being classified as smart services.

It should be noted that the structure of domestic company exports reflects how the legacy of capabilities were “reassembled” to remain in use within the limitations of domestic agents having no access to capital or international markets. Outside of food, exports largely consist of custom-made goods for a known customer. Customization requires the extensive reliance on reasonably high and plentiful engineering and technical capabilities, but not much reliance on capital or substantial global market penetration capabilities—both of which are in short supply.

Unlike most countries at comparable development levels, Serbia’s development prospects are inhibited by strongly negative demographics. The displacement of the past decades has pushed wages well below historical expectations and emigration has been depopulating regions. Unless productivity is increased quickly to support wage increases, the population outside the major cities threatens to implode.

Pushing the envelope

These are the overarching questions for Serbia’s policymakers: How to enhance Serbia’s economic growth? How to generate ever greater numbers of more productive, better paying jobs? The circumstances and constraints faced in this regard by private actor-sector nexuses (economic segments) described in the previous section differ. I will focus here on three: (i) FDI with export orientation; (ii) small and medium-sized enterprises (SMEs) with export orientation and (iii) knowledge-based, creative and modern services industries concentrated in Belgrade and Novi Sad (“knowledge economy,” for short). The job for Serbia’s policymakers may seem simple enough—that is, attract as many sophisticated foreign companies as possible, support SME growth, and invest in modernizing education and innovation to enhance the knowledge economy.

However, in each of the economic segments, policymakers

will need to make discretionary decisions; they will want to make them so as to enhance the prospects for the development of sustained chains of profit opportunities. These decisions will vary greatly depending on the specific products and value chain segments, as well as (a) characteristics of the locations in which investments are made; (b) the likely synergies and tradeoffs among resource allocations between the economic segments; and (c) the likelihood—particularly in Serbia—that different types of SMEs can be transformed into locomotives of domestic economy growth.

What product and technology characteristics should be considered in investments?

The likelihood that an investment will lead to the opening of new profit opportunities, and that it will generate a long chain of such opportunities, varies not only by broad industrial sector (e.g., textiles or machine-building) but also by more specific product, technology and value chain segments; this likelihood is also determined by company culture. Most immediately, policymakers will be interested in knowing the opportunities that the specific value chain segment of the specific product offer for product diversification, value chain extension and/or technology upgrading once the investment is successfully in operation.

Consider three cases of investment by three different multinational companies (referred to as Factory 1, Factory 2 and Factory 3, for our purposes) into the production of electrical equipment in Serbia, a broad sector known to have some of the more complex linkage. Factory 1 produces wind turbine power generators, supplying about a quarter of European demand. Today, all of the customization and a considerable portion of this complex product's development is in Serbia. The company has also attracted a number of foreign suppliers to relocate to Serbia. Factory 2 assembles electrical motors for the automobile industry, as well as producing some of the more basic parts for the motors. Finally, factory 3 produces automobile electric cable sets.

All three factories employ about 1500 to 2000 employees, each continuing to grow.

All three factories started in Serbia cautiously, executing the simplest operations, mainly the product's assembly. But the evolution of the companies' further investments differed, so that they today engage different levels and kinds of capabilities with different future development prospects. Each factory utilizes labour-intensive technology, but with the attending capital and organizational investment as needed to ensure state-of-the-art products, with no room for compromising on quality or characteristics. The average wage paid in each of the companies is a good proxy of the average skill structure (i.e., the complexity of capabilities engaged at any moment in time). Initially, the average wage of all employees in each of the companies stood only slightly above the level of Serbia's minimum wage, reflecting that the capabilities engaged were very basic. Today, however, the average wage remains close to the minimum wage only in the cable sets factory; in the automobile electrical motors factory, it has increased by nearly 50 per cent and in the wind turbine generators company it is nearly double that.⁷

It should be underscored that the possibility of these evolutions was first of all determined by the characteristics of the products in question, but the context offered by the respective locations mattered as well. Electric cable sets are among the most basic metal products and their value chain cannot be developed either upstream or downstream. Electrical motors are a much more complex product that offers numerous opportunities for value chain extension or bifurcation. However, such diversification in Serbia is hampered by the fact that, being produced for the automobile industry, these products need to be produced in massive series. Only those value chain extensions that Factory 2 has decided to produce in-house may be considered for production locally. Finally, wind turbine generators are also complex products, but they are produced in smaller series and are linked to related products that require some degree of customization. Hence, Factory 3 found most

⁷ According to unpublished background studies that served as preparatory work for Center for Advanced Economic Studies (2019).

profit opportunities in engaging and developing the kind of capabilities available locally.

What are the likely synergies and tradeoffs among industries and economic segments?

Policymakers will also want to pay attention to the potential for synergies and tradeoffs offered between different industries and economic segments (i.e., FDIs and SMEs). An investment may affect opportunities laterally, in other industries, depending on the possible channels of technology and know-how spillovers that characterize it. Synergies may arise if different products complement one another, as well as if they engage the same or closely related capabilities. In Serbia's case, the existence of shared capabilities explains the fast growth seen in the plastics industry, in both foreign and domestic companies. This is because the production of plastic products requires frequent small changes in metals tools. Serbia has abundant fine skills in the production of metal tools, and this gave rise to a competitive plastic parts industry (Center for Advanced Economic Studies, 2017).

So, considering the dispersion of Serbia's production structure, should policymakers somehow encourage the collocation of plastic and metals industries? For example, the Serbian town of Čačak is known for having a multitude of small metalworking and mechanical parts shops as well as a handful of very successful SME producers of special machinery (Center for Advanced Economic Studies, 2017). Should Serbia's policymakers aim to attract FDI into Čačak? What exactly are the risks? Tradeoffs are also just as possible. Every large investment will compete with the existing local economy for at least some resources. Under which circumstances is such competition beneficial, and when does it threaten to crowd out activities that, with time, would have opened greater profit-generating investment opportunities?

How far can the production envelope be pushed by small and medium-sized enterprises?

Serbia's policymakers surely are especially interested in how much and how to support the country's SMEs. SMEs are of interest because they comprise a very large share of the

private domestic economy. Also, Serbia's small dispersed pockets of capabilities are more likely to be reached and developed by SMEs than by FDI. The transaction costs of finding and absorbing these small pockets can be expected to be simply too high for the usual FDI considerations. However, the main question driving this consideration is whether SMEs can drive the country's production envelope forward.

A broadly accepted answer to this question, at least until recently, has been that SMEs cannot be depended on to drive (i.e., generate) a significant outward movement of a country's production envelope. They were viewed, at best, as a generator of employment that depended on the growth of large enterprises/systems for dynamism. Development has been driven by increasing returns to scale, and, until recently, SMEs were not expected to be able to accomplish the necessary scale. Yet we see that Serbia's SMEs have grown successfully and have independently driven a portion of the country's exports. Could it be that this answer belongs to the past? Could it be that the technology that has facilitated the fragmentation and globalization of manufacturing value chains also opened a new development driver—the direct internationalization of SMEs?

How hard should Serbia's policymakers try? How unusual it is that so much of Serbia's exports is by SMEs, and how much can be expected from that? In principle, the policy possibilities in support of SMEs range from the development of strictly horizontal programmes, to very hands-on, interventionist competitiveness programmes. Under Serbia's circumstance, the question is less about where to position policy in this range of intervention philosophies, and more about whether some kind of SME-adjusted industrial policy can be developed for the more sophisticated sectors.

What direction for the long term?

As mentioned, filling capability gaps to expand market opportunities will always be risky. Some of those allocations will become wasted, or even counterproductive. Policymakers may be able to assess the short-term risks

and the likely benefits reasonably well. But in many cases the critical benefits can be expected to come only over the longer term, and are generally highly uncertain. The longer the horizon, the greater the uncertainty about the factors that may intervene to steer the evolution of the production envelope, and the more speculative the questions and answers of the policymakers.

In fact, there is ample evidence that sustained development requires rallying a country's actors and resources around one development vision. To hatch a single, unified vision, any policymaker will want to gauge the development potential as manifested by the country's production structure. They will want to make the most of their capabilities, and it would help if they could make comparisons with other countries—those that have successfully moved from similar to higher levels development, as well as those that have not. They will want to learn about what I will call the stylized facts of the evolution of productive structures. What can we say regarding Serbia's production structure compared to that of other countries at similar levels of income per capita?

The measurements done in Hausmann and Hidalgo (2011) suggest Serbia's structure opens up substantially more than an "average" level of opportunities. This is valuable information, but they will want to have much more specificity. How far can each of the industries currently comprising its production structure (i.e., the agrifood sector and the key segments that comprise it (textiles, mechanical equipment, chemicals, and so on)) evolve? And how much does the development of some areas condition the development of others? How easily do switches between close and relatively distant industrial groups happen?

Over the longer term, how far the chain of opportunities develops will of course depend on the extent to which these opportunities materialize and, further, on the realization of the same kind of opportunities that may repeatedly open. Every piece of information that can reduce the risks and increase the likely benefits of policymakers' actions will be precious.

BOTTOM-UP COLLABORATION FOR BETTER ANSWERS

How policymakers become informed

In general, the original information on the possible availability of profit opportunities or the potential short- to medium-term development paths for specific industries resides within the business sector. The maintenance of a continuous dialogue between policymakers and the business sector is a key element of the kind of supportive business environment that fosters growth. However, this information needs to be processed and complemented for the users' needs. Even to satisfy the needs of business leaders, information is processed into knowledge by academia (business schools), private consultancies, and research departments of private (usually financial) organizations. Policymakers may rely on these same private sector resources, but they also need to process information themselves within the country's development institutions, as well as learn from national academia and from institutions of the global development policy community—including both academia and international development organizations.

There are at several reasons why the policymakers' need a different perspective on production structure and profit opportunity information: Policymakers will be interested not only in the profit opportunity, and what may enhance it; they are interested in the externalities that investments can create, be they public or private. Moreover, the private actor will be mainly interested in internalizing profits, and even monopolizing them if possible—while policymakers will be interested in understanding when to go along, how to regulate, and when/how to foster competition.

Perhaps most importantly, however, the policymaker needs a comparative perspective on the role and experience of policymaking across countries and throughout history. To hatch a reasonable development vision, policymakers need to accumulate experience—their own, but preferably also that of as many international and historical examples as possible. What are the stylized facts of structural change that lead to development, and how were they accomplished?

Policymakers, especially in catch-up countries, need to look to other countries' more advanced (or simply more desirable) production structures as models and inspiration—comparing their experiences, taking what may be applicable and disregarding that which is not.

This processing is necessarily done by a country's development governance institutions. Typically, in addition to an economy's ministry departments, countries will have investment promotion and SME development agencies, and often also development banks. These entities collect and process information from all sources and, if the country's governance is solid, develop an institutional memory that becomes accumulated experiential knowledge about, among other things, how different industries evolve. To piece together an independent and sufficiently comprehensive picture, policymakers will need to do very substantial work, mostly by themselves, identifying, collecting and systematizing information about an adequate range of relevant circumstances in different countries. Most of the time, they will need to bridge considerable information barriers, including distance and language.

Collecting and adequately processing this information requires an improbably high level of development governance and cost. Policymakers may engage consultants to advise them on questions related to the development of specific industries. The consultants may be drawn from the international development industry or from business consultancies. They may be sectoral specialists, having studied, for example, public health, engineering or agronomy, or they may have a business school, public policy, or social sciences, education. Either way, to be useful to policymakers, their knowledge must originate largely from the private sector as it will need to include a large dose of practical experience, acquired either directly from work in the respective industries, or vicariously by consulting for them. The more that consultants are used, the higher the cost of such advice, especially if it concerns frontier industries.

Clearly, the international development policy community is positioned to make a crucial difference in the cost and

effort countries need to invest in accumulating knowledge that is derived from experience across countries and time. Academic and policy research often does provide strategic insights about how to approach policy design. However, as argued in the introduction, a relatively small portion of it is dedicated to understanding the evolution of production structures, and all too often more specific insights are strewn across the literature. For example, there is a wealth of research exploring the relative performance of companies in transition before and after privatization (e.g., Estrin and others, 2009; Frydman and others, 1999), but it is hard to find anything on the relative performance of industries or comparing the effectiveness of their respective privatizations (Kolasa and Bijsterbosch (2009) and Repkine and Walsh (1998) are rare examples). There are also numerous studies on the evolution of single industries (e.g., Pavlinek (2008)), but they tend to be available locally, in national languages, and comparative studies are hard to find.

The sector-specific expertise of international development institutions is focused on the sectors that emerge in earlier stages of development—especially on those that need to be either run or heavily regulated by the public sector. Thus, the international development banks tend to hold expertise about the capital-intensive infrastructure and utilities sectors, such as transport, energy and water supply, as well as the social sectors, primarily health and education. In addition to those sectors, United Nations agencies tend to hold specific expertise on agriculture and agribusiness as well as labour-intensive industries such as textiles and tourism. The Food and Agriculture Organization has a singular role in collecting information and developing policy-relevant knowledge about agriculture. The United Nations Industrial Development Organization (UNIDO) maintains a similar mandate with regard to industry, and the potential it has for a critical contribution is evident in the Industrial Development Report 2013. While its focus more recently has been on supporting industrial competitiveness through the development of benchmarks and on addressing cross-cutting issues, in the case of both UNIDO and UNCTAD, more could be done to articulate and perhaps

codify the wealth of sector-specific expertise maintained in their operational work. Finally, particularly relevant to answering questions on the intersection between industry-specific development and SME growth is the work done by the International Trade Center, whose mandate originates in the provision of technical assistance for integration into international trade.

Can we do better?

Despite substantial global resources invested in economic and development policy research, the amount of experiential and immediately applicable knowledge at the disposal of policymakers in support of their resource investment decisions pales in comparison to that available to the private sector. Business decision-making is supported by academic disciplines, as well as consultancies and private sector research departments, focused on codifying tacit knowledge and systematically organizing stylized facts, as well as processing massive amounts of case studies. By contrast, it is not clear where policymakers should go to acquire, for example, the “technical capacity” to “assess which goods are growth promoting and which are not” (World Bank, 2005, p.259). Who is producing such knowledge?

An important initiative in this regard is the OECD peer review of structural transformation (Primi, 2016) mentioned in the Introduction, conducted jointly with UNIDO and UNCTAD, as well as the participation of other United Nations agencies. It offers what could be qualified as a concentrated transfer of experiential knowledge to a country’s policymakers from peers. Based on a specific country’s request, the exercise consists of an “in-depth analysis of [the country’s] experiences of diversification, production transformation and upgrading with the participation of peers. It allows identifying how countries can benefit from the participation in global value chains and create resilient linkages, benefiting from the variety of the experiences of the countries engaged in the network” (Primi, 2016, p. 4). The range of issues covered goes well beyond identifying desirable and technically feasible structural change, to incorporate strategy and institutional

implementation capacity, as the exercise aims to provide actionable policy advice. Nevertheless, the reviews rely extensively on benchmarking of the country’s structure and performance, the kind of information that I argue policymakers need. This peer review exercise is a reflection of policymakers’ demand. It has been developed at the request of OECD member states. Expanding this initiative to cover more countries and involve more institutions, and/or accompanying it with a codification effort, should be explored.

The development of this kind of systematic, more operable body of knowledge should be feasible, even if it may seem to require an overwhelming amount of information, or to be liable to too much change. Hausman and Hidalgo are right when they say that the study of the evolution of production structures based on identifying “the precise technical and institutional requirements of each product” would require the collection of a “mindboggling” amount of information (Hausman and Hidalgo, 2011, p. 52). They limit themselves to the systematic observation of a limited number of characteristics of the empirical export structures. However, the fact that the authors identify relatively stable patterns suggests that there is some stability, as well as a probable hierarchy, in the evolution of capabilities underlying the evolution of different production structures. These probably derive from the relative stability of the functions most products offer, as well as of the technology with which they are produced. Their further empirical exploration is worthwhile, but should probably focus on the value adding process within a technology, or the value added component within a value chain.

Enter the United Nations: a pragmatic research programme concept

Building on contextualized knowledge, however, presents the challenge of requiring the coordination of multi-country expert teams. On the one hand, for each country whose production structure/experience is analysed, detailed and contextualized information, including both data and narratives, is needed. This can be best produced by local experts, and at much lower cost. On the other, to maximize

the usefulness of the information, such data and narratives need to be collected and made comparable for many countries. This goes beyond the benchmarking usually done by international agencies to resemble, most likely, a codification of the knowledge gathered in the OECD reviews.

Such multi-country coordination is something United Nations agencies are best positioned to organize, and the whole approach could be tested and promoted through a targeted programme. A useful example of the architecture of the process that needs to be followed is offered by the analysis of productive capacity development of least developed countries (LDCs) conducted by the Committee for Development Policy (CDP) for the 2016 United Nations Economic and Social Council. After classifying LDC countries by type and conducting fourteen case studies, three different pathways in the evolution of productive capacities are identified that lead to graduation from LDC status: (i) rapid development through natural resource exploitation; (ii) for small economies, combining economic specialization (typically in tourism or in natural resources); and (iii) investing in human assets and structural transformation, leading to diversified economies (United Nations, Committee for Development Policy, 2017). Although also broader in coverage of issues and much less detailed in the analysis of productive structure, the steps taken by the CDP are illustrative. After the necessary step of classifying countries into sufficiently similar groups for comparison, many kinds of systematic comparisons can be made. One comparison could be between countries of similar structure and at similar levels of development to identify the drivers of commonalities and differences in the stories of how they "got" where they are. Another would be to compare past but similar development stages of countries that today may or may not be similar, focusing on the drivers of the similarity or difference. Yet another possibility would be to focus on the evolution of specific sectors, across different countries, branching thereafter into the sector's interaction with other sectors. What got them where they are? The preliminary work would also include analysis of the evolution of productive structures on the readily available

detailed international export data (at the level of nearly 1000 product disaggregation), in order to help direct the researcher's attention to potential areas of key importance. To the extent possible, other structural data would also be analysed, such as the evolution of sectoral structures by company size or ownership, as well as location.

CONCLUSION

In the period since the global financial crisis, a shared understanding has matured, that concerted action is necessary if the global community is to successfully meet the intensifying challenges to its sustainable development. The COVID-19 crisis has now only further underscored the critical role that multilateral action must play in meeting these challenges. Otherwise, individual country action aiming to enhance the resilience of national economies could roll back some welcome accomplishments of international integration.

There is still no consensus on the role that industrial and other policies should play in deliberately guiding structural change at the national and international level. Nevertheless, there is a surge in policymakers' demand for a much better and more practical understanding of the options they face, and of actionable policies to promote desired structural change. Welcome initiatives, particularly in United Nations agencies and the OECD, have been increasing the collective knowledge regarding patterns of structural change and experiences in the process of development, offering a growing body of benchmarking data and operational advice.

More needs to and can be done, however. Global development research resources are still too skewed towards inapplicable theoretical work or essentially ideological battles. In this chapter, I argue that a reasonably rigorous understanding of the productive capabilities framework offers insights that can be further built into an applicable body of knowledge through the systematic collection and exchange, as well as codification, of experiential information. There appears to be sufficient stability in the needs/functions that the global production basket fills, and in the relatedness of the capabilities needed to produce them, to justify the effort.

Without prejudging conclusions on what kinds of industrial policy are desirable or not, I argue that policymaker actions are almost never neutral. Hence, regardless of how much one can or should expect policymakers to be able to know about markets, there is a need for developing as much applicable knowledge as possible about the evolution of production structures in practice, and policymakers' role in that evolution. Policymakers' need for applicable knowledge is exemplified in the case study of Serbia.

I argue that the organizational and data obstacles to constructing the desired programme of inquiry are considerable, as it needs to be anchored not only in centrally

observable data, but in case studies and interpretations that are best elaborated in research at the national level. Hence, I call for a bottom-up, networked but coordinated and systematic research effort that the United Nations is best positioned to pursue. Essentially, such a research programme would be an expansion (from a country and institutional perspective) of the work already pursued by some United Nations agencies and the OECD. Consideration should also be given to formally incorporating access to such knowledge in the activities pursued by the United Nations in support of the accomplishment of the SDGs at national levels.

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CHAPTER VII



Equality, democracy and sustainable development

by Alicia Bárcena, ECLAC



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Photo credit: Mr. Predrag Vasic, UN DESA

Equality, democracy and sustainable development



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INTRODUCTION

Equality is an objective of economic development and, at the same time, a key instrument in attaining that very objective. The role of equality in fostering development comprises two interrelated aspects. The first is economic, namely the impact equality has on productivity growth and economic diversification by means of the expansion of human capabilities; the second is political, rooted in the positive influence of equality on the quality of policymaking, especially in the implementation of policies of structural change and technological catching up. Equality creates a political economy conducive to learning, innovation and productivity growth. There is no trade-off between economic efficiency and equality, but a mutually reinforcing interaction.

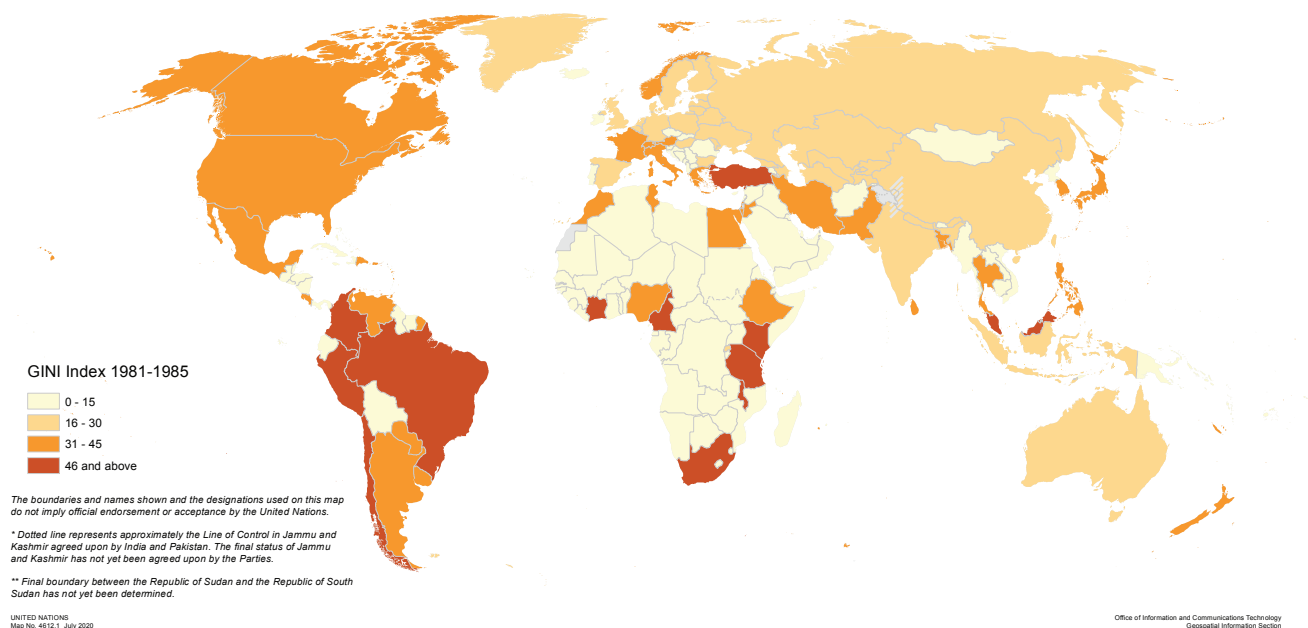
This chapter is organized into five sections. The first section presents a few stylized facts regarding inequality's evolution in the global economy and, in particular, in Latin

America. The rest of the chapter discusses the interactions between equality, structural change and productivity growth. The second section addresses the determinants of inequality, with a focus on how it is affected by the production structure in a centre-periphery system marked by technological asymmetries, and by different patterns of specialization. It is argued that the centre-periphery system tends to endogenously reproduce a pattern of specialization that breeds inequality. Industrial policies and macroprudential policies are necessary for reshaping incentives in favour of the diversification of the economy towards sectors with higher dynamic efficiency. The third section looks at causality from inequality to structural change. The former is a barrier to structural change because it limits access to health, education and opportunities, and creates a political economy that perpetuates privileges and rents based on natural resources and/or low-skilled labour. The fourth section argues that efforts at equality and industrial policy in the periphery should be complemented

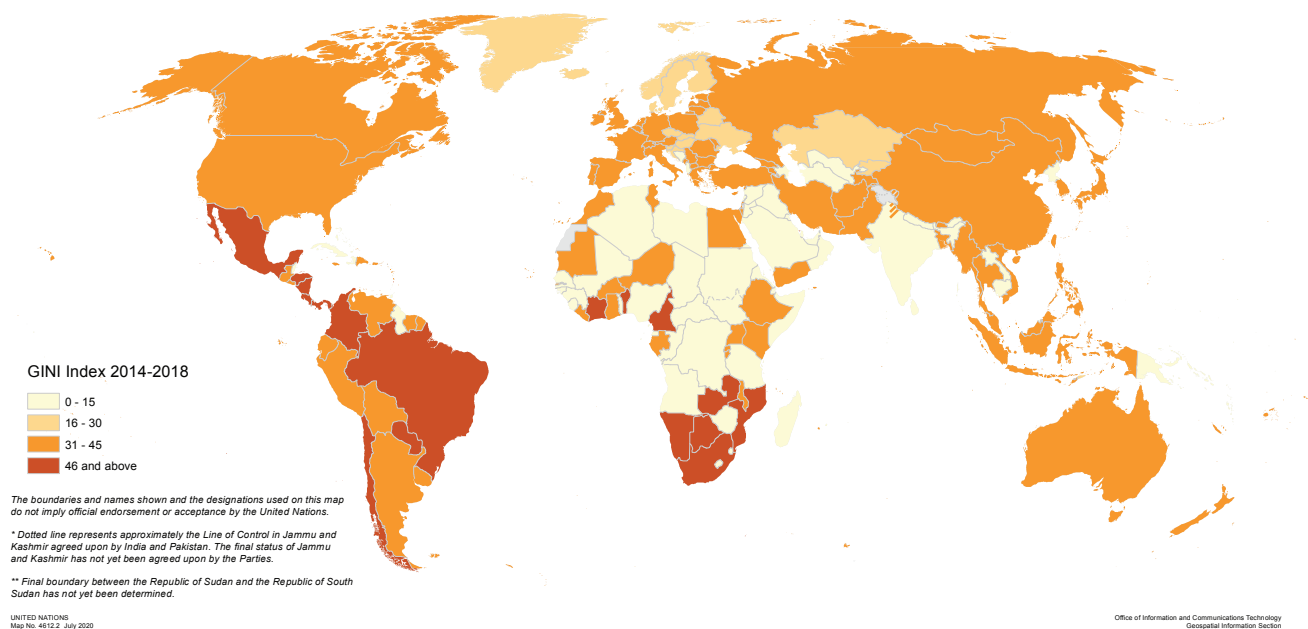
* Ms. Bárcena wishes to thank Gabriel Porcile, Economic Affairs Officer of the Division of Production, Productivity and Management of ECLAC and Zebulun Kreiter, Associate Economic Affairs Officer of the Office of the Deputy Executive Secretary of ECLAC, for their significant contribution as co-authors of this article.

Figure VII.1
Gini index, five-year averages, 1981–1985 and 2014–2018

A. 1981–1985



B. 2014–2018



Source: World Institute for Development Economics Research (UNU-WIDER), World Income Inequality Database.
Available from <https://www.wider.unu.edu/database/wiid> (last updated 6 May 2020).

by a new multilateral governance that acknowledges the structural asymmetries of the international system and provides global public goods for a new development model, based on inclusiveness and environmental sustainability. The final section presents conclusions.

THE EVOLUTION OF INEQUALITY IN LATIN AMERICA AND THE WORLD

Global trends

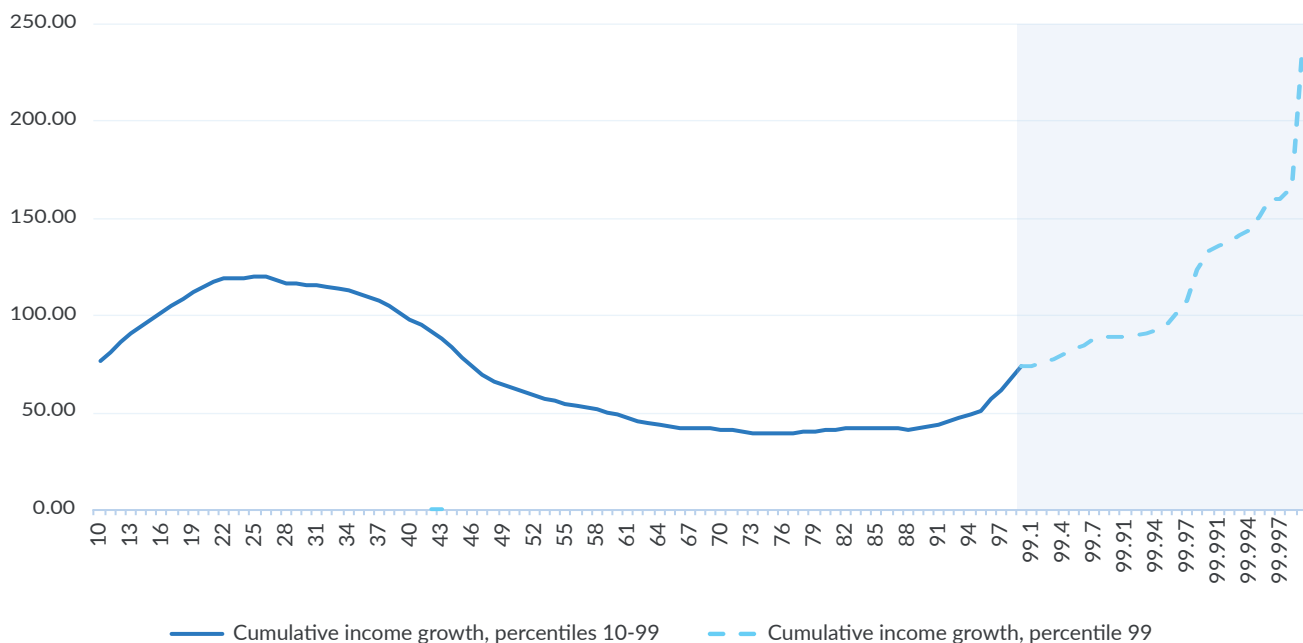
The paradigm shift that began in the late 1970s and early 1980s, as the collapse of the post-World War II Bretton Woods system gave way to an era of globalization based on trade and financial market integration, brought about substantial changes in income distribution, both between and within countries. “Outside-the-box” policy reforms in China, as well as in India to some extent, brought the world’s two most populous nations into an increasingly

integrated global trading system while retaining domestic policy flexibility, spurring their rapid structural change. This reconfiguration of the international economic landscape contributed to lower between-country inequality as hundreds of millions of people escaped poverty.

However, national-level income distribution dynamics tell a different tale. As increased capital mobility contributed to a breakneck pace of industrialization and economic growth in selected developing countries, constrained national policy space reduced the extensiveness and effectiveness of compensatory and social protection measures to accompany the disruptive changes occurring in domestic productive structures. Within developed and developing countries alike, income inequality increased as unhindered trade and investment flows drove greater heterogeneity in firm productivity and financialization in the global economy.

Despite economic growth, income distribution within many

Figure VII.2
Real income growth per adult by income percentile in the global distribution, 1980–2016
(Percentages)



Source: ECLAC, based on Facundo Alvaredo and others, *World Inequality Report 2018*. Available from <http://wir2018.wid.world/files/download/wir2018-full-report-english.pdf>.

countries became more unequal between the early 1980s and the 2010s (see figure VII.1). The Gini index reached its highest level in decades, especially within the more developed regions. For example, the Gini index for the countries of the Organization for Economic Cooperation and Development (OECD) was 0.32 in 2018,¹ its highest value since the 1980s.

During this period, the highest real per capita income growth occurred among people with average income between percentiles 20 and 60 of the global income distribution, and especially those with average income in percentile 99—that is, the world’s richest 1 per cent (see figure 2). The world’s richest 1 per cent saw its income rise steadily in most countries and captured 27 per cent of the total cumulative growth in income between 1980 and 2016, while 50 per cent of the distribution captured only 12 per cent (Alvaredo and others, 2018).

Those who fared the worst were those occupying the middle strata in developed and some developing countries. Displaced by outsourcing, technological change, and increasingly flexible labour markets, deteriorating social protection systems failed to preserve the same living standards and compensate for the growing insecurity of workers in the middle-income strata.

Perpetual and worsening inequality can continue without respite for only so long. Increasing inequality may be tolerated during periods of high growth during which those left behind imagine that they will soon be better off, sometimes referred to as the “hope factor” or “tunnel effect” (Hirschman and Rothschild, 1973). However, this proves to be ephemeral if expectations are not realized. In recent years, protests triggered by myriad context-specific sources of discontent have taken the form of diffuse and uncoordinated demands without an institutional agent to translate them into public policy.

As the world faces the most severe health and socioeconomic crisis it has faced in the past century, existing inequalities have been laid bare. Whether the world emerges from the current crisis with stronger state institutions that rectify the unequal distributional outcomes of unfettered market forces or historically high inequalities become further exacerbated is an open question.

Inequality in Latin America

Despite having made substantial strides in reducing income inequality since the turn of the century, Latin America remains the most unequal region in the world with an average Gini coefficient nearly one third higher than Europe and Central Asia (Economic Commission for Latin America and the Caribbean, 2019a). Latin America’s Gini coefficient averages 0.465² for the region as a whole. The highest levels of income inequality are found in Brazil and Colombia, while Argentina, El Salvador and Uruguay reflect the region’s lowest levels.

In 15 Latin American countries, data from the period 2002-2018 shows that economic growth combined with strong labour market and social protection policies were able to improve income distribution in a highly unequal region. Between 2002 and 2018, the region’s average Gini coefficient fell from 0.538 to 0.465, an average of 0.9 per cent per year (see figure VII.3).

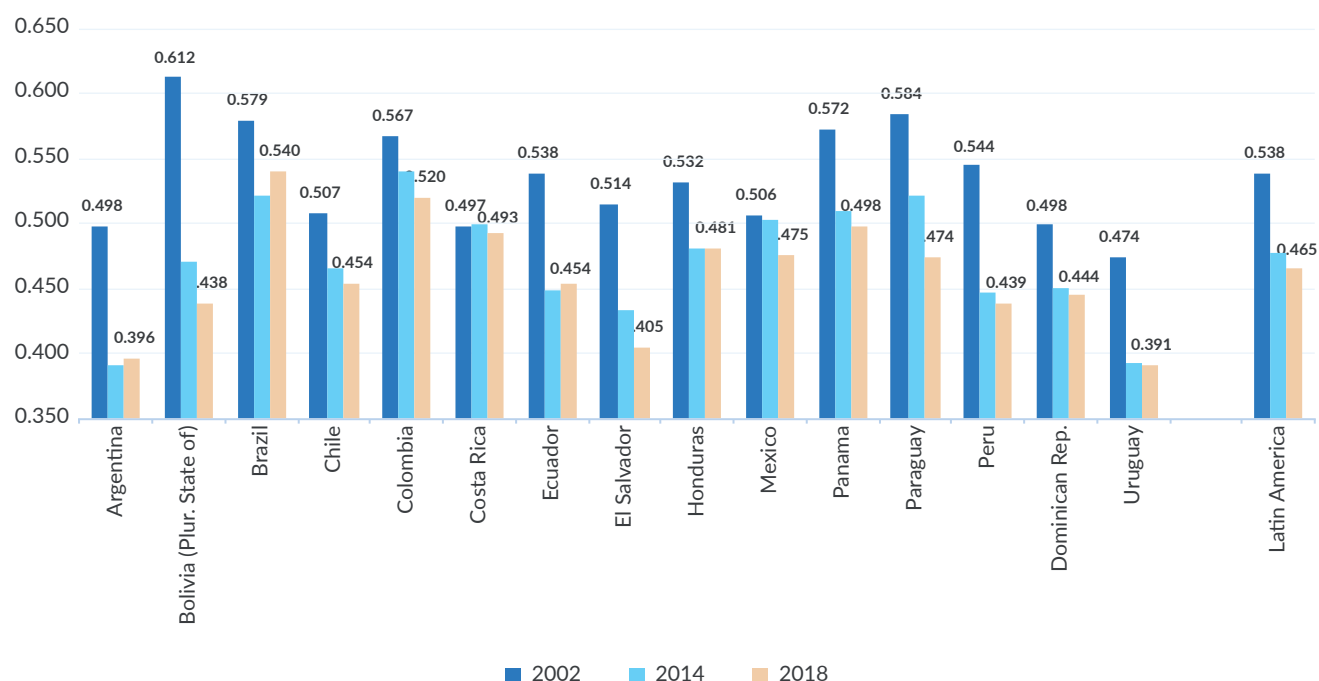
Improving income inequality in Latin America took place during a period of economic growth driven by the commodities boom. Labour’s share of national income reached a nadir in 2004 before increasing through the middle half of the 2010s. This was driven by South American countries, which grew consistently, generating employment and lowering poverty rates.

Complementing strong economic and wage growth was a set of policies aimed at strengthening labour institutions. These

¹ Organization for Economic Cooperation and Development (2020), Income inequality (indicator). Available from <https://data.oecd.org/inequality/income-inequality.htm>. Accessed on 3 June 2020. Simple average based on data from 2018 or most recent year available.

² Average for 15 countries on the basis of information from household surveys conducted in 2018, except in the case of Chile, for which data refer to 2017.

Figure VII.3
Latin America (15 countries): Gini coefficient, 2002, 2014 and 2018



Source: ECLAC, based on the Household Survey Data Bank (BADEHOG).

include labour legislation, minimum wage hikes, increased vocational training and the strengthening of collective bargaining processes. Employment quality increased in terms of formality and labour rights. Simultaneously, social protection systems were strengthened, particularly monetary transfers to the most disadvantaged sectors of the population, such as families with children living in poverty and older persons. However, in the absence of policies to stimulate structural productive transformation, these advances proved fleeting. As the commodity boom ended and economic growth rates declined, the reduction of income inequality in the region slowed. Between 2014 and 2018, the average annual decline in the average Gini coefficient was 0.6 per cent per year, compared to 1.0 per cent per year between 2002 and 2014.

The COVID-19 pandemic threatens to further roll back progress. In 2020, inequality is expected to be higher in every country in the region, with increases in the Gini

coefficient of between 0.5 per cent and 6.0 per cent. The region's largest economies—Argentina, Brazil and Mexico—are expected to be among the countries with the largest rise.

THE PRODUCTION STRUCTURE AS AN EXPLANATION OF INEQUALITY

Structural determinants of inequality

Structural transformation is central to economic development. In his pioneering work, Prebisch (1948) argues that the international economy comprises two different sets of countries, centre and periphery, defined by the characteristics of their production structures: the centre is diversified and complex, while the periphery is specialized in a few low-tech sectors. Such a structure implies that a significant share of the labour force in the periphery is allocated to subsistence activities or the informal sector.

Table VII.1
Latin America (17 countries): Projected change in Gini coefficient in 2020, not including the impacts of policies to mitigate the impacts of the COVID-19 pandemic

Between 0.5% and 1.4%	Guatemala
	Honduras
	Panama
	Paraguay
	Dominican Republic
Between 1.5% and 2.9%	Bolivia (Plurinational State of)
	Chile
	Colombia
	Costa Rica
	El Salvador
	Nicaragua
	Peru
3.0% or more	Argentina
	Brazil
	Ecuador
	Mexico
	Uruguay

Source: ECLAC, based on the Household Survey Data Bank (BADEHOG).

This gives rise to large differences in labour productivity within the periphery, between the leading modern sectors (usually linked to the international markets) and the subsistence/informal sectors. This fragmented structure was called “structural heterogeneity” by Pinto (1978). The process of economic development consists in overcoming structural heterogeneity through the transformation of the narrow production structure of the periphery into a more diversified structure (i.e., with a higher share of technology-intensive sectors). Diversification allows the economy to

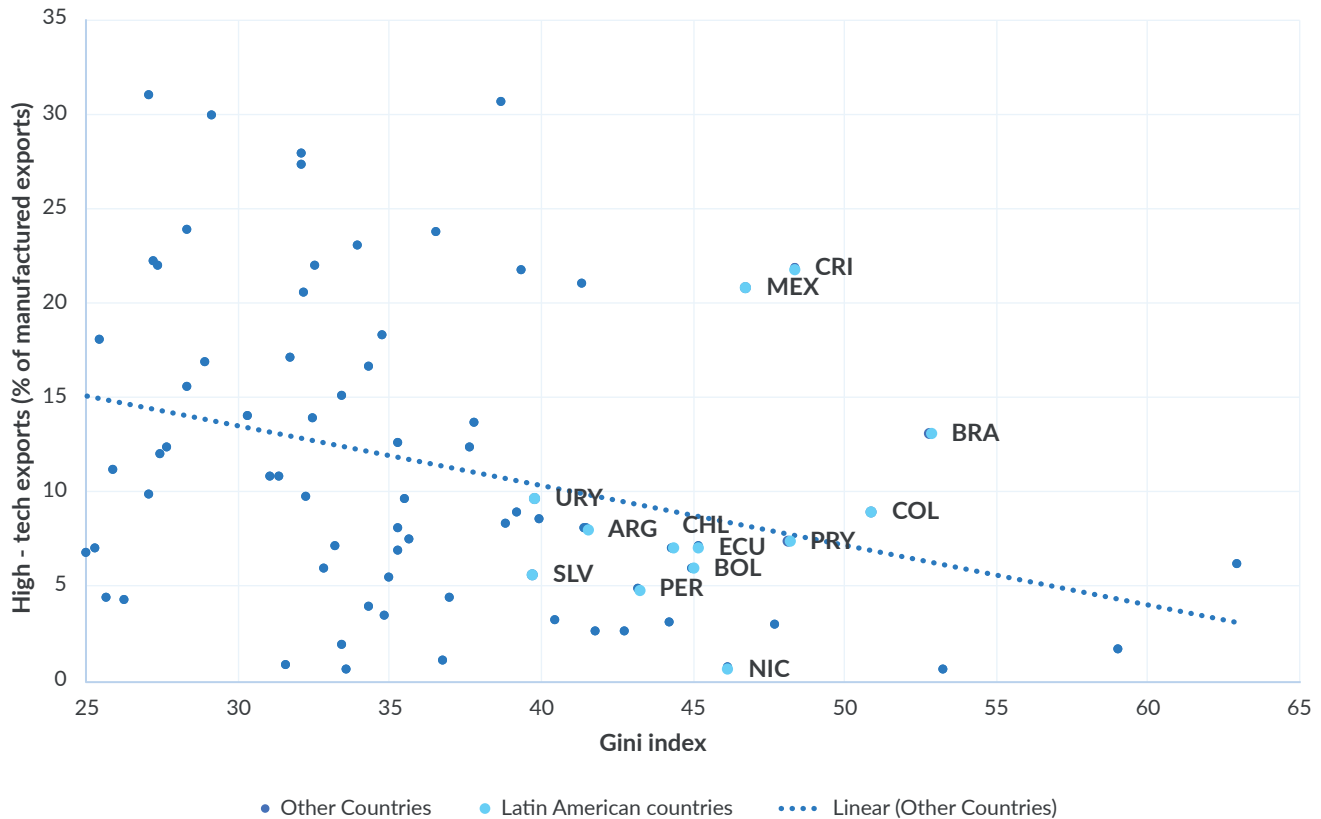
generate jobs with increasing productivity, which will drain the labour force from the subsistence/informal sectors.

The centre-periphery analysis is an important piece of the toolbox left by the pioneers in development thinking (see Rodríguez, 2007). But how does equality enter the analysis? A first perspective is to look at equality as an endogenous variable. The causal direction goes from the production structure to equality. A production structure heavily concentrated on a few, low-tech sectors, which compete internationally on the basis of natural resources and/or cheap low-skilled labour (of which the maquila system is the paradigmatic case), is more likely to generate a skewed income distribution than a productive structure that competes on the basis of technical change and knowledge. In a structure dominated by low-tech sectors, decent jobs will be scarce and unemployment or underemployment high. As a result, workers' bargaining power will be weak. In addition, in developing economies, the ownership of land and mining activities is usually heavily concentrated. Ricardian rents obtained from the exploitation of these resources will be captured by a small group of landowners or mine owners; higher profit rates from cheap labour will mostly accrue to large domestic or foreign firms entrenched in global value chains. In all cases, the pattern of power and income distribution that emerges is heavily tilted against labour. The characteristics of the production structure is thus an important explanatory variable of why Latin America is the most unequal region in the world, as discussed in the previous section.

Figure VII.4 illustrates this point. The y-axis presents the share of high-technology exports in manufacturing exports as an indicator of production structure sophistication; the x-axis shows the Gini index. The graph indicates a negative association between these two variables. Causality, as argued in this chapter, runs in both directions.

Another factor that explains inequality is that the rate of economic growth will tend to be lower in the periphery than in the centre, in the absence of industrial policies in the periphery. Low-tech sectors usually show lower rates of demand growth than the high-tech sectors, in which the

Figure VII.4
The production structure and inequality, 2014–2018
(Percentages and index values)



Source: ECLAC, on the basis of World Bank data.

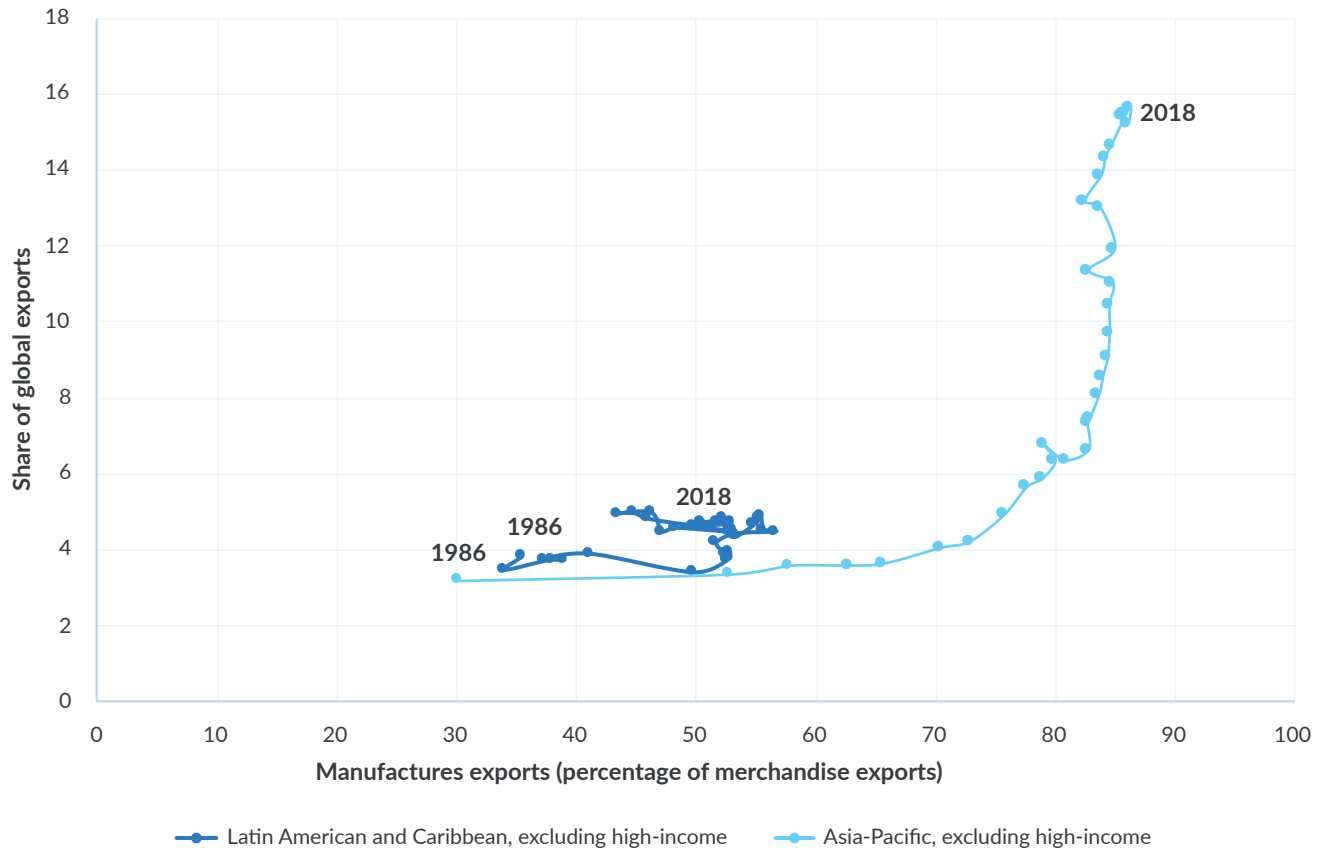
centre specializes. This in turn entails that the exports of the periphery will grow at a lower rate than its imports, leading to recurrent deficits in current accounts in the periphery. For countries that do not issue an international reserve currency, recurrent deficits mean a rising external debt. The periphery will have to depreciate its currency and reduce the rate of growth to prevent these deficits and debt from becoming explosive. In short, economic growth in the periphery is balance-of-payments constrained (Rodríguez, 1977; Blecker and Setterfield, 2019). Figure VII.5 shows the association between export diversification and competitiveness in the global economy. The x-axis shows the share of manufactured exports in total goods exports, while the y-axis shows the share in world exports.

Two regions are compared: a sample of Latin American and Caribbean countries that excludes high-income countries, and Asia Pacific countries excluding high-income countries. It can be seen that the dynamism of the region in global trade is associated with its ability to diversify exports, as represented by the ability to export manufactures.

Slow and unstable growth implies that the demand for labour will be sluggish too, which weakens the bargaining power of workers in the labour market. Frequent depreciations lead to a worsening of income distribution, as imported goods are part of the workers' consumption basket.

The combination of industrial policy and macroeconomic policy is key for escaping an inefficient pattern of specialization.

Figure VII.5
Export diversification and international trade, 1986–2018
(Percentages)



Source: ECLAC, based on World Bank data.

Diversification towards sectors with higher technological intensity will reduce the importance of Ricardian rents and of low-skill wages in income distribution, and will heighten growth and the demand for labour, thereby strengthening the bargaining power of labour. This represents what Fajnzylber called “authentic competitiveness,” based on technical change and not on low wages or abundant natural resources. An economy whose growth is driven by innovation and technical change is an economy that creates better jobs, demands more skills, and is more favourable to the redistribution of power and income.

The desired transformation of the economic structure is progressive structural change, which consists of increasing

the share in production of sectors that show three types of dynamic efficiency: (i) growth (or Keynesian) efficiency, defined by a rate of demand growth higher than the average rate of growth of global demand; (ii) technological (or Schumpeterian) efficiency, defined by a rate of technical change higher than the average; and (iii) environmental efficiency, defined by decoupling gross domestic product (GDP) growth from CO₂ emissions and the destruction of natural resources (Economic Commission for Latin America and the Caribbean, 2012, 2014, 2016, 2018). A structure whose sectors show these three types of dynamic efficiency is one conducive to sustainable development.

The critical point in the structuralist tradition is that such a

transformation is not a spontaneous process that could be delivered by the workings of the market forces alone. On the contrary, the structure of the periphery and technological backwardness both show a high degree of inertia, and they both perpetuate over time. The reason for this is that technical change in a firm is path dependent: what the firm learns and produces is a function of its previous experience, not something it can take from the technological shelves and immediately put to work. Firms and countries cannot “jump” from one type of technology to another by simply observing what other firms do. Learning has an important tacit component that requires building skills and routines which can only be developed through experience in production and investment. Capabilities emerge from learning by doing, not from codified handbooks.

Atkinson and Stiglitz (1969) have a pioneering work in which this perspective is highlighted: learning is strongly localized around existing technologies. Firms produce new knowledge within a small interval of feasible technologies, concentrated in the vicinity of the technology they are using. Since the mid-1970s, the Schumpeterian evolutionary literature showed there is a cumulateness that exists in learning (Arthur, 1994; Fagerberg and Verspagen, 2002; Cimoli and Porcile, 2011; Dosi and others, 2015; Lundvall, 2016). Increasing returns imply that the advantage of the firms that have higher capabilities is reinforced, while the laggards fall behind. In a context of technological asymmetries, countries that are closer to the technological frontier will innovate at faster rates than the catching-up economies. This reproduces inequalities across and within countries.

Increasing returns are a force that reproduces advantages and disadvantages in technical change and international trade. The reproduction of competitive asymmetries may give rise to “lock-in” effects and slow-growth—slow-learning traps which represent undesirable equilibria for developing economies. Industrial policies are needed to escape these traps. Such policies should reshape incentives and redirect investments with the aim of bringing forth capabilities that otherwise would not be created. Diversification and

the creation of new capabilities require policies that defy comparative advantages rather than conforming to them, as argued by Chang (2003).

To be effective, industrial policies must go hand in hand with macroeconomic policies aimed at promoting growth and full employment. Countercyclical policies are crucial for stabilizing the rate of growth, while macroprudential policies and the adoption of capital controls are needed to cushion the destabilizing impacts of financial cycles in the international economy. A stable and competitive real exchange rate (RER) enhances the impact of industrial policy, while an appreciated RER compromises diversification. In effect, if the RER appreciates (and hence the price of foreign goods falls in units of the domestic goods), the country will lose international competitiveness. Even when industrial policy allows for an improvement in productivity and the quality of the domestic goods, the loss in price competitiveness may drive domestic production out of the domestic and international markets (Bresser-Pereira, 2011; Ffrench-Davis, 2012; Ocampo, 2016; Guzman and others, 2018). RER and industrial policies must complement each other—not act as alternative paths towards diversification—in order to succeed in catching up.

The experience of countries such as China and the Republic of Korea, whose currencies began to appreciate only after they became exporters of sophisticated manufactured goods, underscores the importance of coherence between industrial and exchange rate policies (see the classical work of Amsden, 1989; see also Amsden and Euh, 1993; Frieden, 2015 and Lee, 2013). Inversely, in Latin America, industrial policies suffered a negative shock in the 1980s and were abandoned in the 1990s (Bértola and Ocampo, 2012). In the 1980s, the external debt crisis took the shape of a fiscal crisis, which led to the collapse of public investment. No industrial policy was viable in a situation in which large amounts of resources were sent abroad to service the debt. In the 1990s, Latin America embraced liberal reforms, which systematically neglected policies of structural change. The institutional capabilities required to implement industrial policies were downgraded. The

commodity boom of the second half of the 2000s made it still more attractive to invest in the “old sectors” with static comparative advantages, halting economic diversification (Nassif and others, 2016).

Summing up: The production structure is a key determinant of inequality through structural heterogeneity and the limits it imposes on the growth of the demand for labour, particularly skilled labour. If technological learning evolves, is context specific, related to institutions and the previous experience in production, and subject to increasing returns, then there are several possible equilibria. Some of these equilibria will be better than others in terms of productivity growth, economic growth, income distribution and the external balance. The path the economy will take and the equilibrium it will attain is not fate. Policies and institutions are a significant force in selecting the economy’s eventual path, and history matters. In particular, it is crucial to have industrial and macroeconomic policies that work in consonance to foster diversification.

INEQUALITY AS AN EXPLANATORY VARIABLE: THE POLITICAL ECONOMY OF THE REPRODUCTION OF BACKWARDNESS

Direct and indirect effects of equality on productivity and growth

Economists were used to thinking of equality as being opposed to economic efficiency, to the point that the association between these two variables was labelled the “big trade-off”. This idea has changed drastically in recent years. Both variables are now seen as strategic complements. Equality favours efficiency and productivity growth directly, by providing universal access to health and education. By doing so, it expands the ability of people to learn and innovate, with positive effects on productivity. There are significant direct costs related to inequality in Latin America. For example, it has been estimated that, in

2017, the cost of the double burden of malnutrition (i.e., the combination of undernutrition and obesity) was equivalent to 2.6 per cent of GDP in the Dominican Republic and reached 10.3 per cent in El Salvador.³ The costs of not having a universal social protection system are very high in terms of health (both physical and mental), education, productivity losses and violence. Investing in social protection and care entails savings in all those areas and would mean being more prepared for emergencies—like the one caused by the COVID-19 pandemic. Investment in social protection is investment in capabilities in the long run. The absence of a welfare state in Latin America is a burden on the ability of the region to make advances in its technological catching up.

But there are also indirect impacts of inequality on economic and productivity growth, which are expressed in term of loss of cooperation and acute political conflict. In the previous section, it was suggested that the production structure is difficult to transform due to inertial forces associated with the importance of tacit knowledge and experience in technical change. It was also argued that, as a corollary, industrial policies are required to break this inertia. However, the type of industrial policy adopted and the efficiency with which it is applied is not independent of the production structure, because such structure sustains a certain set of interests and power. Economic power shapes political power, and the latter can be used to reinforce the former. The lock-in of the production structure does not only have technological causes, but is also the outcome of the specific political economy that inequality produces. Inequality is at the root of a political economy that limits the adoption of the industrial and macroeconomic policies required to foster structural change (Khan and Blankenburg 2009; Doner and Ross-Schneider, 2016).

The political economy of inequality is inimical to cooperation and trust. Privileged groups will favour producing private goods rather than financing public goods that would benefit

³ See Economic Commission for Latin America and the Caribbean and World Food Programme, the cost of the double burden of malnutrition. Available from <https://www.cepal.org/es/areas-de-trabajo/desarrollo-social>.

the entire population. Such preferences would reproduce networks of economic and political power that deny access to opportunities and capabilities to most of the population—what ECLAC (2018) has called the culture of privilege. What appears to be meritocracy in this context will be hiding an initial position of extreme asymmetry of access and opportunities. Political instability rises, and democracy loses support and legitimacy.

In sum, reducing inequality is a necessary condition for the success of policies of structural change. It is necessary to look at reduced inequality not just as an outcome, but as a factor shaping the type of policies and institutions that prevail. Greater equality has an impact on productivity that goes beyond the one stemming from improved health, education and opportunities; it also improves the formulation of policies by giving more space to innovators and the emergence of new sectors. Industrial policies that are underpinned by equality stress learning, export diversification and the creation of “Schumpeterian” rents through innovation and the rapid diffusion of technology, rather than protecting political privileges or rents accruing from static comparative advantages.

The capital account and the policy space in the periphery

Phases of high liquidity and euphoria followed by “sudden stops” in international lending make the domestic macroeconomic environment extremely uncertain and volatile. Developing economies highly dependent on foreign capital and on the export of only a few commodities—whose prices may change abruptly—should restrain short-term capital flows. Periods of high liquidity lead to currency appreciation and exacerbate current account deficits that subsequently become a burden on investment and growth. Latin American economies have experienced successive crises since the 1990s that show the destabilizing impact of open capital accounts. The effects are not confined to short-run crises. The contraction of GDP these crises produce leads to a fall in investment that, in a world of accelerated technical change, increases the technology gap between centre and periphery.

Besides macroeconomic stability, there is also a political economy dimension in trying to avoid sharp fluctuations. Highly mobile financial capital has a veto power over domestic economic policies. Redistributive policies and progressive tax systems may be inhibited by the possibility of massive capital flights. This constrains the ability of the Government to tax and provide the public goods that a stable democracy demands (Storm, 2018). A fully open capital account hinders efforts for redistribution and full employment. A simple econometric exercise helps substantiate this point.

Table VII.2 shows the impact of financial openness and inequality on the quality of democracy. The dependent variable is the polity score; the independent variables are inequality (measured by the Palma index and by an index of inequality in education) and financial openness (proxied by the Chinn-Ito index). The model includes the income per capita as a control variable. The sample of 45 countries is divided into 5 clusters (regions). Regressions in clustered samples are used to produce robust estimators of the variance.

The results indicate that inequality (measured by the Palma index, defined as the ratio of the income share of the top 10 per cent to that of the bottom 40 per cent) has a strong negative impact on democracy. Capital account openness (measured by the Chinn-Ito index) also has a significant negative effect on the quality of democracy. The effect of trade openness is not significant. The significant negative coefficient of financial globalization is consistent with the idea that high levels of liquidity and capital mobility contribute to weakening democracy.

In sum, accelerating growth and technical change in the periphery in the direction of progressive structural change (which includes the inclusiveness and environmental sustainability dimensions) requires decisive steps in the inequality front. Moving ahead in building welfare and a more egalitarian society will remove barriers to growth. This implies challenging the current distribution of political and economic power, and limiting the ability of short-term capital flows to destabilize both the macroeconomic and the political dynamics of peripheral countries.

Table VII.2

Regression in clustered samples: inequality, capital account openness and democracy

Regression			
Dependent Variable: Polity	Coefficient	Robust St Error	t, P > t
Palma_i	-0.127	0.010	-12.47 0.000
e_peedgini	0.002	0.003	0.59 0.588
Migdppcln	0.022	0.008	2.96 0.041
Openness	0.000	0.001	0.47 0.666
ka_open	-0.023	0.010	-2.33 0.081
_constant	0.721	0.148	4.86 0.008

Note: The polity score is computed by subtracting the autocracy score from the democracy score. The resulting unified polity scale ranges from +10 (strongly democratic) to -10 (strongly autocratic). e_peedgini measures inequality in the level of education achieved by the population aged 15 years and older. Migdppcln is the log of GDP per capita obtained from The Maddison Project Database, 2018. Openness is the sum of exports and imports as a percentage of GDP, and measures openness to international trade. ka_open is the Chinn-Ito index, based on dummy variables that codify the tabulation of restrictions on cross-border financial transactions reported in the International Monetary Fund's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER). It ranges from 0 (total restriction) to 1 (total openness). Chinn-Ito index is a proxy for the degree of openness of the capital account. The Gini coefficient of educational inequality is estimated from average education data, using the method as suggested by Thomas, Wang, and Fan (2000), Checchi (2004) and Castelló and Doménech (2000: 4). The sample includes developing and developed economies, and 11 Latin American countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Panama, Peru and Uruguay.

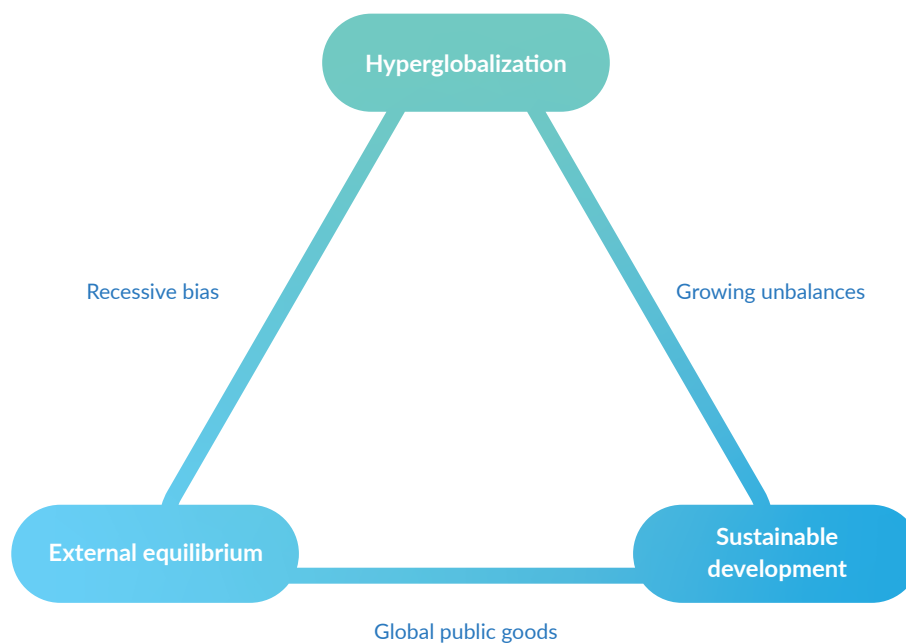
THE SUSTAINABLE DEVELOPMENT TRILEMMA IN THE INTERNATIONAL ECONOMY

In the centre-periphery system, interdependence is asymmetric. The governance of such a system requires taking this asymmetry into account. Figure VII.6 depicts a world with heterogeneity in capabilities and the political tensions that such asymmetries imply. It underlines the need for global public goods and domestic industrial policies to overcome the structural barriers to development that emerge from increasing returns, path dependence and lock-in in learning. Figure VII.6 takes as a point of departure the concept of hyperglobalization as suggested by Rodrik (2011), defined as a form of global governance based on minimizing transaction costs across borders, regulation and state intervention, and maximizing the mobility of capital and goods. The impact of hyperglobalization is now studied from the perspective of a global economy with structural asymmetries.

In such a global economy, a trilemma emerges between sustainable development, external equilibrium and hyperglobalization (figure VII.3). Sustainable development is defined as in the previous sections, taking into account the economic, social and environmental dimensions. It refers to a process of transformation on the basis of progressive structural change, in which the country pursues policies in favour of full employment, equality and environmental protection.

Assume that international governance is hyperglobalization. If the country advances in the direction of sustainable development, the combination of growth and enhancing social and environmental protection will boost the demand for imports and generate growing imbalances in international trade. In a developing economy—a technological laggard—this will lead to a deficit in current account and growing indebtedness, which eventually leads to slower growth and falling behind (and may lead to global unbalances). Therefore, external equilibrium cannot coexist with sustainable

Figure VII.6
The development trilemma: hyperglobalization,
heterogeneity in capabilities
and sustainable development



Source: ECLAC.

development in the context of hyperglobalization. On the other hand, if the periphery prioritizes having a balanced current account and abandons the objectives of sustainable development, then the economy will grow at a much lower rate. The result is that hyperglobalization plus equilibrium in current account imposes a tendency towards low growth at slower rates (a recessive bias) on the international system.

To keep the current account in equilibrium, or at least to maintain the deficit constant as a percentage of the GDP, and at the same time move towards sustainable development, the international system must provide global public goods and allow policy space for industrial policies in the periphery. Sustainable development and external equilibrium can coexist in the form of global governance with mechanisms to correct or alleviate external disequilibrium and technological asymmetries.

In the case of global public goods, they should be aimed

at (i) facilitating both technological spillovers to and rising exports from the developing economy; (ii) international standards for labour and social protection that prevent developed and developing economies from engaging in a “race to the bottom” type of competition, thereby preserving (or building) their welfare states; (iii) standards and agreements over CO₂ emissions and the destruction of the common goods; and (iv) regulations for financial capital flows that limit their destabilizing effects on the price of currencies and commodities, and on domestic financial markets. These global public goods must complement and facilitate the adoption of industrial and technological policies for sustainable development.

The political economy obstacles to producing international public goods are higher than those that constrain the production of domestic public goods. At the national level, Governments can impose taxes and finance the production of these goods, while there is no centralized power at

the international level.⁴ Still, the call for a Global Green New Deal is an important step in this direction (United Nations Conference on Trade and Development, 2016). The Sustainable Development Goals (SDGs) express the concern of the international community on the impacts of hyperglobalization and the need to find new forms of international cooperation. The concern over “democracy-enhancing multilateralism” is providing an important source of reflection on how to revive multilateral cooperation, with development problems at the core of that inquiry (Keohane and others, 2009; Rodrik, 2019).

In the real world, complex combinations of the scenarios described above are likely to be present. The Latin American countries, and countries of the European periphery (such as Greece and Portugal), are representative of cases where growth is recurrently halted by the emergence of external disequilibrium. China, in turn, is representative of countries with a strong industrial policy but, arguably, with adverse impacts on the environment and the protection of workers, which presents new policy challenges. Figure VII.6 might also be seen as a dynamic system, not just as an equilibrium outcome, which implies that some countries shift positions in a systematic way. For instance, a developing economy that stresses growth and social protection during a given period will run a deficit and contribute to global unbalances; in its next period, an external and financial crisis could force it to reduce growth, hence contributing to the recessive bias.

CONCLUDING REMARKS

Inequality is a consequence of a production structure concentrated in low-tech sectors; it is also a barrier to transforming this structure. Building a welfare state is a necessary step for accelerating technical change and productivity growth in peripheral economies. The fall of inequality will not emerge from growth because growth itself is constrained by inequality. Inequality should be reduced hand in hand with the adoption of industrial and macroeconomic policies to promote structural change.

Inequality hinders cooperation and leads to a conflictive political economy that threatens the quality—and even the survival—of democracy. The recent crisis brought about by the COVID-19 pandemic highlights the importance of public policies and state capabilities to sustain growth and build resilience. The need for proactive public action in this emergency should serve as a model for addressing other pressing challenges, such as inequality and climate change. A new global governance based on a Global Green New Deal, the building of a welfare state in the periphery, and expanding the space for industrial policies should replace hyperglobalization and unilateral responses to enable effective progress towards achieving the SDGs.

⁴ The classical discussion of international public goods is Kindleberger (1986).

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Giancarlo Corsetti is Professor of Macroeconomics at Cambridge University, Fellow of Clare College and Director of the Cambridge INET Institute. He previously held the Pierre Werner Chair at the European University Institute in Florence, and taught at the Universities of Rome III, Yale and Bologna. He is a leading scholar in international economics and open macro with pioneering contributions on currency, financial and sovereign crises, monetary and fiscal policy in open economy, and the international transmission and global imbalances. Mr. Corsetti is a consultant at the European Central Bank, the Bank of England, the Bank of International Settlement and a regular visiting professor in central banks and international institutions. He is research fellow of the Centre for Economic Policy Research London and CESifo in Munich.



CRISTINA DUARTE

Cristina Duarte served Cape Verde as Minister of Finance, Planning and Public Administration from 2006 to 2016. Prior to that, she was the Director of a reform programme on private sector development and competitiveness. In the private sector, she rose to become Vice President, Country Corporate Officer and Head of Corporate and Investment Banking of Citibank, Angola. Over her long career, she has developed strong leadership and strategic management skills, played an instrumental role in public policymaking and in the private sector. She was the only female candidate in the 2015 election for the Presidency of the African Development Bank. She used this opportunity to present her vision for Africa's transformation. She has an abiding interest in issues of governance, private sector development, and particular competence in international negotiations, strategic and scenarios planning, development policy and management, and institution building. Since Mrs. Duarte left Government in 2016, she has been invited to governance and advisory positions in various international and regional organizations. She is a member of the United Nations Committee of Experts on Public Administration, established by the Economic and Social Council (ECOSOC). She is a Member of the Advisory Committee to President Paul Kagame on the Reform of the African Union. She is a Member of the Board of the Alliance for a Green Revolution in Africa (AGRA) and she is a Member of the Board of the Institute of African Leadership for Sustainable Development (UONGOZI Institute). In addition, she is a Visiting Research Fellow at WITS University, School of Governance, South Africa.



MARCEL FRATZSCHER

Marcel Fratzscher is President of DIW Berlin, one of the leading, independent economic research institutes and think tanks in Europe, Professor of Macroeconomics and Finance at Humboldt-University Berlin, and Chair of the German Government expert committee on "Strengthening investment in Germany". Marcel Fratzscher is member of the advisory board of the German development, non-profit Deutsche Welthungerhilfe and of the supervisory board of the Hertie School of Governance. Moreover, he is member of the advisory board of the foundation Deutschland rundet auf, co-owner and engaged at Kreuzberger Kinderstiftung and member of the advisory board of the Society for German-Chinese Cultural Exchange (GeKA e.V.) Berlin. His prior professional experience includes work as Head of the International Policy Analysis at the European Central Bank (ECB), where he worked from 2001 to 2012; the Peterson Institute for International Economics in 2001; before and during the Asian financial crisis in 1998 at the Ministry of Finance of Indonesia for the Harvard Institute for International Development (HIID); and shorter periods at the Asian Development Bank, the World Bank and in various parts of Asia and Africa. He received a Ph.D. in Economics from the European University Institute (EUI); a Master of Public Policy from Harvard University's John F. Kennedy School of Government; a B.A. in Philosophy, Politics, and Economics (PPE) from the University of Oxford, and a Vordiplom in Economics from Kiel University. He obtained his primary and secondary education in Germany.



ANASTASIA J. GAGE

Anastasia J. Gage is a Professor at the Department of Global Community Health and Behavioral Sciences, School of Public Health and Tropical Medicine, Tulane University. She earned a Doctor of Philosophy degree in Demography from the University of Pennsylvania, a Master of Philosophy degree in Population Studies from the University of Ghana, and a Bachelor of Arts (Honors) degree in Geography from the University of Sierra Leone. Dr. Gage has extensive research experience in sexual and reproductive health, violence against women and girls, maternal and child health, women's empowerment, and health risk behaviors among youth. She has also conducted qualitative and quantitative studies to support program design, implementation, monitoring and evaluation in Ghana, Democratic Republic of the Congo, Ethiopia, Haiti, Nigeria, Jamaica, Uganda, and Zambia. Dr. Gage has served on the Board of Directors of the African Population and Health Research Center, Nairobi (2000-2006); the Integrated Public Use Microdata Series (IPUMS)-International, Advisory Board for the National Science Foundation (2015-2018); the Scientific Advisory Committee, INDEPTH Network (2010-2018); and the International Outreach Committee, Population Association of America (2013-2017). She served as President of the International Union for the Scientific Study of Population, the worldwide network of demographers, from 2014-2017.



JAYATI GHOSH

Jayati Ghosh is Professor of Economics at the Centre for Economic Studies and Planning, School of Social Sciences, Jawaharlal Nehru University, New Delhi. She was educated at Delhi University, Jawaharlal Nehru University and the University of Cambridge, England where she obtained her Ph.D. in 1983. Since 2002, she has been the Executive Secretary of International Development Economics Associates (IDEAS), an international network of heterodox development economists (www.networkideas.org). She is Founding Trustee of the Economic Research Foundation (www.macrosan.org). She has some experience in advising on policy-related issues for state and central governments in India as well as some governments in other countries. She was the Chairperson of the Commission on Farmers' Welfare in 2004 constituted by the state government of Andhra Pradesh in India, and member of the National Knowledge Commission reporting to the Prime Minister of India (2005-09). She has been on several Working Groups and Advisory Committees of the Government of India relating to various developmental issues. She has consulted for a large number of international organizations, including ILO, UNDP, UNCTAD, UN DESA, UNRISD and UN Women. She is a member of a large number of advisory boards of institutions and academic journals. Additionally, she has been collaborated with several newspapers, journals and blogs in India and the United Kingdom. Her blog can be found at <http://www.networkideas.org/jayati-blog/>. She has been closely involved in working with progressive organizations and social movements. She is married and has one daughter.



MERIT E. JANOW

Merit E. Janow is an internationally recognized expert in international trade and investment. She has extensive experience in academia, government and business, with life-long experience in the Asia-Pacific. Janow became Dean of Columbia University's School of International and Public Affairs (SIPA) in July 2013. For the past 22 years, she has been a professor at SIPA and Columbia Law School. Presently, she is also co-director of the APEC Study enter and until recently chair of the Faculty Oversight Committee of Columbia's Global Center East Asia. She has written three books and numerous articles and frequently speaks before business, policy, and academic audiences around the world. In December 2003, Janow was elected as one of the seven members of the World Trade Organization's (WTO) Appellate Body, which is the court of final appeal for adjudicating trade disputes between the 153 member nations of the WTO. From 1997 to 2000, Janow served as executive director of the first antitrust advisory committee to the attorney general and the assistant general for antitrust, U.S. International Department of Justice. Prior to joining Columbia's faculty, Janow was deputy assistant U.S. trade representative for Japan and China (1989-1993). Janow is on the Board of Directors of several technology and financial services corporations and is a member of the Council on Foreign Relations and the Trilateral Commission. Early in her career, Janow was a corporate lawyer specializing in cross-border mergers and acquisitions in New York. She grew up in Tokyo, Japan, and is fluent in Japanese. She has a JD, Columbia Law School, and a BA in Asian Studies, University of Michigan.



RICARDO LAGOS

Ricardo Lagos is Honorary Chairman of the Interamerican Dialogue, member of Global Commission on Drug Policy and Co-Chairman of Foro Iberoamerica and Pro Bono President of Fundación Democracia y Desarrollo. He is also member of the Elders and of the Club of Madrid. During the 1980's he played a predominant role in the process to recover the democracy in Chile. He led the Democratic Alliance and the Independent Committee for Free Elections. He was the founder and first president of the Party for the Democracy. Between 2000 and 2006, he was president of the Republic of Chile. Prior to becoming president, Mr. Lagos was Minister of Education under Patricio Aylwin's term, (1990) and Minister of Public Works under Eduardo Frei Ruiz-Tagle's term (1994). From 2008 to 2009, Mr. Lagos was President of the Club of Madrid and United Nations Special Envoy on Climate Change. Mr. Lagos was born on 2 March 1938. He holds a Law degree from University of Chile and a Ph.D. in Economics from Duke University. He has also received the Honoris Causa distinction from many prestigious universities in the world, such as the Universidad Autónoma de México, Universidad de Salamanca, amongst others. He was granted the "Berkeley Medal," top distinction of the Berkeley University in California.



JUSTIN YIFU LIN

Justin Yifu Lin is Dean of Institute of New Structural Economics and Institute of South-South Cooperation and Development and Professor and Honorary Dean of National School of Development at Peking University. He was the Senior Vice President and Chief Economist of the World Bank, 2008-2012. Prior to this, Mr. Lin served for 15 years as Founding Director and Professor of the China Centre for Economic Research (CCER) at Peking University. He is Councillor of the State Council and a member of the Standing Committee, Chinese People's Political Consultation Conference. He is the author of more than 20 books including *Beating the Odds: Jump-starting Developing Countries*; *Going Beyond Aid: Development Cooperation for Structural Transformation*; *The Quest for Prosperity: How Developing Economies Can Take Off*; *New Structural Economics: A Framework for Rethinking Development and Policy*; *Against the Consensus: Reflections on the Great Recession*; and *Demystifying the Chinese Economy*. He is a Corresponding Fellow of the British Academy and a Fellow of the Academy of Sciences for Developing World.



JOSÉ ANTONIO OCAMPO

José Antonio Ocampo is a Professor at the School of International and Public Affairs, Columbia University, and Chair of the Committee for Development Policy of the United Nations Economic and Social Council (ECOSOC). He is also co-President of the Initiative for Policy Dialogue and a Member of the Committee on Global Thought at Columbia University. He has occupied numerous positions at the United Nations and his native Colombia, including United Nations Under-Secretary-General for Economic and Social Affairs, Executive Secretary of the United Nations Economic Commission for Latin America and the Caribbean (ECLAC), and Minister of Finance, Minister of Agriculture and Director of the National Planning Office of Colombia. He has also served as a Member of the Board of Banco de la República, Colombia's central bank. In 2015-2016, he was also the head of Colombia's Rural Development Commission. In 2012, he was one of the two candidates from developing countries for President of the World Bank. He has received numerous academic distinctions, including the 2012 Jaume Vicens Vives award of the Spanish Association of Economic History for the best book on Spanish or Latin American economic history, the 2008 Leontief Prize for Advancing the Frontiers of Economic Thought and the 1988 Alejandro Angel Escobar National Science Award of Colombia. He has published extensively on macroeconomic theory and policy, international financial issues, economic and social development, international trade, and Colombian and Latin American economic history.



JEFFREY D. SACHS

Jeffrey D. Sachs is a world-renowned professor of economics, leader in sustainable development, senior United Nations advisor, bestselling author, and syndicated columnist whose monthly newspaper columns appear in more than 100 countries. He has twice been named among Time Magazine's 100 most influential world leaders. He was called by the New York Times, "probably the most important economist in the world," and by Time Magazine "the world's best known economist." Professor Sachs served as the Director of the Earth Institute from 2002 to 2016. He was appointed University Professor at Columbia University in 2016, and also serves as Quetelet Professor of Sustainable Development, and Professor of Health Policy and Management at Columbia University. He is Special Advisor to United Nations Secretary-General António Guterres on the Sustainable Development Goals, and previously advised both United Nations Secretary-General Ban Ki-moon on the Sustainable Development Goals and Millennium Development Goals and United Nations Secretary-General Kofi Annan on the Millennium Development Goals. He is a Distinguished Fellow of the International Institute of Applied Systems Analysis in Laxenburg, Austria. Sachs is Director of both the Center for Sustainable Development, and the United Nations Sustainable Development Solutions Network under the auspices of United Nations Secretary-General Ban Ki-moon. Prior to joining Columbia, Sachs spent over twenty years as a professor at Harvard University, most recently as the Galen L. Stone Professor of International Trade. A native of Detroit, Michigan, Sachs received his B.A., M.A., and Ph.D. degrees at Harvard.



JOSEPH E. STIGLITZ

Joseph E. Stiglitz is an American economist and a professor at Columbia University. He is also the co-chair of the High-Level Expert Group on the Measurement of Economic Performance and Social Progress at the OECD, and the Chief Economist of the Roosevelt Institute. A recipient of the Nobel Memorial Prize in Economic Sciences (2001) and the John Bates Clark Medal (1979), he is a former senior vice president and chief economist of the World Bank and a former member and chairman of the (US president's) Council of Economic Advisers. In 2000, Stiglitz founded the Initiative for Policy Dialogue, a think tank on international development based at Columbia University. He has been a member of the Columbia faculty since 2001 and received that university's highest academic rank (University Professor) in 2003. In 2011, Stiglitz was named by Time magazine as one of the 100 most influential people in the world. Known for his pioneering work on asymmetric information, Stiglitz's work focuses on income distribution, risk, corporate governance, public policy, macroeconomics and globalization. He is the author of numerous books, and several bestsellers. His most recent titles are *Globalization and Its Discontents Revisited*, *The Euro*, *Rewriting the Rules of the American Economy* and *The Great Divide*.



HEIZO TAKENAKA

Heizo Takenaka is a professor emeritus at Keio University and a professor at Toyo University in Japan. Professor Takenaka started his academic career in 1981 as a visiting scholar at both Harvard University and University of Pennsylvania. His academic experience includes Senior Economist, Institute of Fiscal and Monetary Policy, Japanese Ministry of Finance (1982); Associate Professor, Faculty of Economics, Osaka University (1987); Visiting Associate Professor, Harvard University (1989); Visiting Fellow, Institute of International Economics (1989); and Associate Professor (1990) and Professor, Faculty of Policy Management, Keio University (1996). Professor Takenaka was named a member of the Economic Strategy Council (advisory board for economic policy to the Prime Minister) in 1998 and a member of the IT Strategy Council (advisory board on IT policy to the Prime Minister) in 2000. In 2001, he was named the Minister for Economic/Fiscal Policy. In 2002, Professor Takenaka was named the Minister for both Financial Services and Economic/Fiscal Policy. In 2004, he was elected to the House of Councilors, and was named the Minister for both Economic/Fiscal Policy and Privatization of the Postal Services. In 2005, he was named the Minister for both Internal Affairs and Communication, and Privatization of the Postal Services. The following year, Professor Takenaka returned to academia. He was named to the Foundation Board of the World Economic Forum in 2007. Professor Takenaka received his B.A. in economics from Hitotsubashi University and his Ph.D in economics from Osaka University.



IZABELLA MÔNICA VIEIRA TEIXEIRA

Izabella Mônica Vieira Teixeira is the Former Minister (2010-2016), the Brazilian Ministry of the Environment. During her career, Ms. Teixeira was the Environmental Analyst of the Ministry of Environment (1984-2016), the Undersecretary for the Environment, Chief of Staff, Task Leader of the Clean-up Program of the Guanabara Bay of Rio de Janeiro State Secretary for the Environment (2006-2008), the Deputy Minister of the Environment of Brazil (2008-2009), the Minister of the Environment of Brazil (2010–2016), the Executive Director of New Tracks Environment and Development Consultancy (since 2017), the Senior Fellow for Land Use and Climate Change of Brazilian Center for International Relations – CEBRI (since 2017), the Co-Chair International Resource Panel – IRP/UNEP (since 2017). Ms. Teixeira has international expertise as the Head of the Brazilian Delegation on negotiations of the Paris Agreement of the United Nations Convention on Climate Change, Member of the High Level Panel on Global Sustainability of United Nations Secretary-General, Member of the High Level Panel on the Post-2015 Development Agenda of United Nations Secretary-General, Key leader of Rio+20 Conference on Sustainable Development, Head of the Brazilian Delegation on negotiations of the Convention on Biological Diversity, Head of the Brazilian Delegation on negotiations of the United Nations Framework Convention on Climate Change and of BASIC countries (Brazil, South Africa, India and China). Ms. Teixeira has a Ph. D. and M.Sc. in Energy Planning, Federal University of Rio de Janeiro. She was awarded Champions of the World for Policy Leadership of the United Nations Environment Programme (2013).



KORI UDOVIČKI

Kori Udovički heads the Belgrade think-tank Center for Advanced Economic Studies (CEVES), which she founded in 2004. CEVES is an independent think-and-do-tank devoted to advancing Serbia's economic recovery, democratic consolidation, and convergence with the European Union. Previously, she was Deputy Prime Minister and Minister of Public Administration and Local Self-Government (2014-2016) in the Government of Serbia. In this position she launched comprehensive reforms of the public administration including the design and adoption of an employment control and public administration sizing mechanism and the adoption of long postponed regulatory packages for the general administrative procedure, the inspections system, public administration wages, and civil service at the local level. In Serbia, she also served as Minister of Energy and Mines (2002-03), and as the first woman Governor of the National Bank of Serbia (2003-2004). In 2007-2012, she served as Assistant Secretary-General of the United Nations, Assistant Administrator and Director of the Bureau for Europe and CIS of UNDP. Prior to joining UNDP, she founded the Foundation for the Advancement of Economics (FREN) in Serbia, and established and edited its flagship publication, the Quarterly Monitor of Economic Trends and Policies in Serbia. From 1993 to 2001, Ms. Udovički worked as an Economist at the International Monetary Fund. Ms. Udovički holds a Ph.D. in economics from Yale University and a B.A. from the Economics Faculty of the University of Belgrade. She is married and the mother of three children.



ERNESTO ZEDILLO

Ernesto Zedillo is the Director of the Yale Center for the Study of Globalization; Professor in the Field of International Economics and Politics; Professor of International and Area Studies; and Professor Adjunct of Forestry and Environmental Studies at Yale University. After almost a decade with the Central Bank of Mexico he served as Undersecretary of the Budget, Secretary of Economic Programming and the Budget, and Secretary of Education before serving as President of Mexico from 1994-2000. He is Chairman of the Board of the Natural Resource Governance Institute and the Rockefeller Foundation Economic Council on Planetary Health and Co-Chair of the Inter-American Dialogue. He serves on the Global Commission on Drug Policy, the High-Level Board of Experts on the Future of Global Trade Governance and on the Selection Committee of the Aurora Prize for Awakening Humanity. From 2010 to 2012 he served as Vice Chair of the Global Commission on Elections, Democracy and Security, chaired by Kofi Annan; from 2005 to 2011, as Chair of the Global Development Network; and from 2008 to 2010 as Chair of the High Level Commission on Modernization of World Bank Group Governance. He is a Member of the Group of 30, a consultative group on international economic and monetary affairs and The Elders, an independent group of global leaders aimed at achieving peace, justice and human rights worldwide. In 2011 he was elected an international member of the American Philosophical Society. He earned his Bachelor's degree from the School of Economics of the National Polytechnic Institute in Mexico and his M.A. and Ph.D. at Yale University.



DR. MIN ZHU

Dr. Min Zhu is currently the Chairman of the National Institute of Financial Research at Tsinghua University and he is also a board trustee member of the World Economic Forum. Dr. Zhu was a Deputy Managing Director at IMF from July 2011 to July 2016. Before that, Dr. Zhu was a Deputy Governor of the People's Bank of China, and prior to his service at China's Central Bank, he served as a Group Executive Vice President of the Bank of China. Dr. Zhu also worked at the World Bank and taught economics at both Johns Hopkins University and Fudan University. Dr. Zhu received his Ph.D. and M.A. in economics from Johns Hopkins University, an M.P.A. from the Woodrow Wilson School of Public International Affairs at Princeton University, and a B.A. in economics from Fudan University. Dr. Zhu was awarded as China Economic Leader in 2014, as Global Influential Chinese in 2015, and as CFV-10 year Global Financial Leader in 2016.



ALICIA BÁRCENA (Guest speaker)

Ms. Bárcena assumed office as the Executive Secretary of the Economic Commission for Latin America and the Caribbean (ECLAC) on 1 July 2008.

She had previously served as the Under-Secretary-General for Management at United Nations Headquarters in New York, Chef de Cabinet and Deputy Chef de Cabinet to the former Secretary-General, Mr. Kofi Annan. Alicia Bárcena held the post of Deputy Executive Secretary and Director of ECLAC's Environment and Human Settlements Division. Prior to her time at ECLAC, Ms. Bárcena served as Co-ordinator of the Latin American and Caribbean Sustainable Development Programme of the United Nations Development Programme (UNDP), responsible for the Environmental Citizenship Project at the United Nations Environment Programme (UNEP).

Alicia Bárcena was the Founding Director of the Earth Council in Costa Rica, a non-governmental organization in charge of follow-up to the agreements reached at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, in 1992.

Ms. Bárcena holds a Bachelor of Science degree in Biology from the National Autonomous University of Mexico (UNAM, in Spanish), as well as a Master's degree in Public Administration from Harvard University. She has completed the courses for a degree of Master in Ecology, and has initiated studies for a Ph.D. degree in Economics at the UNAM.

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