

RETHINKING DEVELOPMENT STRATEGIES AFTER THE FINANCIAL CRISIS

Volume II: Country Studies and International Comparisons





**Hochschule für Technik
und Wirtschaft Berlin**

University of Applied Sciences

RETHINKING DEVELOPMENT STRATEGIES AFTER THE FINANCIAL CRISIS

Volume II: Country Studies and International Comparisons

Edited by

Alfredo Calcagno

Sebastian Dullien

Alejandro Márquez-Velázquez

Nicolas Maystre

Jan Priewe



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Explanatory notes

Classification by country or commodity group

The classification of countries in this publication has been adopted solely for the purposes of statistical or analytical convenience and does not necessarily imply any judgement concerning the stage of development of a particular country or area.

The terms “country” / “economy” refer, as appropriate, also to territories or areas.

References to “Latin America” in the text or tables include the Caribbean countries unless otherwise indicated.

References to “sub-Saharan Africa” in the text or tables include South Africa unless otherwise indicated.

Other notes

References in the text to *TDR* are to the *Trade and Development Report* (of a particular year). For example, *TDR 2014* refers to *Trade and Development Report, 2014* (United Nations publication, sales no. E.14.II.D.4).

References in the text to the United States are to the United States of America and those to the United Kingdom are to the United Kingdom of Great Britain and Northern Ireland.

The term “dollar” (\$) refers to United States dollars, unless otherwise stated.

The term “billion” signifies 1,000 million.

The term “tons” refers to metric tons.

Annual rates of growth and change refer to compound rates.

Use of a dash (–) between dates representing years, e.g. 1988–1990, signifies the full period involved, including the initial and final years.

An oblique stroke (/) between two years, e.g. 2000/01, signifies a fiscal or crop year.

Decimals and percentages do not necessarily add up to totals because of rounding.

Abbreviations and acronyms

ASEAN	Association of South-East Asian Nations
BNDES	Banco Nacional de Desenvolvimento Econômico e Social (National Bank for Economic and Social Development)
DAAD	German Academic Exchange Service (Deutscher Akademischer Austauschdienst)
DB	development bank
DFI	development finance institution
EU	European Union
FDI	foreign direct investment
FFE	foreign-funded enterprise
FIE	foreign-invested enterprise
GDP	gross domestic product
IFIs	international financial institutions
IMF	International Monetary Fund
IPR	intellectual property rights
ISIC	International Standard Industrial Classification of All Economic Activities
IT	information technology
ITES	IT enabled services
n.e.s.	not elsewhere specified
NIE	newly industrialized economy
OECD	Organisation of Economic Cooperation and Development
P&C	parts and components
S&T	science and technology
SELIC	Sistema Especial de Liquidação e Custódia (Special System for Settlement and Custody)
SITC	Standard International Trade Classification
SME	small- and medium-sized enterprise
SOE	State-owned enterprise
TDR	Trade and Development Report
TFP	total factor productivity
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

About the authors

- *André Biancareli* is PhD Professor at the Institute of Economics of the State University of Campinas (Unicamp), researcher at the Center for Studies of Current Trend and Economic Policy (Cecon) and coordinator of the Developmentalist Network (RedeD).

- *Alfredo Calcagno* is Head of the Macroeconomic and Development Policies Branch within the Division on Globalization and Development Strategies at UNCTAD, and team leader of the Trade and Development Report (TDR).

- *C. P. Chandrasekhar* is Professor at the Centre for Economic Studies and Planning, Jawaharlal Nehru University. His areas of interest include the role of finance and industry in development and the experience with fiscal, financial and industrial policy reform in developing countries. He has co-authored (with Jayati Ghosh) *Crisis as Conquest: Learning from East Asia* (Orient Longman), *The Market that Failed: Neo-Liberal Economic Reforms in India* (Leftword Books) and (with Simran Kumar and Kiran Karnik) *Promoting ICT for Human Development: India* (Elsevier). He is a regular columnist for *Frontline* (titled *Economic Perspectives*), *Business Line* (titled *Macroscan*), and *The Hindu web edition* (titled *Economy Watch*). He is an Executive Committee member of IDEAs (International Development Economics Associates), an international network of economists engaged in the promotion of teaching and research using heterodox approaches to economic issues.

- *Sebastian Dullien* is Professor of International Economics at HTW Berlin – University of Applied Sciences and Senior Policy Fellow at the European Council on Foreign Relations. From 2009 to 2013, he was co-director of a DAAD-sponsored network on “Economic Development Studies on Money, Finance and Trade” between 12 universities in Belarus, Brazil, Chile, China, Germany, Jordan, Mauritius, South Africa, Uganda and the United Republic of Tanzania that worked in close collaboration with UNCTAD’s Virtual Institute.

- *Ricardo Ffrench-Davis* is Professor of Economics at the University of Chile. He holds a PhD in Economics from the University of Chicago and has been awarded the Chilean National Prize for the Social Sciences and Humanities. He is former Principal Regional Adviser of ECLAC, 1992–2005, Chief Economist at the Central Bank of Chile, 1964–1970 and 1990–1992, co-founder of the Center for Economic Research on Latin America (CIEPLAN), 1975–1989, and Chairperson of the Committee for Development Policy of the United Nations in 2007–2010. He has published 21 books and about 150 articles on trade and finance, development and Latin American economies and is the author of *Reforming Latin America’s Economies after Market Fundamentalism* (2006) and *Economic Reforms in Chile: from Dictatorship to Democracy* (2010).

- *Qin Gou* is Assistant Professor at the School of Finance of the Central University of Finance and Economics, Beijing, China.

- *Alejandro Márquez-Velázquez* is Assistant Professor at the Institute for Latin American Studies at the Free University of Berlin. From 2009 to 2013, he was administrative coordinator of the DAAD-sponsored network on “Economic Development Studies on Money, Finance and Trade”.

- *Nicolas Maystre* is an Economic Affairs Officer in the Macroeconomic and Development Policies Branch within the Division on Globalization and Development Strategies at UNCTAD, which is responsible for the Trade and Development Report (TDR).

- *Jan Priewe* was Professor of Economics at HTW Berlin – University of Applied Sciences from 1993 until 2014. He was co-director of a cooperation project of the German Ministry for Economic Cooperation and Development with the People’s Bank of China from 2000 until 2009. From 2009 to 2013, he was co-director of a network sponsored by the German Academic Exchange Service (DAAD) on “Economic Development Studies on Money, Finance and Trade” between 12 universities in Germany, Belarus, Brazil, Chile, China, Jordan, Mauritius, South Africa, Uganda and the United Republic of Tanzania, which worked in close collaboration with UNCTAD’s Virtual Institute.

- *Amit S. Ray* is Director, Centre for Development Studies, Trivandrum, India, on deputation leave from Centre for International Trade and Development, Jawaharlal Nehru University, New Delhi, where he has been a Professor since 2000.

- *Pedro Rossi* is PhD Professor at the Institute of Economics of the State University of Campinas (Unicamp), researcher at the Center for Studies of Current Trend and Economic Policy (Cecon) and associated researcher at the Developmentalist Network (RedeD).

- *Laike Yang* is Professor at the East China Normal University and currently the Dean of the Department of International Trade. He holds a PhD in Economics from Xiamen University. He conducted his post-doctoral research at the Chinese Academy of Social Science (CASS). His research fields are trade and environment, Asian economic integration and China’s foreign trade.

- *Liqing Zhang* is Professor of International Finance, Dean of the School of Finance and Director of International Finance Studies at the Central University of Finance and Economics, Beijing, China.

INTRODUCTION

*Alfredo Calcagno, Sebastian Dullien,
Alejandro Márquez-Velázquez, Nicolas Maystre and Jan Priewe*

The global financial crisis that erupted in 2008 marks the starting point for a comprehensive rethinking of economic theories and policies, particularly in the field of development strategies. A number of questions need to be addressed for economic analysis and policy recommendations to be relevant, including the assessment of the causes of the crisis, its potential remedies and the way in which the crisis challenges our understanding of economic and social processes.

The crisis shed new light on the economic trends that led to it, including the developments in different developing and transition economies.¹ Moreover, the crisis may be changing the economic framework in which developing countries formulate and implement their development policies; therefore, it is necessary to assess the extent to which these policies need to be reformulated. These considerations call for examining development strategies from a historical perspective. Indeed, different groups of developing and transition countries had experienced quite divergent performances in the decades preceding the global financial crisis. This has provided a rich set of experiences from which a very valuable learning can be extracted.

When looking at the long-term performance of developing countries from 1980 until 2013, it is possible to identify three major features. First, Asian countries perform remarkably better on most indicators, and especially in terms of per capita gross domestic product (GDP) growth, compared with African and Latin American countries. Second, while the 1980s and 1990s were practically two lost decades for development in most countries outside Asia,

transition and developing economies have boomed since the early 2000s; even after the Great Recession of 2008–2009, output growth has been more buoyant in developing countries than in developed countries, despite strong diversity of performances within the regions. Third, after several decades in which the share of developing countries in global output remained virtually constant, it almost doubled in the decade following 2003.

In the 1980s and 1990s, per capita GDP growth rates in most developing countries were well below those of developed countries, and in many cases they actually contracted (table 1). This trend of developing countries lagging behind visibly changed in the period from 2000–2013, when per capita GDP in the developed countries expanded by a meagre average annual rate of 0.9 per cent, while developing and transition economies caught up with a (weighted) average annual increase in per capita incomes of 4.6 per cent. All developing and transition regions improved their economic performance: Asian economies continued their strong dynamic, several African and Latin American countries reoriented their economic policies away from the Washington Consensus and benefited from a commodity boom, while transition economies in Europe and Central Asia recovered from the huge output losses from the economic collapse of the early-1990s. This growth acceleration was achieved despite the industrialized countries being in the doldrums for most of this period.

Rapid output growth was associated with significant increases in per capita incomes in many

Table 1
GDP PER CAPITA GROWTH IN CONSTANT 2005 DOLLARS, 1981–2013

<i>Country group</i>	1981–1990	1991–2000	2001–2013	1991–2013
	Median			
Developed	2.0	2.1	1.1	1.9
Developing and transition	0.3	1.1	2.8	2.0
	Average of the group/region			
Developed	2.6	2.0	0.9	1.5
Developing and transition	1.3	2.0	4.6	3.5
<i>of which:</i>				
Developing Africa	-0.5	0.0	2.4	1.7
Developing America	-0.3	1.4	2.3	1.7
Developing Asia	3.2	4.7	6.0	5.2
Transition	...	-4.8	4.9	2.5
Number of developing and transition with growth...				
above 5 per cent	19	14	27	18
above 3 per cent	36	41	77	47
above 0 per cent and below 3 per cent	45	71	67	97
below 0 per cent	66	53	20	19
above average weighted growth of developed	41	63	124	96
below average weighted growth of developed	106	102	40	67
Number of developing and transition with data	147	165	164	163

Source: UNCTAD secretariat calculations, based on United Nations, Department of Economic and Social Affairs (UN-DESA), *National Accounts Main Aggregates* database.

Note: GDP per capita is calculated by dividing the corresponding total GDP by the total population of each country group.

developing countries, and particularly those that are highly populated. Therefore, in terms of the population that benefited from it, the improvement was remarkable: in 1990, 52 per cent of the world's population lived in low-income countries (defined here as below the \$1,000 level in per capita GDP in constant prices of 2013); in 2013, that share had plummeted to 10 per cent (table 2). First, China left the low-income group, followed after 2000 by India, among others. Hence, the accelerated income growth has had real effects for the living conditions of hundreds of millions of the poor across the world. Developmental indicators like the reduction of absolute poverty or improvements in health and education usually go hand in hand with higher average levels of income. However, the strength of the nexus between growth and social improvement strongly differs across countries. Indeed, it may be significantly reduced if – as has frequently happened – growth is associated with rising inequality and environmental damages. Therefore, the drivers and characteristics of growth hold the utmost importance, not only for

determining the social impacts of growth but also for its environmental sustainability.

The overall positive developments in the economic and social indicators of developing regions require two major qualifications. First, after the financial crisis, growth in developing and transition economies has become more erratic and the prospects gloomier, with uncertainty about the future growth of the world economy being on the rise. In many large emerging markets from Brazil to South Africa and the Russian Federation, there are doubts about whether the growth spell of the past 15 years can be continued. Second, even if some catching-up occurred, the income gap between developed and developing countries remains large. When using per capita income at constant 2005 dollars as a yardstick, developing countries on average only reached 8.3 per cent of the developed countries level in 2013, and only marginally improved from 5.5 per cent in 1990. At current exchange rates, developing countries' average income reached 11.6 per cent of that of the

Table 2
EVOLUTION OF COUNTRY GROUPS ACCORDING TO PER CAPITA INCOME, 1990–2013

	Number of countries in sample			Population (per cent)		
	1990	2000	2013	1990	2000	2013
Below \$1,000	51	66	54	53.4	41.2	10.3
\$1,000–\$5,000	85	60	65	25.8	34.4	37.8
\$5,000–\$20,000	41	43	43	6.8	10.3	36.9
More than \$20,000	29	38	46	14.0	14.0	14.9
Total reported	206	207	208	100.0	100.0	100.0

Source: UNCTAD secretariat calculations, based on UN-DESA, *National Accounts Main Aggregates* database.

Note: All economies are categorized according to their GDP per capita in current dollars. The World Bank Atlas Method was used for conversion to dollars and for the benchmarks adjustment. For example, the 2013-benchmark of \$1,000 was applied like \$803 in 2000 and \$663 in 1990. Population is presented as percentage of the world total population for the country groups.

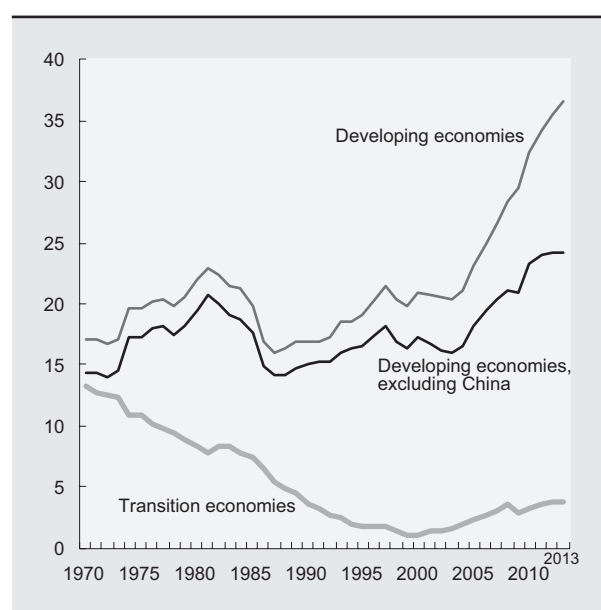
developed countries in 2013 (improving from 5.4 per cent in 2000).

Whatever the measure for proper cross-country income comparisons, there is no doubt that there has been a significant change in the relative weight of developing and developed countries in the world economy. The share of developing countries in world output fluctuated between 16 and 23 per cent during 1980–2003 (chart 1). By contrast, from 2003 until 2013 it almost doubled from 20.3 to 36.5 per cent (when China is excluded, this share rises from around 16.0 to 24.3 per cent). This is due to both accelerating growth in developing countries and decelerating growth in developed countries. This structural change is likely to continue as long as developed countries maintain their low growth path, as has been the case – on average – after the financial crisis. However, this should not be interpreted as a decoupling between developed and developing countries since global interdependence is stronger than ever. Nonetheless, the characteristics of this interaction and the nature of growth drivers are changing, whereby development strategies must adapt accordingly.

Furthermore, there has been considerable diversity in the developing countries' growth performance, both *between* the different broader regions of developing countries and to a lesser extent *within* the regions. There is no clear and unique formula for success or failure, no “one size fits all” approach to development strategies. One of the lessons that can be extracted from experience is that policies need to adapt to specific conditions and national goals, which implies avoiding rigid precepts for both targets and

Chart 1

CONTRIBUTION OF DEVELOPING AND TRANSITION ECONOMIES TO GLOBAL OUTPUT, 1970–2013
(Per cent of global GDP in current dollars)



Source: UNCTAD secretariat calculations, based on UN-DESA, *National Accounts Main Aggregates* database.

tools. However, this does not mean that strategies have to be replaced by ultra-pragmatic and flexible policies, constantly changing according to short-term conditions. The adoption of a better combination of macroeconomic pragmatism and a clear development orientation is one of the reasons why the performance of many developing and transition economies

dramatically improved in the early-2000s. Volume I of this publication discusses these general issues that all developing countries need to handle, as well as highlighting some key policy areas of interest for most of them.

Theoretical thinking on economic development largely relies on comparative analysis. In particular, it explores the reasons why some countries or regions have performed better than others in the long run. Essays in Volume II of this publication contribute to this approach, as well as examining why the performance in a given country or group of countries has improved or deteriorated in the long-term depending on changing development strategies. From this perspective, poor economic results in vast developing regions and transition economies in the 1980s and 1990s have to be compared with rapid output growth and social improvements in the two preceding decades, as well as the 2000s. Several factors have contributed to explaining these contrasts. In particular, the existence of a developmental State that uses its room for manoeuvre to act on both the supply and demand side is a common denominator of most successful experiences. On the contrary, neoliberal policies that restrained the role of the State in the economy and dismissed the need to preserve any policy space prevailed in the slow-growing regions during the 1980s and 1990s.

The demise of the Washington Consensus owing to failing empirical tests (Birdsall and Fukuyama, 2011), the failures of neoliberal recipes and the dramatic consequences of the global financial crisis (after several regional financial crises) have altogether generated enormous new challenges. Consequently, old certitudes have to be abandoned. Development models championed by governments and academia in developed countries as well as by several international organizations are increasingly questioned. Moreover, in parallel to their rising economic weight, the leading developing economies have gained increased influence in the debate about the functioning of the global financial and trading system, as well as global political issues.

Against this historical background, this publication intends to explore the nature and consequences of the crisis, as well as the diversity of economic and social development among developing countries. It looks at the reasons behind the recent improvement in developing countries performances and its potential for continuation after the financial crisis.

The recent economic trends and the challenges posed by the global crisis reinforce the importance of implementing strategies for development as opposed to leaving the economy to market forces. Countries need a strategic compass for long-run economic development, either explicitly or implicitly. Among other ingredients, this comprises macroeconomic policies, sectoral policies (including the financial sector, trade and industrial policies), institution building in key areas and development-friendly global governance. Within a chosen medium- or even long-term strategy, governments need more policy space to adjust to the specific (and evolving) social, historical and institutional context. The experience of Asia shows that rather than implementing narrow and rigid general guidelines, experimental approaches – which require policy space – are a recipe for success. Furthermore, the slow-growth periods endured by several countries (the “lost decades”) allowed inferring which policies should be avoided. The authors of this publication share the notion that developing countries can and should learn more from each other, as well as from their own past experience. It is important to look at comparisons between developing countries, including both success and failure stories.

A developmental State needs to use a variety of tools to intervene in several key areas. Most authors in this book hold the view that more active macroeconomic management with a stronger focus on domestic demand is needed. This should replace export-led growth when associated with entrenched incomes and austere public spending. More prudent financial sector development is necessary to enhance investment with predominantly domestic sources of finance. Industrialization is a major target of any development strategy, and this requires industrial policy. Small countries – even more than larger ones – need a focus of policies on certain sectors to shape potential comparative advantages beyond agricultural or mineral commodities. Boom-bust cycles of short-term capital flows undermine growth and development. Cross-border capital flows should be governed by prudent management, which can include capital controls. Unregulated capital flows negatively affect market-driven exchange rates, generating strong volatility or chronic overvaluation of exchange rates, both of which are strong hindrances for development, given that currency-related conflicts or even currency wars may need to be resolved in the framework of a new global financial architecture. Strong and sustainable development requires a developmental State supported by increased fiscal space

for providing public goods and income redistribution. Reducing income inequality beyond curtailing absolute poverty can have positive impacts for growth, employment and structural change (*TDR 2012*).

Many of the chapters in this publication were written by authors who collaborated within the “Partnership on Economic Development Studies”, a network of 11 universities from the South and HTW Berlin – University of Applied Sciences, with which UNCTAD has been cooperating. This network was funded by the German Academic Exchange Service (DAAD) from 2009 until 2013. We are grateful to the DAAD for their generous support of this project. Most of these contributions stem from the workshop on “Development Strategies: Country Studies and International Comparisons” held in November 2013 in Shanghai (hosted by the East China Normal University). Other chapters are from well-known scholars who work or regularly cooperate with UNCTAD.

As already mentioned, this publication is presented in two volumes with a total of 14 chapters. The first volume addresses the more general issues, while the second focuses on country studies and country comparisons. Due to space limitations, many issues cannot be addressed here. For instance, environmental problems as well as the debate on the Sustainable Development Goals are not included, and in the second volume we mainly cover large economies with significant regional impact, although several lessons that can be extracted from their experiences also hold interest for many least developed countries. While all authors are academic economists, we attempt to reach a broader readership within and outside academia, from graduate students to journalists and policymakers. Therefore, unnecessary technical presentations are avoided. Lastly, the opinions expressed are those of the authors and do not necessarily represent those of UNCTAD, HTW Berlin or the institution to which the authors are affiliated. The remainder of this introduction provides an overview of the second volume’s chapters.

In this (second) volume, four countries are selected based upon the role that they play in the developing world and the current discourses on development: Brazil, Chile, China and India. To a certain extent, they all represent development success stories, at least for a considerable spell of time. Brazil, China and India account for a large proportion of the world population and their corresponding regional GDP.

The continental size of these economies plays a role in their development conditions, particularly regarding their domestic markets. By contrast, Chile is a special case as a small country that is among the most developed in Latin America and often considered a role model, yet it remains many miles off the levels achieved by the first generation of Asian tigers like Taiwan Province of China or the Republic of Korea, especially regarding its industrial development.

China and India have experienced very rapid growth and a remarkable structural transformation in recent decades, strongly contributing to the changing landscape of the world economy. These trends, which are based upon fast industrialization and urbanization processes, are likely to continue in the foreseeable future.

Brazil and Chile share a number of common features with most other countries in Latin America, such as semi-industrialization, dependence on commodities, high income and wealth inequality and a relatively high per capita income (in current dollars) among developing countries (\$11,200 and \$15,700, respectively, in 2013, compared to \$1,600 and \$6,600 in India and China in the same year). All these countries are very peculiar cases embedded in their history and incorporating their idiosyncratic heritages.

It is not possible to identify single countries that are completely representative of the more than 160 countries identified as developing countries by the United Nations. Indeed, developing countries have become increasingly heterogeneous as a group. Nevertheless, some of the development strategies analysed here may be relevant for the cases of least developed countries and middle-income countries. Aside from the detailed analysis of selected country cases, this publication includes two overarching and comparative studies. The remainder of this introduction provides an overview of the seven chapters of this volume.

Sebastian Dullien looks at the characteristics of countries that performed best in terms of real GDP per capita growth between 1980 and 2013. He finds three types of countries in this group: a few tiny economies that have found a specific niche in the world market, some petroleum exporters that have exploited new fuel sources, and a relatively large number of countries that had an undervalued exchange rate and a deliberate development strategy, often including explicit industrial policy. Interestingly, institutional

quality as generally measured by standard indicators does not seem to play a decisive role in terms of being a top performer; rather, this group comprises both countries with good rule of law and low degrees of corruption as well as those with poor scores for these two indicators.

C.P. Chandrasekhar analyses the important role of development banks as a major component of the financial policies that a development strategy should envision. However, development banks are being challenged by neoliberal financial liberalization on the grounds that equity and bond markets could substitute them. The author argues that the disappearance of development banking would lead to a shortfall in finance for long-term investments, especially for medium and small enterprises. Accordingly, he points to a number of successful development banks in several countries.

Amit S. Ray observes an enigma of the “Indian model” of development, which he attempts to unveil. After discussing the evolution of India’s development policies over the last six decades, he describes India’s development trajectory over the long haul. He shows how the country has finally emerged a global player in the last couple of decades, despite India’s lost opportunity to be a part of the Asian Miracle during the 1960s, 1970s and 1980s. However, the Indian model of development, principally driven by rapid expansion of high-end knowledge-intensive sectors, comes with a tragic neglect of low-end labour-intensive mass manufactures. From an agriculture-dominated economy, India straight away jumped to an economic structure, albeit with a transition period of three or four decades, during which services and high-end manufacturing assumed the lead role. He argues that this development model is not only inequitable in the extreme, but it is also a prescription for political volatility and is definitely not a sustainable development model, especially in a democracy.

Liqing Zhang and *Qin Gou* provide a retrospect of China’s economic growth since 1978, as well as a prospect for the years to come. They start with a review of China’s economic spurt in the past reform period. They hold that this success had been driven by the demographic dividend, high saving rates, an outward-oriented development strategy as well as growing technical progress. Subsequently, the authors analyse the challenges from the diminishing demographic dividend, growing structural imbalances, macro instability and financial risks. Lastly,

they suggest some reform policies to maintain sustainable economic growth and avoid middle-income traps, including deepening financial sector reforms, reforms of the household registration system and the education system, structural rebalancing and the phasing-out of the massive stimulus policy applied during and after the financial crisis.

Laike Yang analyses China’s production sharing within East Asia and the respective changes in the trade pattern. International production sharing has been a key feature of East Asian economic development in recent decades, with firms in advanced Asian economies relocating their production to China, using it as an assembly base before exporting the final products to the United States and Europe. China has taken advantage of this process and transformed into a global manufacture centre, with the country’s emergence having reshaped the Asian production network and trade pattern. Yang analyses the economic model and the development strategies in East Asia, China’s position in East Asia’s production network, as well as its impact on China’s technological upgrading. He finds that China has moved to the centre of East Asia’s production network, thanks to its export-led development strategy. It has significantly upgraded its technology and narrowed its technology gap with South East Asia, although the gap between China and Asian advanced economies remains large.

The term “social developmentalism” in the sense of a social-oriented development strategy is a source of heated debate among Brazilian economists. *Pedro Rossi* and *André Biancarelli* analyse this model for the case of Brazil. In the recent debate on the Brazilian growth model, the economic tripod, i.e. the combination of inflation targeting, targeting the primary fiscal deficit and the floating exchange rate regime, was identified as being responsible for lowering economic growth and hindering development in Brazil. However, the macro regime has proved flexible over time, allowing changes in the form of management of policies within the same institutional framework, especially after the 2008 crisis. Within this context, the authors aim to discuss the relationships between these macroeconomic policy fronts and a social-oriented development strategy for the Brazilian economy. The background question is whether the actual macroeconomic regime, inherited from an orthodox perspective, is compatible with the deepening of social development, which depends upon a strong role of the State, changes in income distribution and the expansion of social infrastructure.

Ricardo Ffrench-Davis analyses the performance of the Chilean economy over the last four decades. In terms of GDP per capita, Chile is the most advanced country in Latin America and is often considered a role model for development, not only in this continent. Its economy is usually highly praised as having been successful since the imposition of neoliberal reforms under the dictatorship of general Pinochet in 1973. However, the four decades that have elapsed include sub-periods with quite different policy approaches and notably diverse outcomes;

thus, there is neither one unique model nor only one outcome. The four decades' growth is moderate, averaging 4.2 per cent per year, comprising meagre growth of 2.9 per cent during the 16 years of dictatorship and a much better performance of 5.1 per cent during a quarter-century of democracy, albeit with a vigorous 7.1 per cent in the initial years (1990–1998) and a more modest 3.9 per cent in the last 15 years. Focusing on three episodes (1973–1981, 1990–1995 and 2008–2013), French-Davis explores lessons for building “a model for development”.

Notes

- 1 In our view, there is not a completely satisfactory classification of countries in “developed”, “developing” and “transition economies”. In some cases, the participation in a given group or organization (e.g. being a member of the OECD or of the “Group of 77 and China” (G77)) is used to distinguish developed and developing countries. However, this does not exclude overlapping or paradoxes, such as some G77 countries having per capita GDP higher than some OECD countries. Some institutions classify countries in low-, middle- and high-income groups, using their per capita income levels as the sole criterion and setting arbitrary thresholds. For instance, the World Bank (2014) currently defines low-income countries as those whose per capita income is below \$1,045, middle-income countries as those with an income between \$1,045 and \$12,746 and high-income countries as those exceeding \$12,746 (thresholds are periodically adjusted with inflation). However, using the income level as the criterion for dividing countries in “developing” and “developed” is problematic

(Nielsen, 2011). A number of small oil-exporting countries (e.g. Brunei Darussalam, Equatorial Guinea, Oman and Qatar) or offshore financial centres have higher per capita income levels than countries with a much more developed and diversified production capacity, higher technological mastery and better qualified working force (e.g. Argentina, Brazil, the Republic of Korea, the Russian Federation and Turkey). In this introduction, we generally use the United Nations classification of developed, developing and transition economies. According to the United Nations Statistical Division (UNSD, 2013), “there is no established convention for the designation of ‘developed’ and ‘developing’ countries or areas in the United Nations system. In common practice, Japan in Asia, Canada and the United States in northern America, Australia and New Zealand in Oceania, and Europe are considered ‘developed’ regions or areas.” The group of transition economies comprises the CIS and the South-East European countries that are not European Union members.

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A QUESTION OF STRATEGY: WHAT CHARACTERIZES TOP GROWTH PERFORMERS?

Sebastian Dullien

Abstract

This contribution looks at the characteristics of countries that have performed best in terms of real GDP per capita growth between 1980 and 2013. It is found that three types of countries can be found among this group: a few tiny economies that have found a specific niche in the world market; some petroleum exporters that have found new fuel sources; and a relatively large number of countries that had an undervalued exchange rate and a deliberate development strategy, often including explicit industrial policy. Interestingly, institutional quality as generally measured by standard indicators does not seem to play a decisive role in terms of being a top performer; rather, this group comprises both countries with good rule of law and low degrees of corruption as well as those with bad scores for the two indicators.

Introduction

For decades, economists have tried to find the holy grail of economic development. Since the advent of the New Growth Theory in the early-1990s, research on the determinants of economic growth has grown exponentially. After a first wave of cross-country studies, a second wave with panel regressions followed, making use of the fact that panel regressions allow working with information concerning within-country variation as well as cross-country variations. While pre-1990s studies often tried to confirm or reject income convergence between initially more and less developed countries, the new wave of contributions tried to identify factors that could explain differences in growth in gross domestic product (GDP) per capita, with the implicit aim of also providing policymakers some guidelines concerning how to design economic reforms for development and growth.

At least quantitatively, this research was very productive. Sala-i-Martin (1997) already counts 60 variables that have been proven significant in at

least one specification and it is safe to assume that this number has more than doubled in the subsequent decade-and-a-half. As the development economist Romain Wacziarg (2002: 907) puts it in his review of William Easterly's *The Elusive Quest for Growth*: "All-encompassing hypotheses concerning the sources of economic growth periodically surface, and with the support of adequately chosen cross-country correlations, enjoy their fifteen minutes of fame. Over the last few decades, the list of proposed panaceas for growth in per capita income has included high rates of physical-capital investment, rapid human capital accumulation, low income inequality, low fertility, being located far from the equator, a low incidence of tropical diseases, access to the sea, favourable weather patterns, hands-off governments, trade-policy openness, capital-markets development, political freedom, economic freedom, ethnic homogeneity, British colonial origins, a common-law legal system, the protection of property rights and the rule of law, good governance, political stability, infrastructure, market-determined prices (including

exchange rates), foreign direct investment, and suitably conditioned foreign aid. This is a growing and non-exhaustive list.”

From the perspective of policymakers who want to increase the growth prospects of their own country, the issue is further complicated by lingering debates about the robustness of the findings for both cross-country and panel regressions. A number of issues such as the endogeneity of variables and the robustness of estimated coefficients are being discussed, with some studies concluding that essentially none of the more elaborated factors proclaimed by the literature to explain economic growth can truly be robustly seen as an explanatory factor for development.

Therefore, this chapter adopts a different approach by considering the top performers among developing countries and emerging markets over the past three decades, trying to identify what they have in common. While this exercise naturally is not as

statistically rigorous as econometric cross-country or panel regressions, given the methodological problems that burden the latter, this approach might nonetheless prove informative. While the vast body of cross-country and panel regression literature has yet to present a list of priorities for development, one can argue that the common factors of the “top growth performers” are good candidates for necessary and possibly even sufficient conditions for a sustained catch-up growth and hence convergence towards the living standards of high-income countries.

The remainder of this chapter is structured as follows. First, section I will look at the lessons that we can draw from standard growth and convergence literature, before section II considers international growth experiences. In this section, some characteristics of the top growth performers over the period from 1980 to 2013 will be extracted and presented. Section III subsequently tries to explain the factors that are found to be relevant for economic growth.

I. Determinants of growth and development: The literature

There is definitely no shortage of literature on the determinants of economic growth, yet unfortunately there is also no lack of dispute about what are the main explanatory factors for a rapid GDP per capita growth rate. While the initial contribution focused on applying the Solow (1956) growth model and sought to find evidence for the conditional convergence hypothesis (according to which each country would converge to its own equilibrium output, determined by the national investment ratio¹ and population growth, and according to which countries further from this steady state grow more quickly), the contributions of the New Growth Theory added proxies for variables such as human capital, institutional quality, democratic governments, economic openness and stock of knowledge.

The next step was a shift towards using panel regressions rather than simple cross-country regressions, which offered the advantage of providing a much larger number of data points and hence increased the validity of econometrics methods. Consequently, the majority of recent research on the determinants of economic growth uses panel approaches.

Unfortunately, despite hundreds of papers having been published using both cross-country and panel regressions, the results have been far from clear. Most of the variables have been found to be significant in some contributions yet not significant in other specifications or with slightly altered samples.

Some authors have recently tried to use techniques for meta-analysis of existing studies to solve these questions. For example, summarizing more than 80 studies and almost 500 estimates, Doucouliagos and Ulubasoglu (2008) find that democracy has no direct effect on economic growth, but an indirect one through human capital accumulation, lower inflation and lower political instability. De Dominicis et al. (2008) conduct a similar exercise on the relationship between inequality and growth yet find that the results critically depend on the estimation methodology applied in the underlying studies, concluding that more targeted research is needed. Ugur and Dasgupta (2011) find that the vast number of studies support the claim that corruption overall hurts economic growth.

However, a number of unresolved statistical issues seem to remain in the underlying studies,

which clearly cannot be addressed by meta-analyses merely summarizing the findings of other studies. The first issue is the measurement problem. GDP measured in purchasing power parity (which is often used for these cross-country and panel regressions) is highly unreliable, especially for developing countries, with repeated large revisions dating back over decades. Measurement issues are even worse for some of the institutional variables. A number of these proxies, e.g. for the degree of rule of law or the prevalence of corruption, are based upon surveys and hence carry a large degree of subjectivity.² Moreover, many indicators are not always reported each year and hence are averaged over a multi-year period. Together, the data quality clearly calls into question the results of most studies.

The second problem is endogeneity. For many variables routinely included in growth regressions as explanatory variables, it is unclear whether they are really exogenous. For example, the share of children enrolled in school is often used as a proxy for human capital and hence an exogenous variable explaining GDP per capita. Nonetheless, it is theoretically plausible that school enrolment itself is a function of the general income level of an economy and hence endogenous to GDP. Another example is the openness of an economy, which is generally measured as the share of imports and exports among GDP. While this measure of openness is often used as a proxy for the absence of tariffs and trade barriers, it can be well argued that this measure of openness itself is endogenous to the level of economic development in an economy. A population with very low real GDP levels can be expected to spend a larger share of disposable income on locally grown food and local services, whereas a country with a more diversified (and hence developed) manufacturing sector can be expected to have a larger share of exports to GDP.

The third hitherto unresolved question concerns model uncertainty and robustness. The problem of model uncertainty is that there is no clear single theoretical model telling researchers which variables to include and how to choose between alternative specifications. Practically, this problem has been solved by something akin to data mining. Economists with a certain (theoretical) idea about the relationship

between one factor (e.g. schooling) and GDP per capita look for adequate indicators for schooling (e.g. primary school enrolment, spending on primary educations or average years in school) and add them on a trial-and-error basis to a standard dataset until they find a statistically significant variable that remains robust to slight changes in the specification. As is nicely demonstrated in Charemza and Deadman (1997), such procedures lead to the conclusion that some variables are statistically significant in explaining the dependent variable (here GDP per capita) despite having no underlying economic relationship to it.

The question of robustness of significance in cross-country estimations was first prominently raised by Levine and Renelt (1992) and was rebutted by Sala-i-Martin (1997), claiming that the former had used an excessively harsh criterion of robustness.

However, how valid the question of robustness remains has recently been demonstrated by Westling's (2011) paper, which attracted significant attention in mainstream media, such as the *Economist*. In a clear attempt to underline the statistical fragility of much of the cross-country growth literature, Westling added the average national human penis size to the well-known Mankiw et al. (1992) dataset, showing that, according to standard methodology, penis size is not only highly significant (with an inverse U-shaped relationship) in explaining the GDP per capita level in 1985, but also in explaining (with a linear negative relationship) GDP per capita growth from 1960 to 1985. Moreover, according to Westling, taken at face value, his results would indicate that penis size contributes more towards explaining GDP than standard proxy variables used for describing political institution, further underlining that variables without an obvious connection to underlying economic growth dynamics can emerge as highly significant in cross-country regressions.

In a more serious paper, Moral-Benito (2012) claims that when properly taking account of the issues of endogeneity and model uncertainty, both the conditional convergence hypothesis as well as the significance of the most routinely included explanatory variables for output growth disappear.

II. An alternative approach: Characteristics of top performers

These unresolved issues call for complementing the standard regression approaches with other methodologies, especially mixed-methods that combine the initial large-sample empirical analysis with a more qualitative analysis of a smaller sample. Indeed, this is what this contribution is trying to achieve: it will look at the group of top growth performers and try to infer from their experiences which elements are central for starting and sustaining a vibrant economic development process over an extended period.

Therefore, what can we learn if we look instead at those countries that have performed best in recent decades? In order to answer this question, we first need to define what “perform best” means. In line with the existing literature, the best point of reference is the growth in per capita real GDP. A second question now would concern the extent to which a certain GDP per capita growth rate by low-income countries should be seen as a similar performance as the same growth rate for a middle-income country. According to the Solow model, a low-income country could expect higher growth rates than a middle-income country. However, the literature is unclear about whether there is actually any trend towards convergence (Moral-Benito, 2012), while casual inspection of the correlation between initial levels in 1980 and subsequent GDP growth rates indicates that there is no clear negative correlation. Hence, simply looking at plain average annual GDP per capita growth rates seems adequate as a yardstick for economic performance.

Regarding the time period used, the years from 1980 to 2013 have been chosen. The macro-economic data for this exercise has been taken from the International Monetary Fund (IMF) 2013 *World Economic Outlook* database and data up to and including 2013 has been used.³ For institutional and structural variables, the dataset used by Rodrik (2008) (and provided on his personal website) has been used.

There are some pragmatic and conceptual considerations behind the choices for the period and dataset used. Pragmatically, the dataset from 1980 onwards is much more complete in both scope and width than the commonly used dataset from 1960s onwards. Conceptually, we ideally want to draw relevant policy lessons for developing countries. As the global environment was very different in the 1960s and 1970s from today, with the

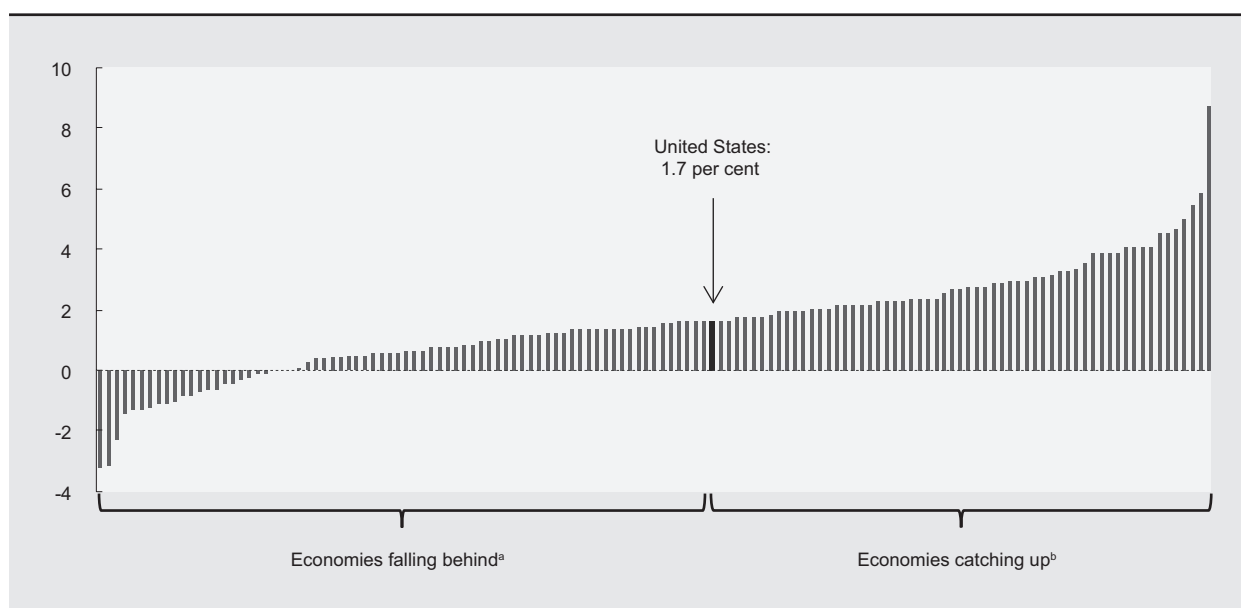
Bretton-Woods-System of fixed exchange rates in place in the 1960s and early-1970s, it seems that more can be learned from successful growth experiences in the 1980s and 1990s than the 1960s or 1970s. The use of Rodrik’s dataset is justified as his work is widely cited and he has collected the data from sources already widely used prior to his publication; hence, any difference in the outcome of the analysis cannot be attributed to the use of different data sources.

When we now look at the global distribution of average growth rates of GDP per capita over these 33 years (chart 1), we find that roughly half of the countries and territories covered by the IMF for the entire period have experienced higher GDP per capita growth than the United States of America (and hence can be seen as catching up if we define the United States as the frontier), while about half have experienced slower GDP growth and hence have been falling behind. Moreover, as marginal upward deviations from the United States growth rates means very long periods of convergence of several centuries, we are interested in countries that have performed spectacularly better than the United States. The original sample includes all developed and developing economies covered by the IMF *World Economic Outlook*.

A question now is how many of the top performers to include in a closer analysis. Again, there is no objective guideline to follow. Looking at the distribution of growth rates, it is interesting to note that within the overall distribution of average per capita GDP growth rates, there is a noticeable drop between slightly less than 4 per cent and around 3.5 per cent. While selecting only 10 or 15 top performers would exclude some of the countries that still almost reached an annual per capita growth rate of 4 per cent, increasing this sample to 20 includes all of the countries that reached almost 4 per cent. Hence, the top 20 growth performers have been selected for closer scrutiny in this chapter.

Selecting countries with a particular growth experience and looking at them as a methodology is not new. The Commission on Growth and Development (2008) also looks at 13 “success stories”, namely periods in countries with sustained high rates of growth. This chapter differs from the Commission’s approach as it uses a common time period (1980 to 2013), while the Commission looks

Chart 1
COMPOUND ANNUAL GROWTH RATES OF GDP PER CAPITA IN SELECTED ECONOMIES, 1980–2013
 (Per cent)



Source: Author's calculations, based on IMF, *World Economic Outlook* database.

- a** These economies are in descending order: Finland, Sweden, Rwanda, Spain, Austria, Islamic Republic of Iran, Angola, Germany, the Netherlands, Guyana, El Salvador, Argentina, Belgium, Iceland, Peru, Denmark, Canada, Bulgaria, New Zealand, Hungary, Romania, Fiji, France, the Philippines, Papua New Guinea, Ecuador, the Congo, Italy, Brazil, Switzerland, Jordan, Bahrain, Lebanon, Honduras, Mali, Mexico, Paraguay, Algeria, Jamaica, Kenya, South Africa, Barbados, Greece, Senegal, Bahamas, Malawi, Plurinational State of Bolivia, Benin, Vanuatu, the Gambia, Cameroon, Guatemala, Solomon Islands, Venezuela, Burundi, Comoros, Gabon, Guinea-Bissau, Zambia, Sao Tome and Principe, Saudi Arabia, Qatar, Kiribati, Niger, Sierra Leone, Kuwait, Central African Republic, Côte d'Ivoire, Madagascar, Haiti, Togo, Democratic Republic of the Congo, Libya, United Arab Emirates.
- b** These economies are in ascending order: Nigeria, United Republic of Tanzania, Japan, Portugal, Norway, Australia, Ethiopia, Colombia, Israel, Albania, Uruguay, the United Kingdom, Cyprus, Morocco, Antigua and Barbuda, Seychelles, Ghana, Poland, Uganda, Burkina Faso, Egypt, Tunisia, Swaziland, Dominican Republic, Turkey, Pakistan, Nepal, Chad, Saint Lucia, Luxembourg, Lesotho, Belize, Panama, Grenada, Bangladesh, Ireland, Saint Kitts and Nevis, Mozambique, Chile, Tonga, Oman, Saint Vincent and the Grenadines, Indonesia, Malaysia, Hong Kong (China), Mauritius, Cape Verde, Sri Lanka, Singapore, the Lao People's Democratic Republic, Thailand, Botswana, India, the Sudan, Maldives, Taiwan Province of China, Viet Nam, the Republic of Korea, Bhutan, China.

at success stories that might have started in the 1960s and compares them to countries that were successful in the 1990s. Given that the global macroeconomic environment and institutions have significantly changed between these periods, looking at the immediate past seems more appropriate in terms of how to achieve a sustained catch-up growth today.

Now, if we take a look at the top 20 growth performers over this more than a quarter century, we obtain a diverse group comprising: China, Bhutan, the Republic of Korea, Viet Nam, Taiwan Province of China, Maldives, Sudan, India, Botswana, Thailand, the Lao People's Democratic Republic, Singapore, Sri Lanka, Cape Verde, Mauritius, Hong Kong (China), Malaysia, Indonesia, St. Vincent and the Grenadines and Oman. All of these economies averaged annual

GDP per capita growth rates of at least 3.2 per cent over the entire period, with China at the top with average annual growth rates of 8.8 per cent. Given the dynamics of compound growth, this means that each of these economies at least roughly tripled its GDP per capita since 1980, while China increased its GDP per capita 16 times. Interestingly, this list is rather robust, given that 17 out of the 20 top performers from 1980 to 2013 would have also been on this list had we started the period of examination in 1985.⁴

The first interesting point is that the size of the economies on the list widely differs. While the two most populous countries in the world, China and India, have made it onto the list, some of the smallest countries in the World can also be found, such as St. Vincent and the Grenadines (initial population in

1980: 110,000) and the Maldives (initial population: 340,000). Hence, the notion that significant economies of scale allow larger countries to grow more quickly is not supported in the data, at least not to the extent that being a large country is a prerequisite for a top growth performance. The share of tiny economies among the top performing group is roughly the same as in the overall database.

For further analysis, very small economies with an initial population of less than two million inhabitants over the average of the period have been excluded,⁵ although we will return to those small country cases later. This exclusion can be justified given that the economics of development in tiny economies might be very different from those for large countries. Moreover, if the goal is to improve living conditions for a large share of the world's population, the fate of tiny economies holds rather secondary importance: in 1980, out of the roughly 4.4 billion people on the planet, according to the IMF *World Economic Outlook* data, not even 20 million (0.5 per cent of GDP) lived in the almost 40 countries with a population of less than 2 million.

Interestingly, two of the top performers are countries that have discovered or developed large fuel deposits in the past decades. Sudan started to export crude oil in the late-1990s, which led to more than a quadrupling of GDP per capita after decades of stagnation. Oman made major oil discoveries around 1980, many of which went online in the first half of the 1980s, thus strongly increasing the country's oil production and oil exports (Mohamedi, 1994). Moreover, Oman started to export liquefied natural gas in the early-2000s with the inauguration of the country's two facilities in 2000 and 2005, again giving a strong push to the country's GDP (United States Energy Information Administration, 2014). Thus, two findings here are interesting: first, of the many countries depending on petroleum exports, only two made it into the group of the top performers; and second, this also does not necessarily give support to the hypothesis of an unavoidable resource curse, given that these two countries obviously managed to at least partly escape problems related to the inflow of natural resource revenue.

Now moving on from tiny economies and petroleum economies, what do the larger countries among the top growth performers have in common?⁶ If one follows the literature on endogenous growth and the recommendations of the Washington Consensus, one

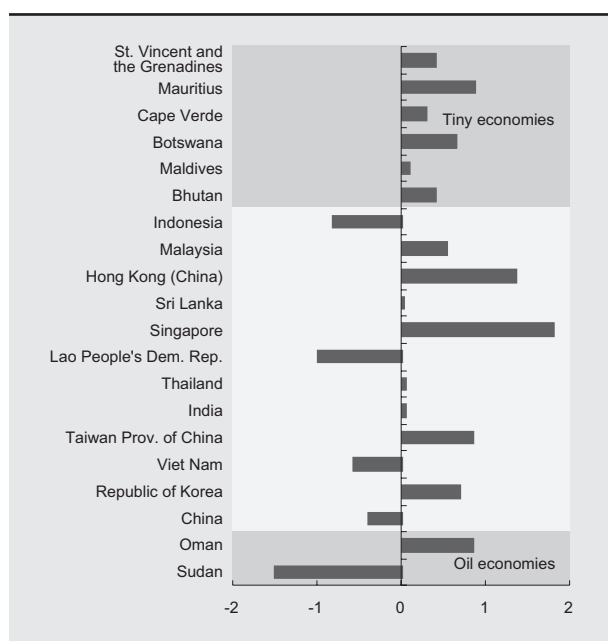
would think that good governance and rule of law should be one of the preconditions for sustained economic growth. If these issues are so important, surely no country without these preconditions should have made it into the top 20. However, this notion seems to be false. As can be seen in charts 2 and 3 (which show the average indexes for the rule of law and the absence of corruption over the period discussed, as used by the Rodrik (2008) dataset, separating the top performers into oil economies, tiny countries and the rest), there does not seem to be any discernible relationship between rule of law and the absence of corruption and being among the top 20 performers. By contrast, there seems to be a wide variation, with some economies in this group (such as Indonesia or the Lao People's Democratic Republic) performing terribly in terms of these institutional variables, whereas some others (such as Hong Kong (China) or Singapore) do quite well. Indeed, the same holds for the government regulation index.

What about net capital inflows? Textbook models recommend that developing economies open up their capital account and allow for net capital inflows, which is expected to result in higher domestic investment and should be seen in a deficit in the current account. By contrast, Prasad et al. (2007) found that economies with a current account surplus actually tended to grow faster over the period from 1970 to 2000. Interestingly, among the group of the top performers, we can find all kinds of current account experiences: economies with large current account surpluses (such as Hong Kong (China), Singapore or Taiwan Province of China), as well as those with large deficits (as the Lao People's Democratic Republic, Sri Lanka or Viet Nam) and those with almost balanced current accounts (chart 4).

Certainly, trade openness must then be important. Again, this cannot be confirmed by the data. The group of top performers include economies with trade (average of import and export) to GDP ratios of only slightly more than 10 per cent, such as India, as well as those with trade-to-GDP ratios of almost 40 per cent (such as Viet Nam).

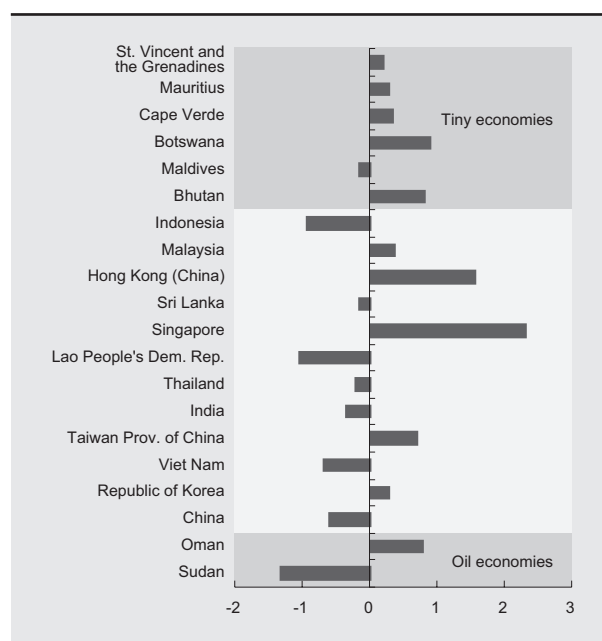
We get closer to common factors if we look at possible undervaluation of the national currency. Using Rodrik's (2008) definition and index for undervaluation and computing the average for the entire period from 1980 to 2007,⁷ we see that the economies in the top performing group share something in common, at least if we abstract from

Chart 2
RULE OF LAW INDEX
IN TOP 20 PERFORMERS, 1996–2004



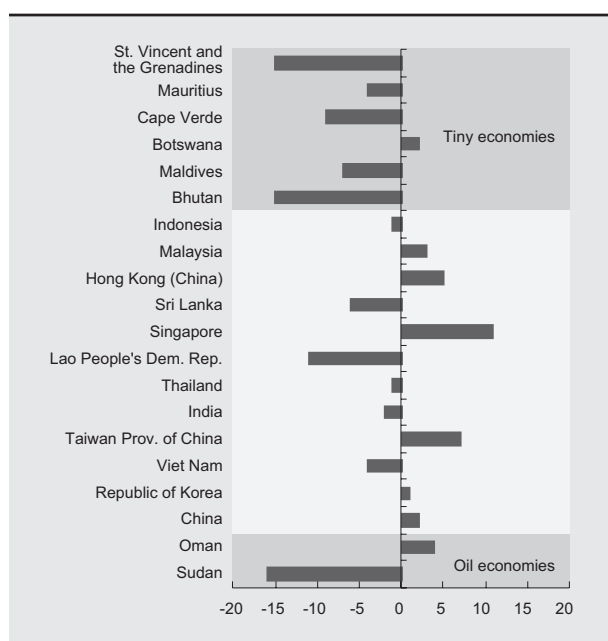
Source: Author's calculations, based on Rodrik (2008) data.
Note: Data refer to the average of the period. Top 20 performers refer to economies that registered the highest compound annual growth rates of GDP per capita during the 1980–2013 period (cf. chart 1).

Chart 3
ABSENCE OF CORRUPTION
IN TOP 20 PERFORMERS, 1996–2004



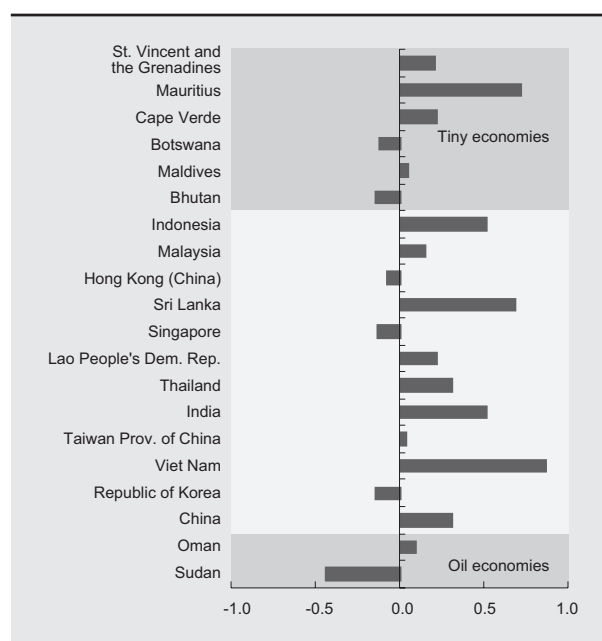
Source: Author's calculations, based on Rodrik (2008) data.
Note: See chart 2.

Chart 4
CURRENT ACCOUNT BALANCE
IN TOP 20 PERFORMERS, 1980–2013
(Per cent of GDP)



Source: Author's calculations, based on IMF, World Economic Outlook database.
Note: See chart 2.

Chart 5
UNDERVALUATION INDEX
IN TOP 20 PERFORMERS, 1980–2004



Source: Author's calculations, based on Rodrik (2008) data.
Note: See chart 2.

oil exporters and tiny economies (chart 5): none of the economies had a significantly overvalued exchange rate over the period in question. Moreover, most of the economies in this group had a strongly undervalued exchange rate. Economies that had a slightly overvalued exchange rate on average often had a clearly undervalued one at the beginning of their development process. For example, according to Rodrik's data, Singapore had an undervalued exchange rate in all but one year between 1960 and 1980, while the Republic of Korea had a strongly undervalued currency until the late-1980s. All this

points towards the conclusion that it is very difficult to truly get into the group of top growth performers without a competitively valued exchange rate, at least at the start of a development process.

There is one further observation worth noting, namely that all but two of the larger top performers are what are usually classified as Asian economies. Indeed, the two exceptions are Oman and Sudan, two petroleum exporting countries with rather specific characteristics and relatively late development of some fuel sources.⁸

III. Why do top performers outperform the rest?

So, why can all top performers be found in Asia, once tiny and oil exporting countries have been excluded? One possible explanation is naturally that specific Asian values are more conducive to economic growth than African, Central and Eastern European or Latin American values. However, the problem with this hypothesis is that the group of the top performers includes culturally and politically extremely different Asian countries. For example, India is historically, ethnically and from its institution extremely different from China or the Republic of Korea, probably at least as different as Thailand is from some Latin American countries.

Another possible explanation is the high population density and easy access to easily navigable ocean shipping lanes of most countries has helped the Asian region to experience economies of scale in the growth process. In some of the larger countries, the sheer size and density of the population might mean that any type of innovation produces large improvements in productivity as they can be used by a large number of people and quickly spread among them. In some of the smaller countries, growing trade integration might have helped the spillover of technological progress and innovation, thus creating a similar mechanism even if the national population is rather small. Support for this argument can be found in the fact that (unlike in other regions such as Africa and Latin America) trade integration and cross-border productive networks in South-East Asia have now reached levels that almost mirror those in the European Union (Athukorala and Kohpaiboon, 2010).

The second explanation is the existence of a deliberate development strategy. All of the larger,

non-petroleum exporting countries among the top performer group have in common heavy State involvement in the development process, often with a clear vision of which sectors to promote and how to implement this support, as well as having feedback loops in place to correct the course if some policies fail.

This is not initially visible in the macroeconomic data or the institutional indicators. Again, the top performer group includes economies that have a very large public sector (India), as well as those with a relatively slim public sector, such as Hong Kong (China) and Singapore. However, the share of government expenditure in GDP, which is most widely used to measure the degree of government involvement in the economy, does not tell the whole story. In addition, there is always the question of regulations and other government interference in the business sector, including cases of moral suasion that might not show up in any of the widely used indicators.

For some economies, the role of (in some cases) far-reaching industrial policies spanning over a wide number of policy fields in a broader development strategy is well documented. For example, for economies such as China, Indonesia, the Republic of Korea, Taiwan Province of China and Thailand, industrial policies have been widely described and analysed,⁹ as has been the example of industrial policy in India, which is generally seen as less successful. As is evidenced by the above-presented data on undervaluation, macroeconomic variables such as the exchange rate have been used as one element of industrial policy in these economies, namely by providing additional price incentives for exports and import substitution.

However, less obvious members of the group of top performers such as Singapore also support this point. While Singapore often scores among the highest in terms of institutional measures such as the Fraser Institute's index of economic freedom, as well as having a rather low share of government revenue and government expenditure to GDP, the Government has played a decisive role in its economic development since the 1960s, actually defining and fostering priority sectors. Wong (2001) nicely summarizes the various interventions of Singapore's Government in a number of important markets such as those for labour, land and capital to achieve strategic goals in the industrialization process.

The only exception to this observation might be Hong Kong (China), which has long been seen as a champion of the free-market approach. However, while the Government did not "pick winners" in certain industrial sectors, it was heavily involved in the planning of transport infrastructure, such as the port and domestic transport routes. Moreover, the policy of fixing the exchange rate through a currency

board system together with liberalized labour markets can also be seen as an attempt to achieve a competitive exchange rate. Here, one could say that being extremely open to international trade was also a deliberate strategy based upon the specific strength of the territory, namely its close connection to both the Chinese mainland and Britain at the same time.

This also links back to the tiny country cases in our group of top growth performers. As previously mentioned, there are a number of small economies on our list that we have not yet explored in detail, such as Maldives, Mauritius and St. Vincent and the Grenadines. If one looks into the economies of the more successful small countries, it soon becomes evident that these countries have managed to move into a specific niche of the world market in which they have prospered. For example, the Maldives has managed to establish itself as a high-price tourist destination. By contrast, Mauritius has created a financial sector that is used as an FDI holding location for Indian investment (Joseph and Troester, 2013), while also promoting high-value tourism.

IV. What can we learn about development strategies?

If we now look back at the different cases again, we can summarize that there seem to be three different strategies that can lead to successful development:

1. Find oil and limit the negative effects from the resource curse;
2. Find a niche in the world market; or
3. Produce cheaply and use this price advantage for technological upgrading, supported by industrial policy.

The question is now why some countries have managed to employ a strategy bringing them onto the path of successful development while many other countries have not.

From the arguments above, there are some important lessons for the design and implementation of successful development strategies. First, one size clearly does not fit all when it comes to development approaches. Especially when we talk about niches in the world market, it is imperative that not all developing countries try to fill the same niche, as a niche does not provide sufficient space for all. A country that has

found oil does not need to worry about which markets to serve, but rather how to manage the oil windfall in a way that does not hinder development beyond the single sector. It is also striking that the strategy of big-bang liberalization of as many markets as possible and government retrenchment is not a strategy that seems to be empirically promising when one wants to belong among the top growth performers. With the possible (and disputable) exception of Hong Kong (China), none of the top performers has managed a leading position with such a strategy.

The second point is that a *comprehensive* strategy is needed. While many countries have passed documents that supposedly define a "development strategy" or an "industrial strategy", many do not implement them beyond the creation of an investment promotion agency. However, what all of the Asian economies depicted above share in common is that a wide range of instruments has been applied with the goal of reaching the targets set in their development strategy, including capital controls, exchange rate and wage policies to sustain a competitive real exchange rate and create domestic savings, which could subsequently be funnelled as credit supply

to certain sectors. Furthermore, industrial policies have been widely used with selective protectionism and preferential treatment for potential export industries.¹⁰ These instruments need to be well coordinated and there must not be conflicts with other policy goals holding potentially higher priority.¹¹

The third point is that a strategy requires more than simply being called “a strategy”. To understand this point, one needs to briefly think about what a “development strategy” is. Given that countries have been pushed by the IMF, the World Bank and the Organisation for Economic Co-operation and Development into formulating their own poverty reduction and development strategies and including them in “poverty reduction strategy papers”, many countries have formally adopted such strategies by now. However, these strategies are often not very far reaching when it comes to the economic part. Even though most of these papers feature an explicit section on a “growth strategy”, the discussion of many policy fields, including the macroeconomic variables in the different countries’ strategies, are extremely similar and not necessarily specific to a country’s problems or conditions.

The macroeconomic discussion usually only covers a few pages of documents of several hundred pages and thus lack depth. A good example here is Cameroon’s poverty reduction strategy paper (IMF, 2003: 33), which states (and continues in a similar tone): “Macroeconomic stability fosters growth and welfare improvement in the medium term. It alleviates the burdens of debt, inflation, and high interest rates that penalize all economic actors and more particularly the poorest households. It reduces the level of uncertainty and country risks and hence decreases the cost of capital. It contributes to maintaining a stable real exchange rate. The latter three factors help improve overall economic competitiveness and foster investment, production, and export diversification, thereby accelerating growth, reducing the volatility of the economy, and maximizing welfare.” Another example is the discussion of monetary policy in the Republic of Bolivia’s (2001: 195) strategy paper: “The low inflation rates anticipated in the BPRS [Bolivian Poverty Reduction Strategy] are an important factor in avoiding distortions in the allocation of resources; they also reduce redistribution effects harmful to society’s poorest members given that most of them have neither the information they need nor the ability to shield themselves against inflation by allocating their limited resources to financial instruments that are indexed or maintain their value.”

Hence, macroeconomic recommendations hardly ever go beyond the goal of guaranteeing stable prices, low budget deficits and stable exchange rates. Country specifics here are usually limited to the description of recent inflation trends and expected reactions of the central bank, or a description of the overall fiscal deficit and instruments to reduce it.

When it comes to the external sector and tariffs, the poverty reduction strategy papers usually proclaim the goal of further liberalizing the external sector, but they hardly ever spell out which sequencing of liberalization might be most sensible to promote domestic industrial development.

If one compares this to the approach chosen and applied by the top growth performers, the difference quickly becomes clear: it is not sufficient to broadly identify that a country wants economic growth and poverty reduction. Instead, a proper strategy needs a vision of where a country wants to go. A successful strategy might include “picking winners” in the sense that the government might decide to prioritize certain sectors or devise a business model for the whole country in the case of a small country. Moreover, a successful strategy clearly requires the employment of all available instruments, including the most powerful macroeconomic instruments influencing credit availability, interest rates and real exchange rates.

Finally, one clearly important result from this simple exercise is to observe that becoming one of the top growth performers seems possible with a wide variety of institutional structures and features. Any development strategy here needs to be country-specific, looking at not only existing comparative advantages but also the specific institutions that exist, as well as asking the question of how far comparative advantages can be changed for the advantage of the country in question. In such a strategy, priorities need to be set. Accordingly, it is possible that bringing institutions to a Western standard reaching high index values in widely used measurements for democracy and rule of law does not need to be the first priority.

Further research is clearly needed, which needs to go beyond employing cross-country or panel regressions at a global level. Instead, carefully crafted case studies or comparative country studies could prove very useful towards better understanding what are the crucial elements of a successful development strategy.

Notes

- 1 While many textbooks speak about the “savings ratio”, Solow (1956) himself refers to this variable as “investment”.
- 2 For example, in some countries, there is a huge difference between the share of respondents who think that their country is corrupt and those who admit to ever having paid or accepted a bribe, while in other countries this difference is rather small, hinting at a high level of subjectivity in the first indicator.
- 3 While the growth rates for 2013 are still estimates for all countries in the sample and the growth rates for earlier years are estimates at least for some countries, this should not affect the analysis as the estimates for the recent past (for which no final data has been published) are usually reasonably reliable and this contribution looks at averages over several decades in which small estimation errors in very recent years should not have much influence on the final value.
- 4 Starting in 1985, Indonesia, Oman and St. Vincent and Grenadines would not have made it on the list.
- 5 This sub-group includes Bhutan, Cape Verde, Maldives, Mauritius, St. Vincent and Grenadines.
- 6 When working on this paper, a large number of typically used indicators have been checked. For reasons of space constraints and for better readability, only a small selection has been presented here.
- 7 Note: Rodrik’s data set ends in 2007.
- 8 Geographically, Oman is part of Western Asia of course, but it is usually grouped with Middle Eastern countries.
- 9 See e.g. Weiss (2005) or Kuchiki (2007).
- 10 For an in-depth discussion on the issue of industrial policy, see UNCTAD (*TDR 2006*).
- 11 On these issues, see also the contributions by Roberto Frenkel and Martin Rapetti on the exchange rate, or Robert Wade on the role of industrial policy.

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NATIONAL DEVELOPMENT BANKS IN A COMPARATIVE PERSPECTIVE

C.P. Chandrasekhar

Abstract

A feature characteristic of countries that were late industrializers was their reliance on financial institutions geared to the task of financing capital-intensive investments with direct and indirect support from the State. While in Germany the universal banks served this purpose in the 19th century, developing late industrializers after the Second World War established specialized development banking institutions to play this role, as well as reach credit to sections that were otherwise excluded from the banking network. Despite differences in the evolution of the development banking infrastructure across these countries, there are striking similarities in terms of what they were mandated to do and how they were financed. However, with the turn to financial liberalization, the transformation of development banking across countries has been very different, with seemingly significant consequences.

Introduction

A feature of most countries in the less developed regions in the period after the Second World War was the emergence and consolidation of a set of specialized institutions referred to as development finance institutions (DFIs) or development

banks (DBs). The principal factor motivating the creation of these institutions was the need to channel large sums of capital for investment in capital-intensive enterprises in industry and the infrastructural sector.

I. Capital requirements

As Gerschenkron (1962) emphasized, a feature of late industrialization that is (by definition) characteristic of developing countries was the quantum jump in investment needed for industrial take-off. Not only was each industry more capital-intensive than it was in earlier times, but increased interdependence meant that countries had to make simultaneous investments in a larger number of industries. In addition, investment in infrastructural projects characterized by economy-wide externalities (such as power, communications, roads and ports) was crucial to supporting such industrial growth.

The large capital required for such a combination of lumpy investments is unlikely to have been accumulated by many potential private investors in backward economies. Even to the extent that such accumulation had occurred, many of those wealth-holders would be wary of investing large volumes of their own capital in one or a few such projects, with long gestation lags and high risks. These investments had to be either made by the State or supported with external finance on reasonable terms provided to willing private investors.

However, the problem is that in developing economies the financial sector is not sufficiently developed and diversified to undertake such activity. The financial sector tends to be bank dominated. While there are active markets for government bonds, markets for corporate bonds are most often absent. On the other hand, the typical commercial bank is most unsuited to financing such projects. They attract deposits from small savers who have a strong preference for liquidity and

short lock-in periods and would like to abjure any income or capital risk. Drawing on capital of this kind, banks would be reticent to expose themselves in any substantial measure to loans that are relatively illiquid and of long maturity, as required by infrastructural projects, for example. An absence of adequate sources of long-term finance is typical of backwardness. Therefore, finding the capital to finance the industrial take-off represents a major challenge.

II. A lesson from history

What is noteworthy is that some of the first-tier late industrializers such as France, Germany and Japan managed to overcome this problem. Alexander Gerschenkron (1962) underlined the important role played by special and unusual kinds of credit institutions in late industrializers in Europe such as France and Germany in the late-nineteenth century. Examples of such institutions were the *Crédit Mobilier* established by the Pereire brothers in France and the “universal banks” in Germany. They were unique in the sense that they were “financial organizations designed to build thousands of miles of railroads, drill mines, erect factories, pierce canals, construct ports and modernize cities” (Gerschenkron, 1962: 12). Gerschenkron believed that they served as institutional substitutes for crucial “prerequisites” for the industrial take-off, such as the prior accumulation of capital or the availability of adequate entrepreneurial skills and technological expertise. As Gerschenkron (1962: 13) argued: “The difference between banks of the *crédit mobilier* type and commercial banks in the advanced industrial country of the time (England) was absolute. Between the English bank essentially designed to serve as a source of short-term capital and a bank designed to finance the long-run investment needs of the economy there was a complete gulf.”

This historical evidence is intriguing, since – as argued above – commercial banks typically do not engage in such lending activity, given the maturity and liquidity mismatches involved. In a set of lectures on continental banking delivered in Cambridge, Piero Sraffa (De Cecco, 2005) attempted to explain what made this possible. According to him, what was experimented with on the continent by the *Crédit Mobilier* and the German universal

banks (*Kreditbanken*) was a form of “active banking” involving close interaction of banks and industry with an element of domination of the latter by the former owing to “the superior information banks could gather on industry, being at the crucial node of the economic system” (De Cecco, 2005: 352).¹

A liquidity mismatch only arises if an institution exposed to capital-intensive projects is unable to access cash to meet demands from some of its depositors. Therefore, the issue is not that banks would not be able to call in their long-term credits, but rather that the assets they hold in the form of the securities associated with those credits may not be easily sold and converted to cash to meet demands to pay back deposits. This problem can be resolved if – as happened in Germany – the central bank (*Reichsbank*) stands by willing to exploit the elasticity of its right of note issue to provide lines of credit to banks engaged in long-term lending to industry when the latter are unable to obtain liquidity from elsewhere. In France, however, the *Banque de France* not only refused to support the *Crédit Mobilier* with liquidity as and when required, but also prevented it from issuing long-term bonds. Faced with this problem, Sraffa reportedly argued that while the *Crédit Mobilier* began with a wise policy of matching maturities of assets and liabilities, it later made the mistake of turning towards financing long-term investment with short-term deposits, which ultimately led to its failure.

Learning from the experience of the *Crédit Mobilier*, the German State – through the backing of the *Reichsbank* – successfully used the universal banks to finance German industrialization. De Cecco (2005: 355) summarizes Sraffa’s perception of the

system as follows: “German *Grossbanken*, which were heavily involved in maturity transformation, were likely to find themselves periodically stuck in illiquidity situations, and required reliable access to last-resort lending by the Reichsbank. In fact, the whole concept of last-resort lending, which had been developed in the English context, had to be adapted, indeed drastically transformed, to be used

in the German one.” According to De Cecco (2005: 354) in Sraffa’s perception, “the German experience represented a clear case of planned institution building”, to realize the task at hand. The universal banks were private, limited liability, joint stock banks, although they were also instruments of the State, acting on its behalf in return for large-scale liquidity support.

III. Development banking

DBs as institutions were clearly inspired by that experience and the subsequent direction that it took in the form of the main-bank system in Japan, which financed export-led industrial expansion with support from and direction by the Bank of Japan and the Japanese Government. Nonetheless, there were two important differences: first, rather than combining the activities of pre-existing commercial banks with the industrial financing function, most developing countries chose to establish stand-alone DFIs expressly geared to realizing specified financing objectives; and second, these institutions were not autonomous creations of the private sector, which subsequently came under government influence, but rather were established by the State and were in many cases State-owned institutions.

DBs are generally mandated to provide credit at terms that render industrial and infrastructure investment viable. They provide working capital and finance long-term investment, including in the form of equity. To safeguard their investments, they closely monitor the activities of the firms they lend to, often nominating directors on the boards of companies. This allows for corrective action as soon as any deficiencies are detected. DBs are also involved in early stage decisions such as choice of technology, scale and location, requiring the acquisition of technical, financial and managerial expertise. They also sometimes provide merchant banking services, taking firms to market, underwriting equity issues and supporting firms with their own reputation.

IV. Policy banks

Since DBs serve to finance activities that may not otherwise be supported by the financial sector, they are sometimes given specific mandates to deliver credit to specified sectors such as marginal farmers and the small-scale sector. Providing credit in small volumes to dispersed and often remotely located borrowers substantially increases transaction costs. If these transaction costs are to be reflected in interest rates charged on loans, the rates could be so high that the loans concerned cannot be used for productive purposes. Accordingly, a subsidy or subvention of some kind would be needed to keep interest rates reasonable. Only specially created banks are likely to undertake such policy lending. Most countries have found that it is best to create separate DBs to provide long-term capital at near-commercial rates and “policy banks” to provide credit to special areas such as agriculture or the small-scale sector, where

interest rates have to be subsidized and grace periods have to be longer.

What is surprising is the degree to which governments have relied on the development banking instrument. A 1998 study by Nicholas Bruck identified over 550 DBs worldwide, of which around 520 were national DBs (NDBs) and 32 international, regional and sub-regional DBs. These were located in 185 countries, with developing countries in particular hosting an average of three or more DBs. Latin America and the Caribbean had the largest number of NDBs (152), followed by Africa (147), Asia and the Pacific (121), Europe (49) and West Asia (47).

As expected, these banks varied significantly in terms of their size and scope of operations. A sample of 90 DFIs studied by de Luna-Martinez and

Vicente (2012) in 2009 found that although almost half of them (49 per cent) were established during the import-substitution years between 1946 and 1989, nearly two-fifths (39 per cent) came into existence during the globalization years between 1990 and 2011. One implication is that irrespective of policy orientation, the failure of private financial markets to deliver adequate long-term finance forces governments to rely on development banking institutions. The de Luna-Martinez and Vicente study defined a DFI as being an institution with “at least 30 per cent State-owned equity” and “an explicit legal mandate to reach socioeconomic goals in a region, sector or particular market segment”. It emerges that 74 per cent of these institutions were entirely government owned and controlled and a further 21 per cent had less than 50 per cent of private equity ownership.

Reflecting the fact these were specially established stand-alone institutions – unlike the universal banks of Germany – the DFIs largely depended on non-depository sources of finance. More than half of them (53 per cent) had specific policy mandates, having been “established to support the agriculture sector (13% of all DBs), SMEs [small and medium

enterprises] through their lending, guarantee or advisory services (12%), export and import activities (9%), housing (6%), infrastructure projects (4%), local governments (3%), and other sectors (6%).” (de Luna-Martinez and Vicente, 2012: 12). This requirement meant that they could not finance their activities solely with finance from the market. Nearly 90 per cent of the DFIs surveyed borrowed resources from other financial institutions or issued debt instruments in domestic markets and 64 per cent had the benefit of government guarantees for debt issued by them. However, 40 per cent of them received budgetary transfers from the government. This backing allowed around half of these DBs to offer credit at subsidized interest rates, and two-thirds of those institutions reported financing those subsidies with the transfers that they received from the government.²

Of course, the evolution of development banking and DFI behaviour varied across nations. In what follows, we consider a few experiences with the evolution and operation of DFIs to identify common elements as well as differences in a policy phenomenon captured in a common phrase yet varying in content across countries.

V. The BNDES in Brazil

A classic case of a country that has relied on one large development banking institution is Brazil, which established the Brazilian Development Bank, also known as National Bank for Economic and Social Development (BNDES – the acronym for its Portuguese name) in 1952. At the end of 2011, the bank’s assets amounted to 15 per cent of Brazil’s GDP, of which 10 percentage points were accounted for by loans and another 3 comprised investments in corporate equity and debt securities. The first phase of the BNDES’s activities stretched to the mid-1960s, during which period (besides investments in developing a new capital at Brasilia) the focus of its activity was the financing of public sector projects in infrastructural sectors like transport and power. During these years, between 80 and 90 per cent of its financing was directed at the public sector (Armijo, 2013: 3).

A transition occurred in the mid-1960s involving three major changes. First, there was a significant step up in BNDES financing. In 1965, BNDES’s

outlays rose from 3 per cent of capital formation to 6.6 per cent and continued at that enhanced level. Second, more of the institution’s financing now went to the private sector, with the public sector’s share falling to 44 per cent during 1967–1971 and between 20 and 30 per cent subsequently. This shift in favour of the private sector was accompanied by a change in the sectoral composition of BNDES funding, which was now also directed to sectors such as nonferrous metals, chemicals, petrochemicals, paper, machinery and other industries. Since the 1970s, the bank has also supported Brazilian firms to target foreign markets or go global, by financing the modernization of potential export sectors such as textiles, footwear and apparel and funding efforts by firms such as meat major JBS Friboi to acquire rivals abroad and enhance its presence in international markets. Finally, after the financial crisis of 2008 and the recession that followed, the BNDES was used by the Brazilian Government as the medium for its stimulus aimed at reversing the downturn. As compared with annual loan disbursements of

just R\$23.4 billion in 2000, the figure stood at R\$168.4 billion in 2010. Subsequently, disbursements came down to R\$139.7 billion in 2011 and R\$156 billion in 2012 (Armijo, 2013). This was an unusual role for a DFI. At its peak in 2010, annual BNDES lending amounted to around 70 per cent of long-term credit in the country.

When compared with DBs in other contexts, the sources of finance for the BNDES have been unusual. Besides bond issues, resources from multilateral organizations, transfers from the treasury and deposits from the Government of funds from privatization, the institution benefited from resources garnered through a special cess. In the early-1970s, the Brazilian Government instituted the Social Integration Programme (PIS) and the Public Employment Savings Programme (PASEP), which were to be financed with payroll taxes imposed on company profits. Under President Ernesto Geisel (1974–1979), the administration of these funds was transferred to BNDES. Subsequently, under the 1988 Constitution, changes were made in the management of PIS-PASEP, which led to the creation of a Workers Assistance Fund, whereby 40 per cent of accruals had to be mandatorily routed to BNDES for investments in employment-generating projects. In addition, the Government has used various measures such as special taxes and cesses, levies on insurance and investment companies and the reallocation of pension fund capital to direct resources to the industrial financing activities of the BNDES (Baer and Villela, 1980). In 2007, 10 per cent of BNDES funds came from the Government's investment in its equity, and 75 per cent from obligatory investments of FAT (Workers' Support Fund) resources and special programmes such as the Accelerated Growth Programme (PAC - the acronym for its Portuguese name) and the Sustainable Investment Programme.

A consequence of this is that through BNDES, the Brazilian Federal Government has been an important source of long-term credit to the country's corporate sector. Implicit in that process has been the delivery of a subsidy to the private sector through BNDES. The rate of interest at which the Government borrows from the market, which is the benchmark SELIC (*Sistema Especial de Liquidação e Custódia* or Special System for Settlement and Custody) rate set by the central bank, is higher than the TJLP (*Taxa de Juros de Longo Prazo* or Long-Term Interest Rate), the rate at which it lends to the BNDES. This amounts to subsidized lending to the BNDES at the cost of the taxpayer. To the extent that BNDES offers credit to its borrowers at a rate lower than the SELIC, there is also a transfer to the latter. Indeed, the BNDES lends at rates close to the TJLP. According to Lazzarini et al. (2011), if the BNDES had obtained funds at the SELIC rate, then its net interest margin would have been negative in many years. BNDES is clearly being used by the Federal Government as a means to make implicit transfers to a select set of firms that it supports.

This holds considerable relevance because there is evidence of concentration in BNDES lending. In 2012, close to two-fifths of BNDES outstanding loans were with the five top borrowers. It also holds large chunks of equity in private firms such as Fibria (30.4 per cent), Klabin (20.3 per cent), JBS Friboi (17.3 per cent), Marfrig (13.9 per cent) and America Latina Logistica (12.2 per cent). During the 2008–2010 period when BNDES lending accelerated, \$16 billion was advanced to the food industry and \$30 billion to Petrobras. Together, this amounted to 50 per cent of BNDES lending to the manufacturing sector. To the extent that this reflects the Government's new growth priorities, BNDES as a DFI is clearly an instrument of State capitalist development in Brazil.

VI. The Indian experience

The other country that conducted a remarkable experiment with development banking was India. A distinguishing feature of the experience was the creation of a large number of DFIs, including numerous industrial financing institutions, a number of policy banks and a set of special purpose vehicles to finance investments in sectors like power and shipping. This deviation from the Brazilian path – where the

industrial financing function was largely concentrated in the BNDES - was the result of a number of factors. First, a decision to segment financing for large and small industry so that the latter is not deprived of finance. Second, the creation of special institutions to channel funds received from foreign donors. Finally, the creation of policy banks aimed at providing finance to targeted groups, sectors and industries.

The industrial finance infrastructure comprised the Industrial Finance Corporation of India (IFCI), established in 1948, the State Financial Institutions set up under an Act which came into effect in August 1952, the Industrial Credit and Investment Corporation of India (ICICI), the first DFI in the private sector, established in January 1955 with a long-term foreign exchange loan from the World Bank, the Refinance Corporation for Industry (1958) established to channel counterpart funds of the United States Agricultural Trade Development and Assistance Act of 1954 (Public Law 480) earmarked for lending to the private sector, and the Industrial Development Bank of India (IDBI) established in 1964 as an apex DB. Thus, by the end of the 1980s, the industrial development banking infrastructure in India comprised three all-India DBs (IFCI, ICICI and IDBI) and 18 State Financial Corporations (SFC). In 1990, the Government established the Small Industries Development Bank of India (SIDBI) as an all-India financial institution for the financing of micro, small and medium enterprises.

Despite this elaborate infrastructure, disbursements by all financial institutions (including “investment institutions” such as the Life Insurance Corporation, Unit Trust of India and General Insurance Corporation) amounted to just 2.2 per cent of gross capital formation by the financial year 1970/71. With a view to supporting various term-financing institutions, the Reserve Bank of India (RBI) set up the National Industrial Credit (Long-Term Operations) Fund from 1964/65. The post-1972 period witnessed a phenomenal rise in

financial assistance provided by these institutions (including investment institutions), and the assistance disbursed by them rose to 10.3 per cent of gross capital formation in 1990/91 and 15.2 per cent in 1993/94. Given the nature of and the role envisaged for the DFIs, the Government and the RBI had an important role in providing them resources. In addition, public banks and the Life Insurance Corporation and General Insurance Corporation also played a role (Kumar, 2013).

However, with the balance of payments crisis of 1991 triggering a major financial liberalization effort, a decline in development banking followed. Domestic and foreign private institutions that were now given greater scope objected to the provision of concessional finance to the DFIs as a source of unfair competition, which kept them out of areas that they were now looking to enter. The resulting pressure to create a “level playing field”, to which the Government succumbed as reflected in the Narasimham Committee reports of the 1990s (especially Narasimham, 1998), triggered a process through which the leading DFIs were transformed into commercial banks, starting with the ICICI in 2002 and the IDBI in 2004. By 2011/12, assistance disbursed by the DFIs amounted to just 3.2 per cent of gross capital formation (Kumar, 2013).³ By 2012, there were only two all-India development banking institutions: the National Bank for Agricultural and Rural Development (established in 1982) and the Small Industries Development Bank of India. Only these two policy banks have expanded their operations substantially in recent years.

VII. Comparing two experiences

An interesting feature of the experiences of Brazil and India discussed above is the trajectory that development banking took in the years after these two countries opted for internal and external liberalization during the period of globalization. In Brazil, reform notwithstanding, the BNDES has grown in strength, as noted above, which has served Brazil well. The bank’s role significantly increased when private activity slackened in the aftermath of the financial crisis. This countercyclical role helped Brazil to face the crisis much better than many other developing countries. The BNDES had stepped in to keep business credit going when private sector loans dried up in 2008 (Bevins, 2010).

On the other hand, liberalization led to a decline in development banking and the demise of the major DFIs in India. In 1993, the IFCI Act was amended to convert the IFCI – established as a statutory corporation – into a public limited company. The stated intention was to do away with the institution’s dependence on funding from the central bank and the Government, requiring it to access capital from the open market. Since this would involve borrowing at market rates, the role played by the IFCI has been substantially transformed. In the case of the ICICI, which was allowed to set up a banking subsidiary in 1994, the parent ICICI was integrated with ICICI Bank (its recently established subsidiary) through a

reverse merger in 2002, to create what was essentially a pure commercial bank. Similar moves were undertaken to transform the IDBI. In 2003, the IDBI Act was repealed and a company in the name of IDBI Ltd was established, which in turn set up IDBI Bank as a subsidiary. Subsequently, IDBI was merged with IDBI Bank, marking the end of industrial development banking in India.

The absence of these specialized institutions is bound to limit access to long-term capital for the manufacturing sector. One result is that the Government has had to use the publicly-owned commercial banks as a means of financing infrastructural investment. The share of infrastructure in lending to industry by scheduled commercial banks in India

has risen from less than 5 per cent in 1998 to 32 per cent in 2012, when aggregate credit provided by scheduled commercial banks rose from 21 to 56 per cent of GDP, with the share of advances to industry falling from around 50 to 40 per cent. Absolute lending to industry and thus infrastructure was extremely high. Given the reliance of banks on shorter maturity deposits that are extremely liquid, this exposure to infrastructure implied large maturity and liquidity mismatches. Unsurprisingly, defaults have been on the rise and non-performing assets have shot up, leading to balance sheet fragility.

As the Brazilian trajectory shows, this was not the inevitable direction that policy and outcomes had to take, even under liberalization.

VIII. The Republic of Korea: The State and development finance

Brazil and India are similar in the sense that they both pursued industrialization strategies in which the principal source of demand was the domestic market. This raises the question of whether developing market economies that pursue export-oriented or export-led industrialization strategies also rely on development banking. A useful case to consider here is the Republic of Korea. Among the factors responsible for the Republic of Korea's success – with its mercantilist, outward-oriented industrialization strategy of growth based upon rapid acquisition of larger shares in segments of the world market for manufactures – was the role of the State in guiding industry to the segments of the global market that were dynamic. For this to work, the State must through its financial policies ensure an adequate flow of credit at favourable interest rates to firms investing in these sectors, so that they can not only make investments in frontline technologies and internationally competitive scales of production, but also have the means to sustain themselves during the long period when they acquire and expand market share. These financial policies would include interest rate differentials and favoured financing of private investment. Indeed, development banking was an important component of this process.

As Cole and Park (1983) note, at the end of the Second World War when the South part of Korea was first occupied by the United States and then just after the Government of Korea was elected, “[the Republic

of] Korea had the shell of a modern financial system” (Cole and Park, 1983: 48). In the words of Bloomfield and Jensen (as quoted by Cole and Park), who were sent in 1950 from the United States Federal Reserve to help Korean officials reform the Korean financial system: “All the existing banking institutions are engaged predominantly in a regular commercial banking business consisting essentially of accepting demand deposits and of making short-term loans and advances to primary producers, to businessmen and to Government Agencies.” (Cole and Park, 1983: 49) Thus, in the case of the Republic of Korea, there was also a major gap to be filled with respect to long-term financing.

Therefore, the Government decided to set up the Korea Development Bank (KDB) in 1954, with the primary objective of granting medium- and long-term loans to industry. Wholly owned by the Government and built on the assets and facilities of the Industrial Bank, the KDB came to account for over 40 per cent of total bank lending by the end of 1955. At one point, it accounted for 70 per cent of the equipment loans and 10 per cent of working capital loans made by all financial institutions (Sakong and Koh, 2010). These loans were not based upon deposits — about a third of the loans were supported by aid counterpart funds and two-thirds with financing from the Bank of Korea and the Government. In the 1950s, 50 per cent of the funds came from the Government fiscal loans programme and another 30 per cent raised by

issuing bonds. Development banking had become an important instrument of policy.

Third, the KDB's charter was revised to allow it to borrow funds from abroad and guarantee foreign borrowing by Korean enterprises. In fact, an interesting feature of industrial finance in the Republic of Korea was the guarantee system, largely created to privilege borrowing abroad over attracting foreign investment, to keep Japanese capital at bay. Firms wishing to borrow from abroad obtained approval from the Economic Planning Board, which was ratified by the National Assembly. Once that was achieved, the Bank of Korea (BOK) (or later the Korea Exchange Bank) issued a guarantee to the foreign lender and the KDB issued one to the Bank of Korea. Therefore, while the borrower was committed to repaying the loan and carrying the exchange risk, that commitment was underwritten by the KDB and BOK, which by guaranteeing against default were ensuring access to foreign borrowing. Between 1960 and 1978, foreign loan guarantees by the KDB rose from 0.2 billion won to 3,898.3 billion won.

Besides the KDB, the other DFIs established in the Republic of Korea included the National Investment Fund, the Korea Development Finance Corporation and the Export-Import Bank of Korea. The Korea Development Finance Corporation, established in 1967 with support from the World Bank, was mandated "to assist in the development and creation of private enterprises by providing medium and long-term financing and equity participation, as well as technical and managerial consulting services"

(quoted in Cole and Park, 1983: 73). It took on the underwriting of equity shares and debentures as a major activity.

With the launch of the Heavy and Chemical Industries strategy, the National Investment Fund (NIF) was set up in 1974 to direct savings to these industries. The NIF mobilized its resources through the sale of bonds, obtaining loans from the deposit money banks and other savings and investment institutions and transfers from the Government's budget. The role of the State was visible in the fact that the deposit money banks were required to provide the NIF with 15 per cent of their incremental deposits and non-life insurance companies as much as 50 per cent of their insurance premiums and other receipts (Cole and Park, 1983: 77). While the Ministry of Finance was responsible for administering the NIF, its management was entrusted to the BOK. The NIF's lending often included an implicit subsidy reflected in lending rates lower than deposit or borrowing rates, although these were covered with funds from the Government.

Clearly then, the Republic of Korea was also a late industrializer in which development finance (supported by the State through the budget and the central bank) played an extremely important role and contributed in no small measure to the success of its late industrialization. However, the DB's role here included support for borrowing from abroad to acquire foreign technology, which was subsequently leveraged to launch a successful export-oriented strategy.

IX. China: A different trajectory

Among the DBs that are spoken of today, one that receives special attention due to its large size and asset base as well as its growing global presence is the China Development Bank (CDB). Development banking came late to China, and was the product of two trends. The first was China's economic reform that created an environment in which firms and agents large and small had to find resources for investment from sources other than the central Government or the local one. The second was the decision of the party and Government in the Deng Xiao Ping era in the early-1990s to accelerate investment and growth in China.

In the years prior to 1993, it was difficult to separate development banking from "normal" or commercial banking in China. Long-term investments were financed either directly from the State budget or through directing credit to the enterprise sector. In fact, until the 1980s, the only bank of relevance was the People's Bank of China, which subsumed all kinds of financial activities through its head office, branches across the country and subsidiary units such as the Bank of China. In this environment, financial policy in China involved the direct allocation of resources from the Government's budget or the use of directed credit in the form of

mandatory credit quotas for the State-owned banks that mobilized public savings (Xu, 1998).

This system was put to the test when China's Government decided to accelerate growth within the framework of an increasingly liberalized economy in the early-1990s. With the mandate to raise investment and a promise of rewards if they did, provincial leaders went on a spending spree. They were helped by the fact that provincial governments substantially influenced appointments to and the operations of regional bank branches, including branches of the central bank. The result was a borrowing and spending spree, not only to finance infrastructure but also large "prestige projects", which were not revenue earning. The inflationary spiral that followed and the evidence that provincial governments were finding it difficult to service the debts they had accumulated to finance these projects led the central Government to ban borrowing by provincial governments in 1994 (Xu, 1998).

Measures were undertaken to recapitalize the commercial banks and remove non-performing assets from their accounts. Furthermore, asset liability and risk management procedures were introduced and the State-owned commercial banks were required to reduce bad loans over time. They were also issued guidelines to lend against collateral, take account of borrower creditworthiness when lending and limit their exposure to any single borrower to 10 per cent of their capital (Xu, 1998).

The CDB was established as part of this process in 1994. Therefore, unlike in India, it was a product of reform rather than a victim of the same. However, three factors gave CDB a privileged position. First, it was established at a time when banks were being restrained from lending to projects that were either capital-intensive in nature, with long gestation lags, or were in the infrastructural area. This gave CDB a niche that it could seek to occupy, during a time when China was pursuing a high-investment growth strategy. Second, this was the phase of rapid urbanization in China, resulting in huge demands for infrastructure. Third, much of the investment in infrastructure was being undertaken by provincial governments that did not have the tax revenues needed to finance those expenditures and could not borrow to finance the same due to the 1994 ban. To circumvent the ban, they established special local government financing vehicles (LGFVs), which became important clients of CDB (Sanderson and Forsythe, 2013).

CDB mobilized resources by issuing bonds that were subscribed to by banks that saw these instruments as being safe despite yielding higher returns. After a lacklustre initial innings, CDB registered a dramatic expansion of its asset base. That process was accelerated in 2008-2009, when CDB became a leading vehicle to finance the Government's gigantic stimulus package adopted in response to the global financial crisis. By 2011, the assets of CDB were estimated at \$991 billion, as compared with \$545 billion for the World Bank group,⁴ \$306 billion for BNDES (2010) and \$132 billion for the KDB (Sanderson and Forsythe, 2013).

Four areas accounted for CDB's huge asset base. The first was lending that was part of its original mandate, involving replacing the Government and the commercial banks as lender to the State-owned enterprises. The second was lending to the LGFVs to finance the huge infrastructural investments being undertaken by the provincial governments. According to Sanderson and Forsythe (2013), as much as half of CDB's loan book could comprise lending to local governments, and the bank may account for as much as one-third of all LGFV loans, making it a bigger lender than all of the four commercial banks put together. The third, which has been visible since the last decade, is financing China's "going out" policy or spread abroad, partly as a manufacturing investor in low cost locations in Africa and Latin America but more importantly as an acquirer of mineral and oil resources across the globe. Finally, as a major investor in China's wind, solar and telecommunications companies, with Huawei Technologies being the largest beneficiary.

It is to be expected that many of these projects would not be profit-making, stretching from some infrastructural projects to ventures in the solar and wind area. Nonetheless, CDB is considered an extremely well-managed financial institution with the lowest ratio of non-performing loans among China's lenders (Sanderson and Forsythe, 2013). This must be because the central Government and the provincial ones ensure that there are no defaults on payments to the institution. The role of the State is crucial in ensuring the stability of a system where one gigantic DB stands at the centre of an investment-led growth strategy. The transition away from the era of "planning" to one with a socialist market economy may not mean much in terms of explaining how China is financing its high growth trajectory.

X. Conclusion

Thus, over a significantly long period of time, countries embarking on a process of development within the framework of mixed, capitalist economies have sought to use the developing banking function – embedded in available or specially created institutions – to promote their development goals. The role of these institutions in the development trajectories of late industrializing, developing market economies

cannot be overemphasized. They have played a role independent of the kind of industrialization strategies pursued and irrespective of the extent of industrial and financial regulation. Therefore, it is surprising that under financial liberalization India has chosen to do away with specialized development banking institutions on the grounds that equity and bond markets would do the job.

Notes

- 1 Hilferding (1910) argued that the close relationship between banks and industry allowed capital to assume the form of “finance capital”, which was the most abstract form of capital.
- 2 Eighteen per cent of the institutions that received transfers declared that if transfers were withdrawn, they would not be able to operate.
- 3 Figures computed from information provided in tables 13 and 83 of Reserve Bank of India (2013).
- 4 Comprising the International Bank for Reconstruction and Development (IBRD), the International Development Association and the International Finance Corporation.

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THE ENIGMA OF THE “INDIAN MODEL” OF DEVELOPMENT

Amit S. Ray

Abstract

The present chapter is an attempt to unveil the enigma of the “Indian model” of development. After discussing the evolution of India’s development policies over the last six decades, the paper attempts to unfold India’s development trajectory. It shows how, despite India’s lost opportunity to be a part of the Asian Miracle of the 1960s, 1970s and 1980s, the country finally emerged as a global player in the last couple of decades. However, the Indian model of development, principally driven by rapid expansion of high-end knowledge-intensive sectors, comes with a tragic neglect of low-end labour-intensive mass manufactures. From an agriculture-dominated economy, India straight away jumped to an economic structure, albeit with a transition period of three or four decades, in which services and high-end manufacturing assumed the lead role. This development model is not only inequitable in the extreme, but it is also a prescription for political volatility and is definitely not a sustainable development model, especially in a democracy.

I. The context

After a long journey of developmental struggle, negotiated through meticulous planning and policy initiatives spanning over nearly six decades, India finally emerged as a major player in the world economy and polity. India’s journey began as a newly independent poor underdeveloped nation in 1947, the year of its independence from the British rule. At that time, India was one of the poorest nations in the world in terms of per capita income, wealth and material capacity. However, it had an illustrious history of an ancient civilization dating back to 5000 BC, with periods of high prosperity and a rich cultural heritage, intellectual capacity and enlightened leadership.¹ With these assets, India embarked on its path of post-colonial economic development. The original architects of India’s development planning and policy were perhaps chasing a goal of bringing back India’s past glory to re-establish its lost position in the world after a prolonged (two centuries of) colonial rule. Over the next six decades, the trajectory of India’s development policies evolved through the ups and downs of its development performance.

India’s development experience has attracted significant attention in the economic development literature.² Much of this literature focuses on the failure of India’s initial approach of “State-directed” development with a strong inward-looking bias in its development strategy. It has been well demonstrated how India’s prolonged strategy of import substitution was followed by a paradigm shift towards a more liberalized open economy model of development in the 1990s. India’s successful emergence in the world economy has often been attributed to this liberalized trade and industrial policy regime. Essentially, the existing literature on India’s development experience analyses its economic performance in an attempt to link it with the broad theoretical contours of outward versus inward-looking industrialization and development.

However, we believe that this approach is too simplistic to understand the complexities of the so-called “Indian model” of development. Accordingly, the present paper has a very different

flavour: rather than focusing on the broad contours of overall development strategies, we argue that specific policy elements are formulated within such an overall strategy framework to achieve narrow and targeted goals of development. Each and every policy element may not necessarily be an integral component of a particular development strategy package, as theoretically understood in the development economics literature. While many of the policy elements might have played complementary roles in achieving desired developmental goals, some of the others might have been conflicting. Moreover, new policy elements have been added over time, while older ones have been modified and sometimes discarded. In this chapter, we consider India's quest for development as a composite of a multitude of policy initiatives addressing specific aspects of a multi-dimensional conceptualization of development. Indeed, this approach towards understanding India's development policies will also enable us to address a frequently raised yet less understood question:

Is there indeed an “Indian model” of development within such a diversity of policy initiatives? The present paper marks an attempt to unveil the enigma of this “Indian model” of development.

The chapter begins with a discussion of the evolution of development policymaking in India in section II. We demarcate the first couple of decades as a period during which policies were driven by ideology and idealism, followed by deeper penetration of self-reliance during 1970–1985. The second half of the 1980s was a period of policy ambivalence with sporadic reforms and opening up, while 1991 marked the beginning of a paradigm shift in India's policymaking. Section III presents India's development trajectory, showing how India finally emerged a global player in the last couple of decades, despite its lost opportunity to be a part of the Asian Miracle of the 1960s, 1970s and 1980s. Section IV highlights the foundations of India's success story and discusses its promises and pitfalls.

II. Evolution of development policymaking in India

As already indicated, the conventional discourse presents India's development policy largely within the paradigm of inward- versus outward-looking strategies, dividing it into two distinct regimes – import substituting industrialization extending until the 1980s, followed by a paradigm shift in 1991 towards a liberalized trade and industrial policy regime. Here, we refrain from such a broad-brush depiction of India's development policy evolution. Accordingly, we demarcate four distinct phases of India's development policy, distinguished by their guiding philosophies and compulsions.

A. *Policy planning driven by ideology: 1950s and 1960s*

India remained a virtually closed economy for nearly four decades after its independence in 1947, following an inward-looking development strategy. The key goal was to achieve *self-reliance* in all possible dimensions of economic activities of the nation. The immediate aspiration of independent India was perhaps to mimic the development trajectories of the “advanced” industrialized nations, albeit very much within the framework of import substitution

and self-reliance. It was perhaps important for Indian policymakers to signal to the rest of the world that India could do whatever the advanced nations could (Ray, 2006). Accordingly, a diversified industrial production base was meticulously planned out for India, ranging from simple consumer items to sophisticated capital goods and heavy machinery. This drive towards self-reliance also prompted India to engage in highly-complex and resource-intensive activities such as space research and nuclear technology. The notion of natural comparative advantage took a back seat in this planning process. This policy approach was perhaps a result of the hangover of the prolonged colonial rule that fostered a process of “drain of wealth” through tripartite and unequal trading relations dictated by the colonial rulers. This hangover was reinforced by the contemporary scholarship on *dependency theories*³ pioneered by the Latin American School of thought, highlighting notions of elasticity pessimism and in-equalizing trade. All this led to deep cynicism about trade and openness among the founding fathers of India's development policy. Therefore, the goal was to achieve “self-reliance” by doing away with all elements of dependence on the western world. Indeed, the notion of *self-reliance* played a major role in defining the *norm*

of development in post-colonial India. However, the idea of *self-reliance* itself has gone through a metamorphosis in India's development policy.

The architecture of India's post-colonial development policy framework was inspired by the soviet model of development. Indeed, the foundations of India's second Five Year Plan model (Mahalanobis, 1953) closely resembled Feldman's (1964 [1928]) model developed in the Soviet Union in the 1920s, arguing for a larger share of investment in the capital goods sector, which may slow down growth in the short run but would result in a much higher growth rate in the long run, accompanied with higher levels of consumption. India's first Prime Minister Jawaharlal Nehru, with his Cambridge exposure, had a strong faith in socialist ideals, which left a significant imprint on India's post-colonial development model. If we consider the Nehruvian era, which extends probably until the mid-1960s, we note that socialist sentiments went a long way towards defining India's own understanding of development, in terms of both its means and ends. Indeed, there are several pointers to substantiate this claim.

Soviet style *Central Economic Planning* was the cornerstone of India's initial development strategy, aimed at a "socialistic pattern of development". There was lack of faith in the market and the role of the State was emphatically highlighted. Although a mixed economy was envisaged, there was a clearly assigned role earmarked for the private sector, primarily restricted to the consumer goods segment, and even that was subject to pervasive regulatory control by the State. The public sector was expected to reach the "commanding heights" of the economy with clearly demarcated priority sector industries reserved for the public sector, progressively expanding its ambit during the Nehruvian era.

Trade received very little attention in the foundation of India's post-colonial development strategy. India's trade policy was characterized by pervasive import and exchange control, primarily relying on quantitative restrictions. From 1962 onwards, these restrictions were supplemented by the increasing use of import duties. There was initially a pessimistic neglect of exports, although the Third Plan (1961–1966) included some piecemeal and ad hoc attempts towards export promotion through export incentives (subsidies, fiscal incentives, and import entitlements). Of course, there was a temporary and short-lived trade-liberalization attempt during the devaluation of 1966, with

an announced goal of eliminating/rationalizing export subsidies and liberalizing import licensing and reduced import duties, albeit only to be followed by a reversal to the protectionist policy framework (Wolf, 1982).

Socialist ideals were also reflected in the deliberate policy attempts on several other fronts: (i) the reduction of monopoly and concentration of economic power; (ii) the promotion of a small-scale sector that generates income and livelihood for the common man through a policy of industrial reservation; (iii) ensuring balanced regional development through freight equalization policy to eliminate regional disparities in growth and development; and (iv) price controls aimed at ensuring the availability of certain "essential" ("crucial") products at "reasonable" prices, namely fertilizer, cement, iron, steel and pharmaceuticals.

Another area that warrants special attention in India's development policy during the Nehruvian era is its concerted focus on social sector policies, driven by the ideals of the so-called *Nehruvian Socialism*. The need for a proactive role of the Government in the provision of merit goods like health and education was clearly highlighted. An elaborate public health care system and infrastructure was envisaged and created during this period. Likewise, government-funded higher education and research, especially in the fields of science and technology, was emphasized with the creation of an elaborate network of public-funded colleges and universities, as well as other institutions of higher learning in sciences, technology and management.

B. Deeper penetration of self-reliance: 1970–1985

The decade of the 1960s witnessed several changes in the global political economy scenario. Two neighbourhood conflicts (1962 China and 1965 Pakistan) exposed the ground realities of India's limited military capabilities and the consequent vulnerabilities against global forces and alliances. Moreover, the acute food crisis of 1966 revealed India's economic vulnerability vis-à-vis the United States, when it withdrew its food aid to India under public law 480.⁴ This was followed by an acute currency crisis and a major devaluation of the rupee.

Despite being one of original founders of the non-aligned movement in a bipolar world, India

slowly started aligning with the Soviet Union, on both a strategic and economic front. There was urgency to rapidly march towards the goal of self-reliance, both economically and strategically. India's achievement of nuclear capability in 1974 was a clear step in this direction. This was also a period during which the private capitalists were emerging as a powerful class in India, as an outcome of its original vision of a mixed economy. This class had a vested interest in protecting their business from international competition and a policy of self-reliance and import substitution was in perfect harmony with their narrow interests. The policy of licence-raj had already created a rent-seeking vested interest among bureaucracy. Against this backdrop, India's development policy framework tilted towards deeper penetration of self-reliance in every sense of the term. However, the original policy goal, whereby the public sector was expected to reach the commanding heights of the economy, seemed to have been substantially diluted by now and the private capitalist class was being rolled out a larger space to operate. In the re-classification of the industrial sectors, greater access was accorded to private capitalists. The public sector was also mentioned, although it was no longer expected to reach the "commanding heights" of the economy.⁵ Industrial licensing continued in full steam. There was an announced intention to relax licensing policies with a change in the political regime in 1977, although it never quite materialized and was promptly reversed in 1980.

This period also witnessed a passage of several legislative acts that have a direct bearing on India's development model. The Foreign Exchange Regulation Act (FERA) of 1973 was introduced to restrict and regulate the operations of foreign (multinational) companies in India to protect and develop indigenous industrial and technological capability. A 40 per cent ceiling was imposed on foreign equity share, with the exception of some "core" sectors like pharmaceuticals, where up to 74 per cent foreign equity was allowed to high technology bulk and formulation producers, with the proviso that 50 per cent of the bulk was supplied to non-associated formulators and the share of own bulk in their formulation should not exceed one fifth. The Monopolies and Restrictive Trade Practices Act of 1970 was enacted to ensure that industrialization did not result in the concentration of economic power in hands of a few rich. The Patent Act of 1970 was a radical departure from the earlier patent law inherited from the British period. This Act only granted process patent for

chemical substances including pharmaceuticals, reduced the duration of patents to seven years from the date of filing or five years from the date of sealing whichever is lower, excluded all imported substances from the domain of patent protection (i.e. only new substances manufactured in India were entitled to patent protection) and placed the burden of proof on the plaintiff in case of infringement.

All these acts introduced in the 1970s, in conjunction with several other policy initiatives towards the active promotion of indigenous technology creation and adoption, resulted in a policy framework that took the goal of *self-reliance* beyond mere manufacturing capabilities to technological *self-reliance*. Given the protectionist environment, considerations of costs and quality as per global standards were not considered to hold much relevance during this phase of India's development model.

Another important dimension of this deepening of *self-reliance* during this era was evident in India's strive towards attaining self-sufficiency in food grains production. India's *green* revolution was made possible through the Government's concerted effort and investment in agricultural research and extension services.

C. Policy ambivalence and sporadic reforms: 1985–1990

The flipside of this protectionist policy regime soon revealed itself in the form of inefficiencies of various kinds. For one thing, there was no incentive to keep pace with the fast changing global technology frontier in many of the manufacturing sectors, which resulted in Indian industry becoming technologically backward and inefficient with respect to global standards of cost and quality. India's industrial sector was characterized by very high effective rates of protection and associated domestic resource costs. The concept of natural comparative advantage appeared to have taken a back seat in India's development trajectory. The country settled at a "Hindu" rate of growth of 2–3 per cent per year and was branded by development scholars as a growth laggard in the world (see e.g. Lal, 1988 and 1989).

From the mid-1980s, with Rajiv Gandhi taking over as prime minister with a young and dynamic appeal along with his team of technocrat advisers like Sam Pitroda, a technological view of development was

gaining momentum in India's development policy. It was realized that being able to produce everything could not be the end-all goal; rather, it is also very important to be able to do things "efficiently". This may require opening up the doors to the latest technological development on the global frontier, marking quite a departure from its earlier inward-looking policy regime. At the same time, global scholarship on development strategy was also undergoing a metamorphosis, fuelled by the trumpeting of the success of outward-oriented industrialization strategies adopted by East Asian economies. There was some serious re-thinking about India's development path among Indian scholars and policymakers, albeit with significant scepticism and hesitation.

In a sense, this marked the beginning of India's policy of liberalization. However, the policy response beginning in the mid-1980s was feeble and sporadic, given that it was limited to liberalizing particular aspects of the control system, without any major change affecting the system itself in any fundamental way. These attempts of liberalization have been arguably piecemeal and somewhat ad hoc without a comprehensive programme of reforms that some of the other inward-looking economies had already adopted (including China since 1978).

D. Paradigm shift: 1991 onwards

1991 marked a radical departure from the past, when, faced with an exceptionally severe balance of payments crisis, India launched a massive economic reforms package comprising short-term stabilization measures along with a longer-term programme of comprehensive structural reforms. Indeed, the reforms initiated in 1991 were much wider and deeper than earlier piecemeal attempts. It ushered in a complete paradigm shift in policymaking that now emphasized the liberalization of government controls, a larger role for the private sector as the engine of growth, freer operation of the market and competitive forces to boost efficiency, as well as greater integration with the world economy.

Interestingly, the *balance of payments* crisis of 1991 that precipitated India's massive economic reforms package coincided with the Uruguay Round of negotiations culminating in the establishment of the World Trade Organization (WTO), thus heralding the beginning of a new world order of globalization. Hence, a better perspective on the Indian reforms

process may be gained by viewing it against the backdrop of the evolution of the WTO-driven new world order, rather than regarding it merely as an isolated occurrence.

In terms of outcomes, the reforms process put in place a trade regime compatible with the diktats of the WTO over a period of time, with the removal of all quantitative restrictions on trade, reduction of tariff rates, market-aligned foreign exchange rates with full current account and limited capital account convertibility and a liberal, transparent, investor-friendly foreign direct investment policy in place. In the industrial sector, the reforms led to the virtual elimination of industrial licensing and de-reservation. The number of sectors reserved for small-scale enterprises was drastically reduced. Most significantly, the role of public sector was re-defined with the Stated objective of disinvesting and privatizing public sector units. Finally, the establishment of bodies like the Investment Commission and the National Manufacturing Competitiveness Council clearly highlight a major shift in the government's role from "control" to "regulation" as far as the industrial sector is concerned.

On the fiscal front, the *Fiscal Responsibility and Budget Management Act* was passed to achieve fiscal consolidation and stabilization. This act enjoined the central government to eliminate its fiscal and revenue deficits in a phased manner in the medium term. In another significant move, a uniform system of value-added tax was adopted and services sector (contributing to more than 50 per cent of GDP) was brought under the tax net in a comprehensive manner. Finally, subsidies on petroleum products were progressively dismantled by linking the domestic retail prices to international prices, which considerably reduced government expenditure on the petroleum account.

Financial sector reforms entailed the deregulation of the banking sector, which has significantly expanded the size of the sector in terms of the number of new private banks and branches, as well as enhanced the scale of operations, particularly in new businesses like merchant banking, mutual funds, etc. The *capital market* has also been liberalized with the gradual removal of controls on various transactions in the capital account. The Securities and Exchange Board of India was set up in 1995 to regulate the primary and secondary stock markets along with the stock exchanges and market intermediaries. The

Insurance Regulatory and Development Act was introduced in 1999, opening up the insurance sector to private participation.

Agriculture had received scant attention during the initial phases of India's economic reforms process, largely due to the absence of a political

consensus. Although such a consensus remains somewhat elusive, a growing realization regarding the urgency of removing various inefficiencies in the farming sector has resulted in the introduction of some reform measures, essentially in three areas: subsidies, procurement and the public distribution system.

III. India's development trajectory

In this section, we attempt to portray India's development trajectory with the objective of unveiling the process of its emergence as a major player in the world economy. India had to wait for five long decades before it could make its presence felt in the world economy. Despite its rich heritage and endowment of intellectual and scientific capacities, India remained a poor underdeveloped nation with very low material capacity for more than half a century after independence. It is needless to mention that India had significant ideational influence on global politics and international relations during the Nehruvian era (1950s). However, over time, even this influence became eroded, perhaps due to its failure to match its global diplomatic presence with commensurate economic and/or military presence in the world. It is rather intriguing to note that much of labour-surplus Asia (East and South-East, in particular) forged ahead with economic prosperity from the 1960s and 1970s, despite starting from a much lower base compared to India. Over the last forty years, some of the economies in East and South-East Asia have grown at rates unprecedented in human history, whereas India remained stuck at low levels and growth rates of per capita income.

Popularly known as the Asian Miracle, this spectacular economic development and prosperity in Asia was not as an isolated, regional phenomenon; rather, it reflected an unfolding pattern of international specialization, integrating the labour surpluses of Asia into the mainstream of world trade. "Within [labour-surplus] East Asia, the development of different national economies followed an orderly sequence – the so-called "flying geese" pattern (Akamatsu, 1962). The initial leader Japan was followed by the Four Tigers (Korea, Taiwan, Hong Kong and Singapore), then by the three Cubs (Indonesia, Malaysia and Thailand) and finally by China and Vietnam. At each stage, rapid economic growth in the

current leaders [driven by labour-intensive manufactured exports produced a Stolper-Samuelson effect and] set off a wage-explosion. This drove labour-intensive industries out to the next tier of low-wage economies while the current leaders graduated to more sophisticated activities that were not however at the cutting edge of technology. The final destination of this migration of labour-intensive manufacturing was of course China. In part, this was due to its vast surplus of low-wage labour [generating a Lewis effect]." (Guha and Ray, 2004: 301).

Despite its bulging population, where was labour-surplus India in this Asian Miracle? Given its autarkic trade policy regime that created strong anti-export bias in the relative incentive structures (Bhagwati and Srinivasan, 1975; Wolf, 1982), India could never experience the Asian Miracle driven by rapid expansion of labour-intensive manufactured exports. However, if the inward-looking trade policy regime was indeed the only reason for India's inability to join the miraculous growth experience of its East Asian neighbours, one would naturally expect India, with its low labour costs, to surge ahead in flooding the global markets for labour-intensive mass manufactures after it opened up its trade in 1991. Nonetheless, this never happened. By the time that India's policy shift took place, competition in the global mass market in labour-intensive manufactures had intensified and India had already lost out in the race against the East and South-East Asia. This was perpetuated by India's obsolete industrial policies, and especially the policy of product reservation for small-scale enterprises. It was supposedly in the interests of equity and employment, which spectacularly succeeded in crippling the textile industry, the spearhead of labour-intensive export expansion in the rest of the developing world (Guha and Ray, 2004). Effectively, India almost voluntarily opted out of the world's mass market for traditional labour-intensive

goods; indeed, it was the conquest of this market that propelled China’s boom of the 1990s.

However, this did not prevent India from charting out its own trajectory of emergence in the world economy that transgressed simple labour cost advantage. Fortunately, the advantage conferred by low labour costs is pervasive and extends well beyond the realm of traditional labour-intensive goods into new industries and services, like software, information technology (IT) and IT enabled services (ITES), biotechnology and pharmaceuticals, where knowledge inputs prove the key source of comparative advantage. India’s opening up in the 1990s coincided with a new era, during which these knowledge-intensive sectors began to dominate the world economy. India’s advantage in these activities arises from a strong university-educated middle class (translating labour abundance into skill abundance) and its public investment in science and technology science and technology (S&T) research. We must underline here the role of idealism and ideology in shaping India’s development policy in the immediate post-independence era. The policy thrust on higher education and research, especially in S&T, has created a knowledge base, skilled labour force and S&T capacity that are well-equipped to capitalize on the IT and biotechnology booms.

Apart from knowledge, skills and S&T capacity, another key source of India’s strength has been its knowledge of English language, inherited from its colonial past. This has proved an asset of incalculable value for India in an age of instant worldwide communication, essentially in the English language. Thus, while China continues to dominate the vast world market for traditional labour-intensive manufactures, new vistas have opened up for India, where knowledge resources – as opposed to simple labour abundance – prove the key source of comparative advantage.

Given that India’s emergence has centred on a limited number of specific sectors, an obvious question that arises is whether (and to what extent) it has been ignited by sector-specific policies. We find quite a divergence among sectors in this regard. India’s success in IT and ITES has largely been self-driven, taking off on its own in response to the new global economic opportunities created by an IT driven global production structure in a globalized world. Of course, India’s advantages in terms of skilled (university-educated) manpower and English language naturally

led to the flourishing of IT and ITES in India, even without any specific government policies towards IT during the initial phases. It is interesting to note that the National Policy on Information Technology was only announced in 2011, long after the successful emergence of India’s IT sector.

However, the story is somewhat different in the case of the pharmaceutical sector. Here, India created a unique policy space for itself that fostered the technological capability of the domestic pharmaceutical industry (Ray and Bhaduri, 2014). Carefully designed and targeted policy framework adopted in the 1970s helped this industry to become self-reliant, not only in manufacturing but also in technology, eventually competing successfully in global markets through technological capability. In the first two decades after independence, India’s overall development strategy of import substituting industrialization – supplemented by an active role played by public sector enterprises – acted as the key driving force behind the growth and expansion of the pharmaceutical industry. However, the industry continued to remain largely dominated by foreign firms and drug prices were among the highest in the world (Kefauver Committee Report, 1961). Simply trade policy alone is perhaps inadequate to foster self-reliance, especially in a process-driven sector where learning and technological capability building has to be actively nurtured through complementary policy instruments, and particularly intellectual property rights (IPR). This policy reinforcement towards technological self-reliance started in the 1970s with the passage of several government directives directly shaping the growth path of this sector, including the Drug Price Control Orders of 1970 and 1979, the Foreign Exchange Regulation Act of 1973, the New Drug Policy of 1978 and, of course, the Patent Act of 1970. Within this favourable policy environment, the pharmaceutical industry in India embarked upon a new trajectory of technological learning and acquired substantial technological capability of process development through reverse engineering both infringing processes for off-patented molecules and non-infringing processes for patented molecules. Through the 1970s and 1980s, the Indian pharmaceutical industry reached new heights of process capabilities to “knock off” any new drug with a non-infringing process and market them at low prices. This phenomenon has often been referred to as the “process revolution” in the Indian pharmaceutical sector, whereby India was now poised to make a major dent in the global generics market (Ray, 2008).

The story of India's economic emergence, coupled with the diversity of its experiences in the IT and pharmaceutical sectors, makes it evident that the Indian model of development cannot be fully comprehended with a broad-brush analysis of its transition from an inward-looking policy regime to a more open and liberalized economic environment in line with the neoliberal traditions. We have analysed

how finer elements of development policies – ranging from higher education and S&T research to product reservations and IPR – have played a role in India's economic emergence in one way or another. In some cases, non-targeted general policy elements have produced desired results for specific sectors, while in others targeted and sector-specific policies have yielded positive sectoral outcomes.

IV. The Indian model of development – promises and pitfalls

As we have explained above, the Indian model of development, as it has unfolded in the last couple of decades, is based upon a foundation of knowledge resources. The importance of knowledge as a principal driving force behind economic growth and development is now well recognized, given that there are unlimited opportunities that can be tapped by nurturing and augmenting knowledge resources. Indeed, India has enormous potential and unprecedented opportunities to make effective use of its knowledge resources to enhance productivity in all fields and make a successful transition towards a knowledge economy.⁶

However, India's assets and advantages on this count (namely its educated workforce, technological capability and knowledge of English) are far from being permanent in character; rather, they can be replicated in other countries with some effort. Indeed, some of the other emerging economies like Brazil and China are quickly catching up with India in terms of these assets. More seriously, these assets created by India's colonial history and post-colonial policy effort can be irreparably damaged, if not destroyed, by unimaginative policy. For instance, the language policy (shunting English) adopted by some of the State governments as well as the union government (at times) or the lack of a consistent higher education policy to bring India to newer heights of intellectual achievements could prove serious impediments to nurturing these invaluable assets that have propelled India's economic emergence in the world.

The Indian model of development – principally driven by rapid expansion of *high-end* knowledge-intensive sectors (IT, biotech, business/knowledge process outsourcing and other similar services) – comes with a tragic neglect of *low-end* labour-intensive mass manufactures. Even with all

the rhetoric about India's high-end capabilities, one must confront a fundamental question: *how high is India's high end?* Ironically, India's high end is not quite so "high". Ray (2009) shows that although India has demonstrated significant competitive strength in routine (though skill intensive) tasks like coding (in software) or process development (in pharmaceuticals), it has been lacking creativity and innovativeness to reach the global frontiers of technological advancement. India is yet to make a mark in cutting-edge global technologies. For instance, it is noteworthy that despite India's global presence in the generic market and its declared effort to reach newer heights in pharmaceutical research and development (R&D), we are yet to see a *new chemical entity* (drug) from India hitting the global market. Effectively then, India cannot compete with advanced nations in the truly high-tech segments in terms of creating new technologies and ideas. While India has created a niche for itself in the so-called lower-end activities of the high-end sectors (like customized IT and ITES and generic medicines) requiring skills and technological capability that India has acquired, it is yet to reach the levels of the league of technologically advanced nations.

In the framework of the conventional structural transformation paradigm (Chenery and Syrquin, 1975), the Indian model of development seems to have skipped the middle phase of an expanding secondary sector, in which manufacturing is supposed to account for the lion's share of the GDP. From an agriculture-dominated economy, India straight away jumped to an economic structure, albeit with a transition period of three or four decades during which services assumed the lead role. However, in the process, India completely lost out to other emerging economies (mainly China) in the low-end segment of mass manufactures. At the same time, it has been

unable to compete with the technologically advanced nations in the truly high-tech segment.

India’s remarkable success in *lower-end activities* of the *high-end knowledge-intensive sectors* has undoubtedly created unprecedented opportunities for a limited segment (creamy layer) of the society, mainly for the English-speaking, college/university-educated urban elite. It might have also created incentives for upward mobility and opportunities for the less fortunate to ascend the social ladder and be absorbed in what has been described as the Great Indian Middle Class. Nonetheless, it can hardly be called a truly inclusive strategy of economic development. It emphasizes services performed by an educated middle class as the leading sector in growth, in the midst of an ocean of illiteracy and poverty. Of course, arguably the incomes generated in the leading high-end sector may eventually trickle down to the poor through increased demand for food and manufacture, although this is a process that raises the aspirations of the masses for a better life and then fulfils them – if at all – at an excruciatingly slow pace. It is not only inequitable in the extreme, but also a prescription for political volatility. This is surely not a sustainable development model, especially in a democracy. The political economy of neglecting the bottom quarter billion people, who lack health, nutrition, education and shelter, must be clearly understood.⁷ We believe that it is simply unviable to sustain such a growth process in a democratic setup.

To employ the billion strong population productively, one cannot rely on a policy of picking winners and supporting a narrow set of sectors, whether capital-intensive import substitutes (as during the pre-1991 regime) or knowledge-based IT, pharmaceuticals, biotech, etc. (as pursued now). It

is essential to tap the potentials for labour-intensive “low-end” sectors (mass products) that create job opportunities for the masses. This cannot necessarily be achieved through counter-productive policies of reservation and prolonged protection, but rather through a proactive policy framework to resolve infrastructure deficits on the one hand and improve labour productivity through health, primary education and appropriate technology policy on the other.

The new global economic order that has emerged during the last couple of decades has ushered in a process of globalization that entails greater integration of the global economy, following the principles of *free trade* and *laissez-faire*. While opening up new and exciting opportunities for India’s economic growth and development in the 21st century, globalization has also posed serious challenges, especially regarding the social sectors. The architecture of this new world order, principally designed by the WTO agreement and supplemented by the prescriptions of *structural adjustment* offered to developing nations by the IMF/World Bank, has an immediate consequence of retreat of the State from active engagement in economic activities. Fiscal reforms initiated everywhere (India being no exception) have clearly mandated for public expenditure compression, whereby the soft targets for public expenditure compression – as always – happen to be the social sector allocations, in particular education, health and poverty reduction. This directly affects the poor in a material sense. It is somewhat ironic that while the primary threats of globalization in India are directed towards the underprivileged masses of its enormous population, it is this same pool of human resources – if properly nurtured – that will prove to be its greatest strength and source of opportunity to embrace globalization positively and productively to become a global economic power in every sense of the term.

Notes

- 1 By 1947, India had already produced two Nobel laureates (CV Raman in Physics and Sir Rabindranath Tagore in Literature, who also happened to be the first to receive a Nobel prize in Literature outside the English speaking world), several civil servants, barristers, professors and scientists of global repute.
- 2 See, for instance, Bhagwati and Desai (1970), Bhagwati and Srinivasan (1975), Chakravarty (1987), Little and Joshi (1994), Ahluwalia and Little (1998), Panagariya (2008).
- 3 See, for instance, Prebisch (1950).
- 4 The Agricultural Trade Development and Assistance Act of 1954, commonly known as public law 480, allowed the Government of the United States to export surplus agricultural commodities (food) to “friendly” nations, on concessional or grant terms. The initial objective was to eliminate agricultural surpluses of the United States, but later it became a foreign policy instrument of the country when it

- was re-energized as a Food for Peace programme by Kennedy.
- 5 This may appear somewhat ironic, given that India's political alignment with the Soviet Union was becoming stronger in this period, while private capitalists were also becoming increasingly influential.
 - 6 A knowledge economy is one that creates, disseminates and uses knowledge to enhance its growth and development. See Dahlman and Utz (2005).
 - 7 This figure is based upon a conservative estimate of the poverty line. A more liberal poverty line at US\$2 a day PPP will inflate this number substantially.

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DEMYSTIFYING CHINA'S ECONOMIC GROWTH: RETROSPECT AND PROSPECT

Liqing Zhang and Qin Gou

Abstract

This chapter provides both a retrospective and prospective view of China's economic growth since 1978. It starts with a review of China's economic spurt from the reforms of the late 1970s, before investigating how this success has been driven by the demographic dividend, high savings rate, outward-oriented development strategy, as well as rising total factor productivity. The chapter then studies the challenges arising from a diminishing demographic dividend, growing structural imbalance, as well as macro instability and financial risk, which threaten the sustainability of China's economic growth. Finally, the chapter suggests some pillars to maintain sustainable economic growth and avoid the middle-income trap, including deepening reforms in the financial, household registration and education systems; accelerating structural rebalancing; and replacing massive stimulus with mini-stimulus.

Introduction

Since the economic reforms and opening up policy launched in 1978, China has experienced a massive, protracted and unprecedented economic upsurge, which is sometimes described as the “China miracle” (Lin et al., 1996). Thereby, China has been transformed from a remarkably closed and poor agrarian society into an open global economy within the past three decades. The average 10 per cent growth rate of gross domestic production (GDP) has lifted China's GDP per capita (in constant 2005 dollars) from less than \$200 in 1978 to more than \$3,500 in 2013 (World Bank, 2013), promoting China from the low-income group into the upper-middle income group, as well as dramatically reducing the proportion of absolute poverty (Ravallion and Chen, 2004). China has already grown to become the second largest economy in the world, representing the engine of growth in the Asian area and the top contributor to global growth (Huang, 2011; Lin, 2011).

Despite consensus on the extraordinary economic success, its sources remain open for interpretation. Various analytical frameworks have been developed by economists to explain the key to this

success, such as the demographic dividend – e.g. the rising share of working-age population – (Cai, 2010; Cai and Lu, 2013), the transition to comparative-advantage-oriented development strategy (Lin et al., 1996), allowing incremental growth of the private sector activities while maintaining support to State-owned enterprises (SOEs) (Naughton, 1995), the “dual track strategy” (transform to market-oriented while also supporting planned activities) (Brandt and Rawski, 2008), taking over the growth model of East Asia (Sachs and Woo, 2000), as well as asymmetric product and factor market liberalization (Huang, 2010).

Most recently, the steady deceleration of economic growth, the growing structural imbalance, macro instability and financial risks have led to expectations of a downward growth potential. Economic growth slowed down after the 2008 financial crisis, decreasing to 7.7 per cent in 2013. The Chinese Government adjusted the target growth rate from above 8 per cent to around 7.5 per cent in 2011 for the first time and has maintained this target rate ever since. In addition, many think tanks and

economists gauge China's expected growth potential to be around 7 per cent in the late-2010s and less than 7 per cent in the 2020s (World Bank and the Development Research Center of the State Council, 2012; Eichengreen et al., 2012; Zhuang et al., 2012). China's economy is believed to be turning to a new model of growth and development, whose most basic features are growth rate slowdown, structural rebalancing and industrial upgrading (Garnaut et al., 2013). However, it remains subject to debate whether China can maintain a robust growth rate. Lin (2011) believes that China can still potentially achieve a dynamically rapid growth rate of 8 per cent for another 20 years or more by relying on the

advantage of backwardness, which is also supported by Perkins and Rawski (2008).

What contributed to China's economic spurt in the past reform period? How was the rapid growth pace maintained? Moreover, what factors challenge the sustainability of China's current and further economic growth? How should the Chinese Government move forward its transition? In this chapter, we will address these questions by looking back at China's past economic performance and the corresponding driving forces, as well as exploring the present and future challenges that threaten the sustainability of China's economic growth.

I. China's economic growth performance: Retrospect

A. China's economic growth performance

Although the industrialization process started ever since the establishment of People's Republic of China, which initiated China's economic recovery, the economic performances before and after 1978 significantly differ, with the post-1978 growth model outperforming the one established after the Second World War in many respects.

To start with, the real GDP growth rate reports a remarkable 10 per cent on average between 1980 and 2010, compared to 6.7 per cent during the previous post-war period (chart 1). As a result, the gap between China and the United States in terms of GDP reduced, with China's GDP relative to the one of the United States increasing from less than 10 per cent in 1980 to more than 75 per cent in 2013. Indeed, China now is the second largest economy in the world.

As a result of its extraordinary economic performance, China's share of global GDP has increased from less than 1 per cent to more than 9 per cent during the last three decades (World Bank, 2013), with China having jumped from the fifth strongest contributor to global growth to being ranked first (Lin, 2011). In addition to China's outstanding economic performance in calm periods, China withstood the shocks and maintained rapid growth during both the East Asian financial crisis in 1997-1998 and the current global crises starting in 2008. Moreover, China's dynamic growth in the current global crises was a main driving force for the global recovery.

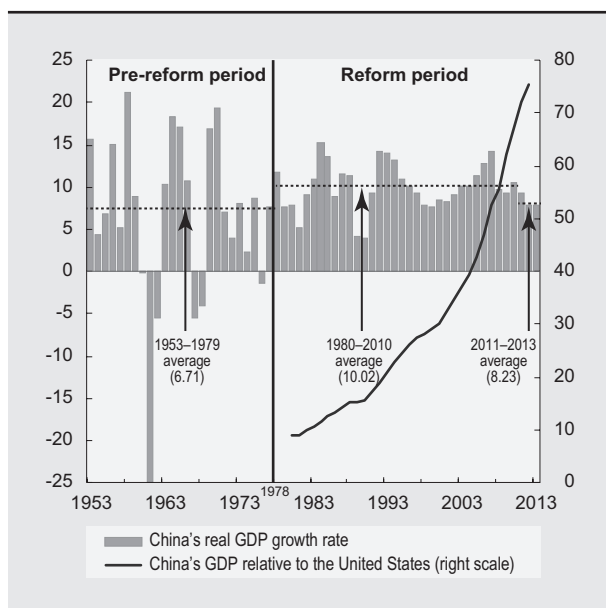
In respect to GDP per capita, the story is much more significant. Prior to 1978, China reaped a 3.6 per cent real GDP per capita growth rate, which slightly outperformed the United States and India yet left China far behind some of its Asian neighbours (chart 2). After 1978, the whole picture changed tremendously, with China's relative economic size expanding. Since 1978, China has achieved remarkably rapid economic growth, with real per capita GDP growing at more than 8.5 per cent annually on average (World Bank, 2013). The high growth rate has significantly closed China's income gap with the United States, with China's GDP per capita having increased from 2 per cent to 17 per cent of that of the United States (chart 2). China's dramatic economic success has also obviously reverted its lagging-behind State into a rapid catching-up trend with Japan and the Republic of Korea, greatly shortening its economic distance to them. Furthermore, China's output rose much more quickly than that of India, pushing China's GDP per capita from less than 50 per cent of India's in 1978 to more than its double in 2010 (chart 2).

Alongside buoyant GDP per capita growth, a huge decrease in the poverty ratio has been achieved in the past three decades. The proportion of the population whose income is less than \$1.25 per day declined to 11.8 per cent by 2009, compared to 84 per cent in 1981 (World Bank, 2013). 678 million people were lifted out of poverty during this period, benefiting from China's dramatic economic development (World Bank, 2013).

Chart 1

CHINA'S GDP: GROWTH AND RELATIVE TO THE UNITED STATES, 1953–2013

(Per cent)



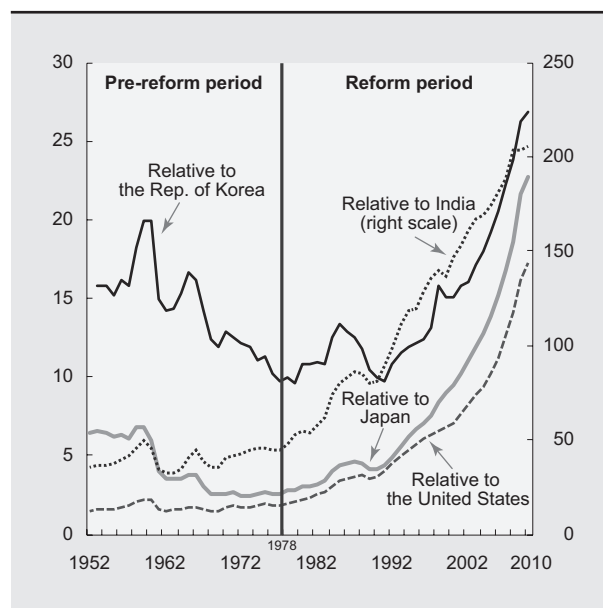
Source: Authors' calculations, based on National Bureau of Statistics of China; and *Wind* database.

Note: Relative GDP measure uses purchasing power parity conversion. GDP growth rates in this chart are not necessarily consistent with the data that appear in table 1, in particular for the early years, which present more conservative GDP growth rate estimates.

Chart 2

CHINA'S GDP PER CAPITA RELATIVE TO OTHER SELECTED NATIONS, 1952–2010

(Per cent)



Source: Authors' calculations, based on *Penn World Table 7.1* database.

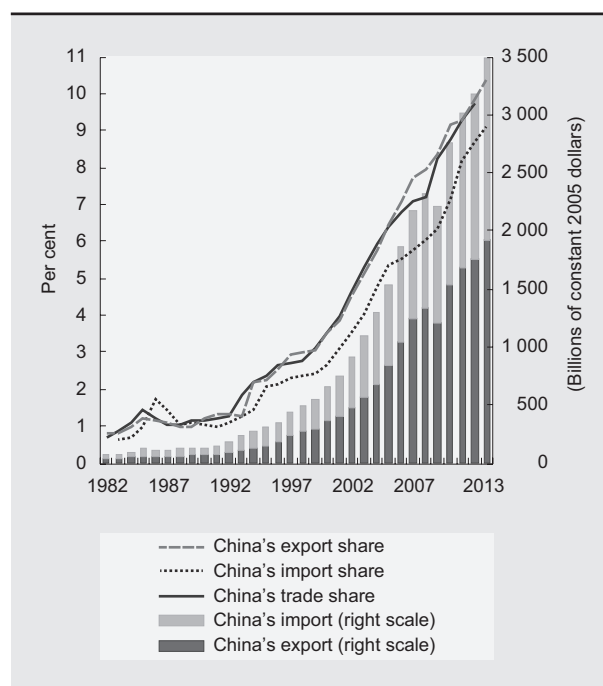
Note: Relative GDP per capita measures use purchasing power parity conversion.

Besides the economic gain, China has achieved a marked increase in its world market shares in both trade and international capital flows. China has experienced rapid growth in both imports and exports during the past three decades, especially since China joined the World Trade Organization (WTO) in 2001 (chart 3). China's exports and imports have both expanded more than 140 times their value since the beginning of the economic reform. Its export share in the world market, i.e. China's exports to other countries in the world as a percentage of world exports, increased from below 1 per cent in 1980 to 10 per cent in 2013, while its import share in the world market increased from below 1 per cent in 1980 to 9 per cent in 2013. The trade surging has lifted China to become the largest exporter, second largest importer and second largest trade country in the world.

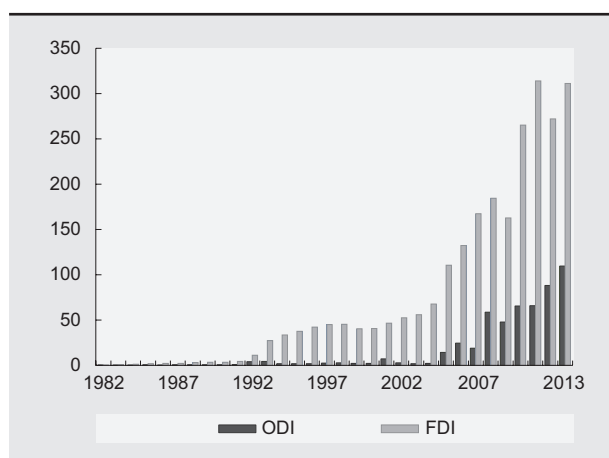
China's opening up also provides the country access to much-needed advanced technology. Foreign direct investment (FDI) inflow to China rapidly increased and China has been the top FDI destination among developing countries since the mid-1990s. In

Chart 3

CHINA'S TRADE AND ITS SHARE IN THE WORLD MARKET, 1982–2013



Source: Authors' calculations, based on World Bank, *WDI* database.

Chart 4**FOREIGN DIRECT INVESTMENT AND OUTWARD DIRECT INVESTMENT OF CHINA, 1982–2013***(Billions of dollars)*

Source: Authors' calculations, based on State Administration of Foreign Exchange of China.

2012, China's FDI accounted for almost 40 per cent of total FDI inflows to low- and middle-income countries (World Bank, 2013). In addition, owing to the "going out" strategy implemented at the beginning of the 2000s, China's outward direct investment (ODI) has also surged. During the past decades, China's ODI flow has raised from \$2.9 billion to \$109.7 billion in 2012 (chart 4), ranking China as the third largest source of ODI in the world at present, according to the Ministry of Commerce of China (2012).

B. Interpretation of China's rapid economic growth

How has China achieved such remarkable economic success in the post-reform period? To investigate this question, we first examine the sources of GDP growth from the supply side. China's growth is commonly considered to be primarily driven by capital accumulation. Therefore, serious doubts have been raised about the role of productivity progress in this kind of growth model, as well as the sustainability of growth (Kim and Lau, 1994; Krugman, 1994; Young, 1994). However, this view has more recently been challenged, given that total factor productivity (TFP) has also been found to play an important role in China's sustained growth, especially in the years before the 2008 crisis (Kuijs, 2009; Park and Park, 2010; Perkins and Rawski, 2008; Wu, 2011 and 2014).

A growth accounting exercise briefly delineates the diverse patterns of China's economic growth before and after the reform. While the pre-1978 growth was mainly led by capital investment rather than productivity improvements, growth thereafter has been derived from both (table 1). After 1978, physical capital grew at a higher growth rate than other inputs and TFP; indeed, it remains the first contributor to the rapid economic growth. TFP has grown at more than 3 per cent annually, which evidences productivity enhancement. Moreover, China's TFP growth rate also outperformed its Asian neighbours from the 1990s onwards (table 2). Although there remains a heated debate about the role of TFP in China's growth, which reaches hardly any consensus, Wu (2011) obtained a 3.7 per cent annual TFP growth rate on average in the post-reform period after surveying 74 studies by employing the method of meta-analysis.

C. Underlying driving forces

In the last three decades, China's sustained economic growth has stemmed from two major sources: capital accumulation and productivity growth. Whether China can maintain that growth model depends on the sustainability of these two major driving forces. Therefore, explaining the fundamental factors that drive them is crucial to look forward. No single factor can explain the whole story of China's economic model. The most important underlying forces are the demographic dividend, high savings rate, outward-oriented development strategy and improvement in productivity.

1. Demographic dividend

Since the very beginning of the economic reform in the late-1970s, the growth of the working age population has accelerated and the proportion of working age population in the total population increased until 2010. This increase not only directly guarantees abundant labour supply and low wages, but has also reduced the dependence ratio (the ratio of the dependent population to the working age population) from a high level of almost 80 per cent in the 1970s to below 40 per cent in 2010 (chart 5). The low dependence ratio contributes to maintaining a high savings rate, which forms the condition for a high growth rate of capital accumulation (Cai, 2010). In addition, the unlimited labour input ensures that the heavy capital accumulation can support a prolonged

Table 1
CHINA'S ANNUAL GDP GROWTH AND ITS DETERMINANTS, 1952–2012
 (Percentage points)

	Periods	GDP	Labour	Physical capital	Human capital	Total factor productivity
Perkins and Rawski (2008)	1952–1978	4.4	1.9	5.8	2.5	0.5
	1995–2000	8.6	0.9	10.5	1.6	3.2
	2000–2005	9.5	1.0	12.6	1.8	3.1
	1978–2005	9.5	1.9	9.6	2.7	3.8
Wu (2014)	1952–1977	4.3	1.0	3.3	0.5	-0.5
	1991–2001	10.4	0.2	5.7	0.5	3.7
	2001–2007	11.3	-0.5	6.1	0.5	4.8
	2007–2012	9.3	-0.2	7.7	0.4	1.3
	1978–2012	9.8	0.3	5.5	0.5	3.2
Kuijs (2009)	1978–1994	9.9	3.3	2.9	0.5	3.0
	1995–2009	9.6	1.0	5.5	0.3	2.7

Source: Authors' calculations, based on Perkins and Rawski (2008); Kuijs (2009); and Wu (2014).

Note: The growth rate of GDP equals to the factor-share-weighted sum of its four components: labour, physical capital, human capital and TFP. For comparability, the accounting results are based upon the official data from Wu (2014). The accounting exercise of GDP growth rate is under the assumption of Cobb-Douglas production function. GDP growth rates in this table are not necessarily consistent with the official data that appear for instance in chart 1, in particular for the early years, which are usually believed to overestimate the GDP growth rate.

Table 2
ANNUAL TOTAL FACTOR PRODUCTIVITY GROWTH, SELECTED ECONOMIES AND COUNTRY GROUPS, 1992–2007
 (Percentage points)

	Non-Asian G5	Japan	NIEs	China	ADEs
1992–1997	0.20	-0.99	1.71	3.1	-0.05
1997–2002	0.17	-1.04	-0.94	2.5	-1.08
2002–2007	0.31	0.98	2.35	6.6	1.93

Source: Authors' calculation, based on Park and Park (2010).

Note: *Non-Asian G5* refers to France, Germany, the United Kingdom and the United States.

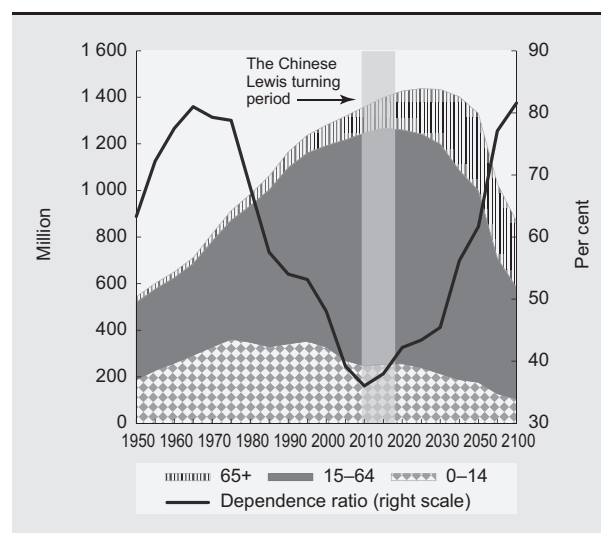
NIEs refers to Hong Kong (China), the Republic of Korea, Singapore and Taiwan Province of China.

ADEs stands for Asian developing economies and refers India, Indonesia, Malaysia, Pakistan, the Philippines, Thailand and Viet Nam.

GDP growth, as it prevents marginal return on capital from diminishing (Bai et al., 2006; Cai and Zhao, 2012; Cai and Lu, 2013).

Moreover, increasing labour mobility will further strengthen the contribution of the unlimited labour supply, as mobility ensures the industrial

Chart 5
POPULATION IN CHINA, AGE STRUCTURE AND DEPENDANCE RATIO, 1950–2100



Source: Authors' calculations, based on United Nations, Department of Economic and Social Affairs (UN/DESA), *World Population Prospects, the 2012 Revision*; and Cai and Lu (2013).

transition from agriculture to manufacturing and services, as well as from rural to urban areas (Brandt and Rawski, 2008). Factor reallocation across industries

and regions thereby promotes total productivity (Brandt et al., 2008; Brandt and Zhu, 2010; Zhu, 2012). Finally, low labour costs owing to the (temporarily) unlimited supply of labour emerged as China's comparative advantage in the global markets, driving China into the typical export-led growth model.

2. *High savings rate*

China maintains a high domestic savings rate, which is used to fund its unusual investment ratio. To understand the role of investment in the growth model, explaining the high savings rate behaviour is crucial. In the early-2000s, the main contributor of the increasing savings rate was the high and rising household savings rate, which is believed to have been promoted by several factors: firstly, the demographic structural change that we discussed above; secondly, the underdeveloped social welfare system, which promotes high precautionary savings; moreover, the low interest rate on savings deposits under financial repression policies, which hinders household interest income and thus induces household to save more to compensate for the income loss (Lardy, 2008 and 2012). Finally, an imbalanced sex ratio leads families with sons to raise savings to be more competitive and attractive for marriage (Du and Wei, 2010; Wei and Zhang, 2011).

Between 2004 and the crisis, corporate savings largely expanded, accounting for approximately half of China's national savings by 2007 (Bayoumi et al., 2010). According to Hofman and Kuijs (2006), it is the high corporate savings that make China stand out in terms of its savings rate in the mid-2000s. Several factors are behind the high savings by enterprises: on the one hand, within an underdeveloped financial system, firms increase retained earnings to fund their investment, which thus raises the corporate savings rate (Allen et al., 2005; Guariglia et al., 2011); and on the other hand, a dividend policy that prevents households from sharing enterprises' retained earnings, especially low dividend payments by SOEs due to large-scale agency problems, further drives up corporate savings (Hofman and Kuijs, 2006; Bayoumi et al., 2010).

3. *Outward-oriented development strategy*

China might be one of the most impressive cases of outward-oriented development strategy in terms of economic growth. Prior to 1978, China was essentially isolated from the rest of the world,

with domestic demand, and particularly domestic investment, representing the main source of economic growth. The economic reform and opening up policy launched at the end of the 1970s made China's economy gradually open to the rest of the world. In 1988, China switched its typical import substitute strategy in the early reform period to an export-oriented development strategy by applying the "big import and big export" model (Lin et al., 1996). Since China's access into WTO in 2001, its export share in GDP and trade share in the world market have both substantially surged (chart 3). The export-oriented strategy has provided China with a good opportunity to utilize its comparative advantages and the advantages of backwardness to gain more economic efficiency, create employment opportunities and eventually bring about better economic welfare.

As one of the most important pillars of the outward-oriented development strategy, FDI inflows have been greatly encouraged since the early-1990s, giving an impetus to exports and representing a source of technological progress. To create more employment opportunities given an inefficient domestic financial market, many local governments tend to rely on FDI. In order to attract more FDI, they usually offered foreign-funded enterprises (FFE) preferential tax treatment, enthusiastically supplied FFEs cheap or even provided free land for factory building and other stimulating facilities (Branstetter and Lardy, 2006). As a result of these encouragement policies, China became the largest FDI destination country in the emerging market world from the mid-1990s. It is noted that by facilitating processing exports, which account for more than 50 per cent of the total export in China in recent years (Koopman et al., 2012; Xing, 2014), the huge FDI inflows have become one of the main propellants to export growth in the country. Moreover, it also improves technology progress through spillover effects.

4. *Sources of growing TFP*

The increase in TFP during the entire reform period before the global crisis is attributable to the technology progress and the improvements in resource allocation efficiency. First of all, technological progress enhances productivity. China's progress in manufacturing technology mainly stems from either the learning effect with the advantages of backwardness (Lin et al., 1996) or spillover effects of FDI (Tian, 2007) in the early decades. More recently,

innovation and human capital improvement resulting from enhanced education have also begun to play an important role (Fleisher, et al., 2010). Meanwhile, China's agricultural production efficiency has been greatly improved as a result of the rural economic reform, providing incentives for peasants by reinstating the link between effort and reward (Lin, 1992).

Second, improvements in factor allocation efficiency due to reallocation across regions and sectors have facilitated TFP growth (Brandt et al., 2008; Brandt and Zhu, 2010; Cai, 2010). By promoting and

expanding the activities of market-oriented private sector and strengthening market competitiveness, the State sector reform has improved the resource allocation efficiency and productivity. Moreover, market-oriented pricing reform ensures more efficient resource allocation, especially in the markets for products. On the other hand, the partial liberalization in the factor markets provides incentives for entities and sometimes overcomes market failure (Huang, 2010). However, some authors observe that factor misallocation remains, constraining China's TFP gains (Hsieh and Klenow, 2009).

II. Prospect of China's economic growth: Challenges

A. Growth slowdown after the global crisis

The 2008 global crisis was like a watershed for China's economic growth, whereby the GDP growth rate fell from a high of 14.2 per cent in 2007 to below 10 per cent in 2008 and 2009. Although the government stimulus policy pushed the growth rate back to above 10 per cent in 2010, this was not sustained and it glided down again in 2012 and 2013 to below 7.7 per cent. The GDP growth rate has declined by

1.8 percentage points on average from the pre-crisis to post-crisis period (table 3). This slowdown trend has prompted concerns about the prospect of China's economic growth. What are the causes of the recent growth slowdown? Is this deceleration a cyclical phenomenon? We will analyse the GDP performance from both the demand and supply side.

Firstly, from the demand side, through decomposing the expenditure of GDP, we find that the GDP

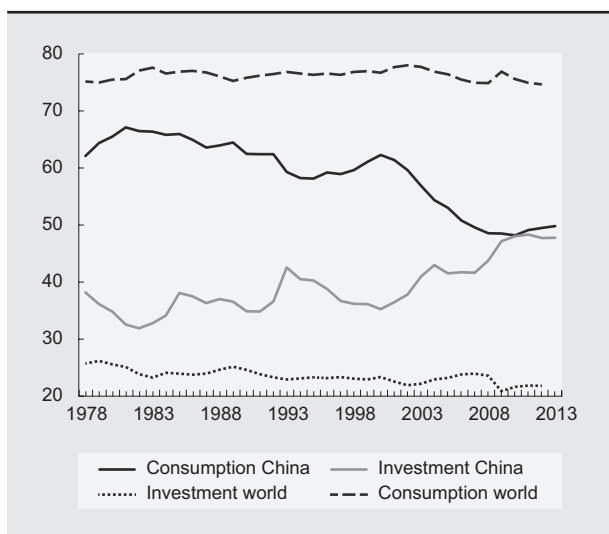
Table 3
AVERAGE ANNUAL GDP AND EXPORT GROWTH IN CHINA AND THEIR CONTRIBUTORS, 2001–2013
(Per cent)

	Contributors to GDP growth				Contributors to export growth		
	Annual growth rate of GDP	Total consumption	Investment	Net export	Annual growth rate of export	World total exports	China's export share in the world total exports
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2001–2007	10.81	4.41	5.16	1.24	25.42	12.05	11.94
2008–2013	8.98	4.45	5.05	-0.5	11.48	6.09	5.07
Change	-1.83	0.04	-0.11	-1.74	-13.94	-5.96	-6.87
Contribution share of the change	100	-1.95	5.85	95.19	100	42.79	49.29

Source: Authors' calculations, based on National Bureau of Statistics of China.

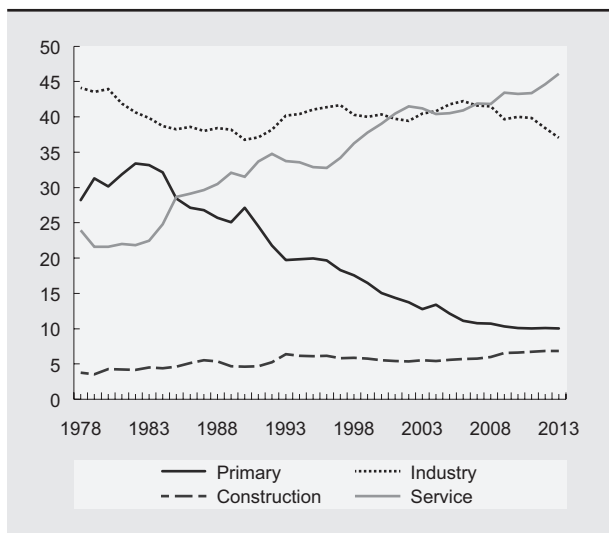
Note: Total consumption refers to private and public consumption. Figures in column 2 to 4 measures the average contributions of consumption, investment and net export to GDP growth rate and to the change of GDP growth rate from the period of 2001–2007 to 2008–2013. Figures in columns 6 and 7 measure the average contributions of the world total exports and of changes in China's export market share to China's export growth rate and to the change of China's export growth rate from the period of 2001–2007 to 2008–2013. Figures in the last row measure the shares of consumption, investment and net export in contributing to the GDP growth rate decrease from the period of 2001–2007 to 2008–2013, as well as the shares of the world total exports and China's export market share in the world in contributing to the decrease of export growth from the period of 2001–2007 to 2008–2013.

Chart 6
CONSUMPTION AND INVESTMENT IN CHINA AND WORLD ECONOMY, 1978–2013
 (Per cent of GDP)



Source: Authors' calculations, based on National Bureau of Statistics of China; and *Wind* database.

Chart 7
CHINA'S ECONOMIC STRUCTURE, 1978–2013
 (Per cent of GDP)



Source: Authors' calculations, based on National Bureau of Statistics of China; and World Bank, *WDI* database.

slowdown is chiefly led by the falling contribution of net exports, which accounts for 95 per cent of the decline in the average GDP growth rate (table 3). Therefore, understanding the net export behaviour is crucial to explain the recent GDP slowdown. The decrease in the growth rate of net exports is mainly because growth rate of exports decreased more than

that of imports. Further decomposing the export growth rate depicts a different picture from what is commonly viewed. Accordingly, the decreasing rate in exports growth is not only explained by the cyclical external demand (measured as the world total export) shock after the crisis, but is also led by slower gains in the market share. Put simply, if we roughly view China's export share in the world as China's export competitiveness, then the export growth rate slowdown is not just a cyclical adjustment, but might also challenge the sustainability of export-oriented model in the long run.

Although the investment growth rate has decreased on average to a rather small degree, its share in GDP sharply increased from an average of 40.4 per cent before the crisis to as high as 48.3 per cent in 2011 (chart 6). The Government's massive stimulus after the crisis can well explain this trend of switching from falling to rising. During the same period, the consumption growth rate slightly increased.

Secondly, from the supply side, the main change emerges in the growth rate of capital accumulation and TFP. While the former plays a more important role in the post-crisis rather than the pre-crisis period, the latter sharply declines (table 1). After adjusting the official data, Wu (2014) even obtained a negative TFP growth rate in the post-crisis period.

The increase in the capital accumulation growth rate is also attributed to the Government's stimulus policy and the acceleration in infrastructure investment. However, the reason for the declining TFP growth rate is not so clear. After the crisis, a fall in the share of the industry sector is mirrored by a rise in the share of the service sector (chart 7). Together with the fact that the manufacturing sector outperforms the service sector in terms of the TFP growth rate (Wu, 2011), this might provide a possible answer to the TFP slowdown. In addition, the investment inefficiency after the stimulus package and the diminishing of the dividends of opening up could offer further explanations.

B. Challenging factors

As we have discussed above, the slowdown of GDP growth after the crisis is not only driven by cyclical factors or the by-product of the stimulus policy, but also by structural factors that cause a reduced export competitiveness and productivity

growth rate. Therefore, can China sustain its previous miracle growth pattern from the long-run perspective? We will explore this by investigating the factors that challenge China's economic prospects.

1. *Diminishing demographic dividend*

Firstly, the demographic dividend has been diminishing following the decline of the fertility rate and the ageing of the population. Chart 5 indicates that as the growth rate of the working age population decreases, the dependence ratio reached the lowest point in 2010 and has subsequently switched to increasing. Therefore, as previously discussed, the contributions of the demographic dividend to China's economic growth have been diminishing.

As the working age population stops growing, all three supply factors of GDP are negatively affected. First, the increase in the dependence ratio pulls back the high savings rate. In addition, the limited supply of labour can no longer prevent the diminishing capital return. Without labour reallocation, the productivity growth rate is also affected. Moreover, labour shortages might push up wages, and thereby manufacturing costs, which impairs China's comparative advantage in the world export market and hinders investments.

In fact, as China passed the Lewis turning point or the Lewis turning period (from 2004, when labour shortages first appeared and migrants' wages started to increase, to 2010–2015, when the number of the working age population peaked), all the trends described above have been evident in China, i.e. labour shortages, diminishing returns on capital, and a declining savings rate (Cai and Lu, 2013). Demographic structural change will lead to a slowdown of the potential growth rate (Cai, 2010; Cai and Lu, 2013). The potential growth rate will fall to an average of 7.2 per cent during the 2011–2015, before gliding again to 6.1 per cent during 2016–2020, according to the estimate by Cai and Lu (2013).

2. *Growing structural imbalances*

Behind the economic performance achievement, significant structural imbalances have prevailed in China over the past thirty years; in particular, a continuously increasing high investment ratio, decreasing consumption ratio, over-dependence on external demand, a prolonged weakness of the service sector,

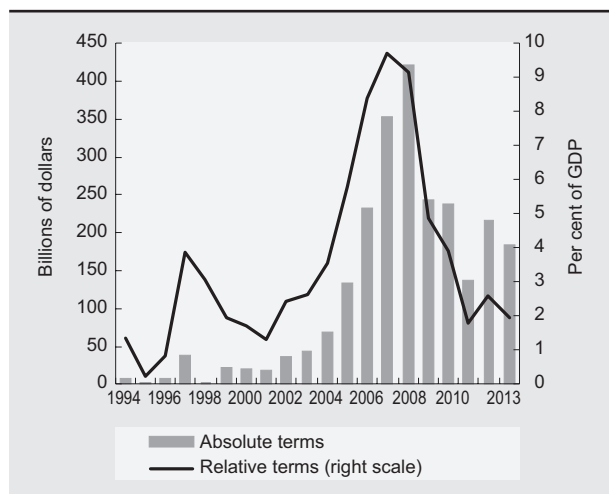
worsening income inequality and severe environmental degradation, which have resulted as by-products of the past growth model. Indeed, these structural imbalance problems have threatened the sustainability of economic growth.

First, the investment share of GDP is already unusually high, whereas the consumption share is very low. The investment share has been steadily rising from less than 30 per cent before the reform to almost 50 per cent after the crisis (chart 6). This share is much higher than the world average (around 20 per cent), as well as the average of Asian economies at around 25 per cent (Huang and Wang, 2010). Contrary to the sharp rise in the investment ratio, the consumption (private and public) share has fallen from more than 60 per cent at the beginning of the reform to less than 50 per cent recently, which is below the world average level of around 75 per cent (chart 6), as well as that of Asian and newly industrialized economies (NIEs) (Huang and Wang, 2010). This declining consumption share is particularly led by the declining private consumption from around 50 per cent to around 36 per cent, which is much less than the average of 60 per cent among emerging market economies (Dorrucci et al., 2013).

Such a high investment share and a low consumption share could dim the GDP outlook in several ways. First, high investment shares often increase risks of overheating, bubbles and over-capacity. The experiences of some East Asian economies with investment share higher than 40 per cent and strong economic growth, such as Singapore in the 1980s, Malaysia and Thailand in the 1990s, increased the likelihood of financial crisis years later (Huang and Wang, 2010). Secondly, a too low consumption ratio might cause social and political problems as households cannot sufficiently benefit from the economic development. Lastly, the investment-led growth model is not sustainable, driven by several factors. For instance, the diminishing return of capital cannot support high capital accumulation speed as before. "One-off windfalls" from both the Chinese corporate restructuring and WTO entry could fade, while the per capita capital stock has been rising (Ma et al., 2012). The obvious natural upper bound on the investment share also prevents it from continuing to grow. Moreover, in an international comparison, Dorrucci et al. (2013) found that although Japan, the Republic of Korea, and other NIEs had enjoyed a prolonged increase in investment since their economy took off, without exception all of them

Chart 8

CURRENT ACCOUNT IN CHINA, 1994–2013



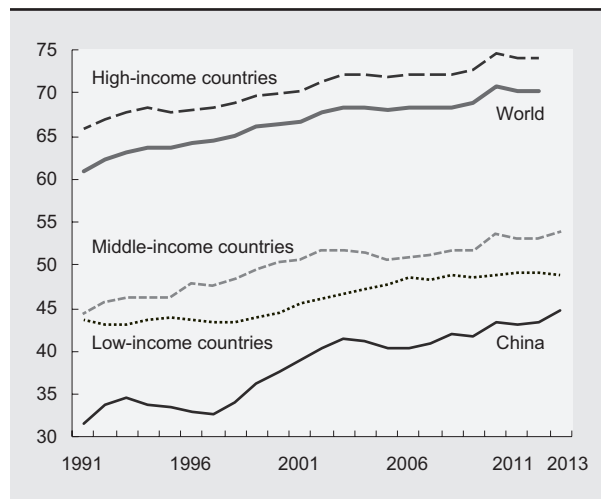
Source: Authors' calculations, based on National Bureau of Statistics of China.

had experienced declining investment shares after reaching a peak of almost 40 per cent.

Second, the external imbalance influences China's growth prospects. China's reliance on net exports has led to a huge current account surplus, reaching its highest point (9.7 per cent of GDP) in 2007 (chart 8). The high dependence on export exposes China's economic growth sustainability to external demand shocks. A huge current account surplus led to an accumulation of a huge amount of foreign reserves under a rigid exchange rate regime. Notably, partly due to the American financial crisis and partly due to the internal structural adjustment, China's current account surplus has steadily decreased since 2009, having already fallen to 2.0 per cent in 2013. The pressure from excessive dependence on external demand has been reduced.

Third, the sectoral structure is imbalanced in two ways. Firstly, the development of the service sector has been significant, but still lags behind. The share of the industrial sector has remained steadily around 40 per cent since the mid-1990s, while the share of the service sector witnessed a rapid growth and steadily increased from less than 25 per cent at the early reform period to around 40 per cent in the 2000s before the crisis and 46.1 per cent in 2013. However, it still lagged behind its average share in low and middle economies, let alone the high-income economies (chart 9). In particular, services such as finance, logistics, information technology, education,

Chart 9

SIZE OF THE INDUSTRIAL AND SERVICE SECTORS, CHINA AND SELECTED COUNTRY GROUPS, 1991–2013
(Per cent of GDP)

Source: Authors' calculations, based on National Bureau of Statistics of China; and World Bank, *WDI* database.

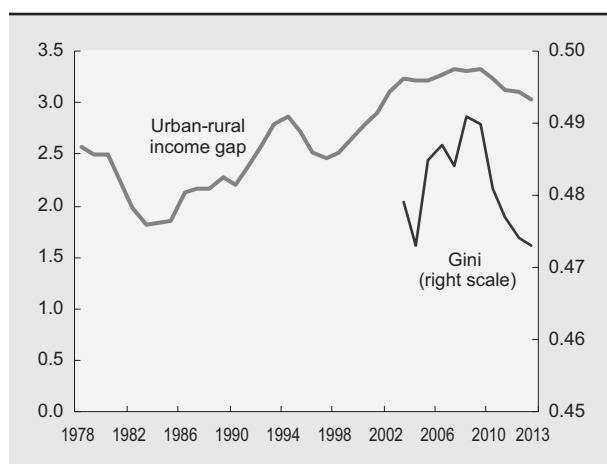
health care and pensions industries remain in short supply. Secondly, the structure is also imbalanced within manufacturing. While there is generally over-capacity within the traditional manufacturing industries such as the heavy chemical industry, steel, equipment manufacturing and the coal and solar industry (Anderlini, 2013), high-end manufacturing, new energy and environment friendly products remain in short supply (Zhang, 2013).

Fourth, income inequality in both dimensions among households and regions has deteriorated. The urban-rural income ratio increased from a low of 1.82 in 1983 to 3.3 in 2009 and the Gini coefficient has also come close to 0.5 in recent years, according to official data (chart 10), although it is even higher according to some other estimates. Rising inequality is emerging as one of the primary concerns of the Chinese Government. The good news is that the latest reading shows a reduction in income inequality in terms of both the urban-rural gap and the Gini coefficient.

Income inequality in China is also embodied among regions. While the eastern coast provinces, especially the big cities, have stepped into high-income level, the western and middle provinces remain underdeveloped, especially the rural areas. Geographical disparity among provinces, measured as the coefficient of variation of real per capita

Chart 10

URBAN-RURAL GAP AND GINI COEFFICIENT IN CHINA, 1978–2013



Source: Authors' calculations, based on State Administration of Foreign Exchange of China.

income, shows a trend worsening from the early-1980s (Song, 2013). Moreover, intra-provincial inequality has also increased, contributing about 63 per cent of the overall increase in regional inequality during 1997–2007 (Cheong and Wu, 2012).

Last but not least, China is facing unprecedented challenges of high resource consumption and severe environmental degradation (Zhang, 2013). Scarcely restrained by the environmental protection institutions, the spectacular economic development over the past two decades has dramatically depleted China's natural resources and produced skyrocketing rates of pollution, in particular in the air and water. For example, along with China's rapid growing export, the CO₂ emissions embodied in the exports have rapidly risen. For example, the CO₂ emissions embodied in China's exports to the European Union increased fourfold from 1995 to 532.35 Mt in 2006, accounting for 8.85 per cent of China's CO₂ emissions (Yan et al., 2011). The environmental degradation has caused significant public health problems, mass migration, economic loss and social unrest (Economy, 2011). Therefore, China now faces great challenges in balancing its economic goals with environmental sustainability (Zhang, 2013).

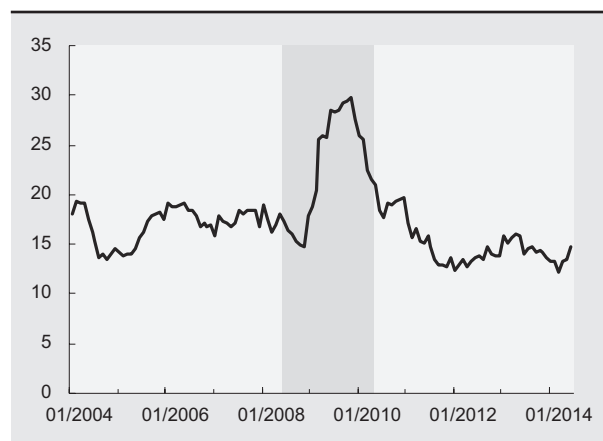
3. Macro instability and financial risk

Macroeconomic instability and rising financial risk have increased the burden on the transition. First, the recent rapid development of local government

Chart 11

GROWTH OF BROAD MONEY (M2) IN CHINA, JANUARY 2004–JUNE 2014

(Per cent)



Source: Authors' calculations, based on State Administration of Foreign Exchange of China.

Note: Data refer to year-on-year change.

financing platforms (LGFPs) has increased the vulnerability of the macro-economy and the financial system, aside from prompting great concerns. After the 2008–09 global financial crisis, the Chinese Government introduced a fiscal stimulus package comprising 4 trillion Renminbi (RMB), in response to the enormous negative external shock. A large number of infrastructure projects represented by railways, highways, airports and subways were approved. In order to ensure that these projects remain on schedule, monetary authorities released a large amount of money and banking regulators loosened credit standards. Therefore, broad money (M2) and credit surged in 2009 and 2010 (chart 11).

The credit expansion triggered a rapid proliferation of LGFPs, as the central Government only contributed RMB 1.18 trillion, with the rest being provided by local governments (Shih, 2010; Lu and Sun, 2013). At the end of 2010, the stock of local government debt reached RMB 10.7 trillion, marking the equivalent of 27 per cent of GDP in 2010, among which LGFP debt was around RMB 4.97 trillion, according to the National Audit Office of the People's Republic of China (2011). By the end of 2012, outstanding LGFPs loans amounted to RMB 9.2 trillion, accounting for 13.8 per cent of the total outstanding loans in the banking industry, as estimated by the China Banking Regulatory Commission. The recent rapid development of LGFPs has increased the fiscal and financial risks and prompted great concerns. On

the one hand, LGFPs loans are exposed to the mismatch between the revenue and expenditure of local governments, with the fiscal gap being exacerbated by the fiscal stimulus (Lu and Sun, 2013). On the other hand, it has also rendered local governments, banks and the economy vulnerable to the volatility of the real estate market, as sale of land use rights constitutes the principal source of LGFPs' future debt payment (Lu and Sun, 2013).

Another concern about financial risk emanates from the real estate sector and shadow banking. The property price booms have recently been cooling off, suggesting that real estate investment might collapse. Broadly described as "credit intermediation involving entities and activities (fully or partially) outside the regular banking system" according to the Financial Stability Board (2013), shadow banking has been rapidly rising in China at an annualized rate of 34 per cent since the end of 2010, as estimated by Standard & Poor's (2013). The total shadowy loans was estimated to amount to RMB 2.29 trillion at the end of 2012, equivalent to 44 per cent of GDP and 34 per cent of the total outstanding loans in the banking industry in 2012 (Standard & Poor's, 2013). The

rapid development of informal finance, which would be hazardous, has also prompted significant concerns.

Although the stimulus policy brought an economic rebound in 2010, it produced large after-effects. The slowdown of investment growth rate itself placed pressure upon the GDP growth rate, while over-capacity and the debt risk stimulated by these policies further hindered new investment. Moreover, to maintain their projects, LGFP and those large firms with over-capacity further finance themselves at a high interest rate, which drives up the capital cost and thereby reduces the profits and investment of private and small firms.

In sum, from the demand side, given that the investment and export-led growth models are unsustainable, the way out is to rebalance to domestic demand and improve investment efficiency. From the supply side, potential output growth rate is declining due to the diminishing demographic dividend and investment inefficiency, whereby productivity improvement represents the chief remedy. Furthermore, any reform policy should take consideration of current macroeconomic and financial risks.

III. Policy implications

Although China's past growth model is not sustainable and the previous rapid growth rate is unlikely to be maintained, it does not necessarily signify a crash of the Chinese economy. International experience indicates that when a fast growing economy reaches a certain income level, it will transit to a slowly growing development stage (Eichengreen et al., 2012);¹ therefore, transition to a new growth model is normal. The key challenge is how to transform the economy successfully to that sustainable and lower growth model and avoid growth stagnation. Historically, despite having enjoyed high growth rates when taking off, most of the middle-income economies suffer from growth stagnation and become trapped at the level of middle-income countries (Gill and Kharas, 2007; World Bank, 2012). How could China transit its past growth model to the new norm and avoid the middle-income trap?

A. Deepening reforms

In order to successfully transit China's past growth model to the new norm and avoid economic stagnation, the country requires deepening reforms in various areas, whose importance has been broadly realized. In late 2013, the Third Plenum of the 18th Party Congress authorized a comprehensive economic reform programme and established the decisive role of the markets in the allocation of resources. The programme mainly involves reforms in the government functions, State ownership, and the financial, fiscal, service and urbanization areas.² In early 2014, Premier Li Keqiang's Work Report to the National People's Congress outlined policies to deepen these reforms and accelerate progress towards a new model, which considers an increase in consumption and service's shares in the economy

and the relative incomes of the poorer, as well as a decrease in environmental damage.

Given its current economic challenges, China should find new ways to increase its labour supply and improve TFP. First, it is crucial to deepen the reforms in the household registration system. Given the labour shortage resulting from the diminishing demographic dividend, the household registration system would promote labour participation by accelerating mobility between rural and urban areas. Second, it is key to further liberalize the financial system, which involves the areas of the banking sector, interest rate, direct financing, exchange rate formation and capital account convertibility. This liberalization is beneficial in terms of eliminating capital distortions, improving investment efficiency and thereby improving TFP, although it should not be made at the expense of prudential regulation. Thirdly, China should accelerate industrial restructuring. Given the large disparities in productivity among industries and subsectors within industries, restructuring would improve TFP as a whole. In addition, China should also focus on technology progress by encouraging innovation and strengthening intellectual property protection. Finally, China should speed up reforms in the education system, including improving vocational education, which would help to optimize the employment and industrial structures. Besides, there are also some other reforms authorized in the area of legal and administrative systems, social welfare, democracy and ecological civilization. Indeed, it is important to deepen all these reforms.

However, the challenge is how to maintain macro and financial stability. Although these reforms would help the sustainability of economic growth and stability in the long run, they might create short-term instability; for instance, interest rate liberalization might push up capital costs and increase inflation pressure, while capital account opening might expose China more to global economic and financial shocks. When further deepening these reforms, both the sequence and timing are important. First, the sequence of reforming should be focused on ensuring that all such reforms are coordinated with each other. For example, to further liberalize the financial sector, the order of liberalization of interest, the banking sector, exchange rate and then the capital account should be well followed (McKinnon, 1993),

otherwise China may be exposed to huge financial risks or even crisis. In addition, timing is important, as there are always preconditions for further reforms. Take capital account liberalization as an example, for which stable macroeconomic conditions, a sound fiscal system and a developed financial system are all important preconditions. Therefore, only with these conditions in place should China put forward the reforms in capital account opening.

B. Structural rebalancing

Structural rebalancing is crucial. First, rebalancing between investment and consumption is crucial, given that the over-dependence on external demand has been greatly improved since the crisis; nevertheless, this rebalancing will not be as rapid as expected. On the one hand, consumption promotion strongly depends on improvements in the reforms in the social security system, education, housing and the reduction in inequality, which would take time to realize. On the other hand, it is inevitable for China to maintain its high investment share in the short run (Ma et al., 2012). Therefore, the only remedy is to enhance investment efficiency.

Secondly, to develop the service sector and accelerate industry restructuring, the key solution is to deepen the domestic marketization reform, and especially the factor markets reform. Marketization reform is helpful to speed up the restructuring, as well as solving the over-capacity problem by optimizing resources allocation. Again, further opening up of the service sector would facilitate its development, especially based upon the previous successful practice in opening up manufacturing. In addition, some industrial policy for emerging industries would be beneficial to foster their development, although such type of policy really needs to reduce government intervention after some period.

However, it is arduous to promote industrial restructuring in China. Restructuring might be thorny in the short term as business failures, bankruptcies and unemployment may increase. Therefore, maintaining macroeconomic stability is crucial to create the conditions for deepening reforms and restructuring. Finally, some other rebalancing policies, such as urbanization and rural construction to reduce income inequality, are also important.

C. Taking mini-stimulus policies

China's growth rate has been lowering since early 2010, partly due to the European debt crisis. In 2014, according to the National Bureau of Statistics of China, GDP growth rate reached 7.4 per cent, the slowest since 1989. In order to avoid further slow-down, Chinese authorities announced a mini-stimulus package, including cutting down tax for small- and medium-size enterprises, increasing government investment in the railway network and low-income housing construction. In the short run, such mini-stimulus policies are important: on the one hand,

they are capable of balancing the multiple targets of maintaining economic growth, adjusting structure, promoting reforms and improving livelihood; while on the other hand, as mini-stimulus policy is difficult to be expected and observed, it reduces the potential disturbing impact of speculative activities of investors on the economy. In addition, mini-stimulus policy is less likely to influence the stability of economic growth when it phases out, thus creating limited negative after-effects. Moreover, it helps to maintain the stability of monetary and fiscal policy. In the near future, prudent monetary policy with moderate liquidity and relatively loose fiscal policy should be the basic policy mix.

IV. Concluding remarks

China has achieved remarkable economic performance for more than three decades since the initiation of the reform in the late-1970s. This miracle has been led by investment and export from the demand side, as well as capital formation and TFP improvements from the supply side. The demographic dividend, high savings rate, the outward-oriented development strategy, technological progress and improved resource allocation efficiency have been the main underlining driven forces.

However, the diminishing demographic dividend, structural imbalances, as well as the macro-economic instability and financial risk created by the stimulus policy after the recent global crisis have all challenged China's economic growth prospects. In fact, the recent growth slowdown is not only caused by the external cyclical shock, but it also reflects structural problems in the Chinese economy.

Several pillars are needed to maintain a sustainable economic growth and avoid the middle-income

trap. First, further deepening of the reforms is needed in the household registration system, financial system, industrial structure, education system and some other reforms in law, politics, social welfare, democracy and ecological civilization. Second, the continuation of structural rebalancing is necessary, which mainly involves rebalancing towards domestic demand and industrial restructuring. However, as consumption increasingly depends on other economic and social reforms in China, the rebalancing between investments and consumption is slow. Therefore, promoting investment efficiency is the main remedy. Sectoral rebalancing should focus on both the development of the service sector and reducing imbalances within the industry sector. Finally, rather than a massive stimulus policy as implemented in China in 2009 and 2010, mini-stimuli policies that create fewer after-effects should be implemented in the near future. When executing such reforms policies, the sequencing of the reforms and the relationship between long-term growth, structural rebalancing and short-term macroeconomic stability should be well focused.

Notes

1 Eichengreen et al. (2012) found that rapidly growing economies were found to slow down significantly by at least 2 percentage points when their per capita income level reaches about \$17,000 in 2005 constant international prices.

2 Decisions of the Central Committee of the Communist Party of China at the Third Plenum of the 18th Party Congress are available at: http://www.china.org.cn/china/third_plenary_session/2014-01/16/content_31212602.htm.

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PRODUCTION SHARING IN EAST ASIA: CHINA'S POSITION, TRADE PATTERN AND TECHNOLOGY UPGRADING*

Laike Yang

Abstract

International production sharing has been a key feature of East Asian economic development in recent decades, with firms in advanced Asian economies relocating their production to China, using it as an assembly base and exporting the final products to the United States and Europe. China has taken advantage of this process and transformed into a global manufacture centre, with the country's emergence having reshaped the Asian production network and trade pattern. This chapter analyses the economic model and development strategy in East Asia, China's position in East Asia's production network, as well as its impact on China's technological upgrading. We find that China has moved to the centre of East Asia's production network, thanks to its export-led development strategy. It has significantly upgraded its technology and narrowed its technology gap with ASEAN-4, although the gap between China and Asian more-advanced economies remains fairly large and noticeable.

Introduction

East Asia has followed a so-called “flying geese” development model since around the 1950s. The main driver of the model is the leader's imperative for internal restructuring due to increasing labour costs. As the evolving comparative advantages of Japan caused it to shift increasingly further away from labour-intensive production to more capital-intensive activities, the country shed its low-productivity production to nations further down in the hierarchy in a pattern that subsequently reproduced itself between the countries in the lower tiers (Kasahara, 2004). Under this model, the gross domestic product (GDP) of many economies in this region has more than tripled in three decades. Led by Japan, followed by Asia's newly industrialized economies (NIEs), later joined by ASEAN-4 (i.e. the four major economies

in the Association of South-East Asian Nations (ASEAN), namely Indonesia, Thailand, Malaysia and the Philippines) and finally China, Viet Nam and Cambodia, the Asian economies took off one after another across half a century. During the same period, East Asia experienced an unprecedented change in its industrial relationship and international trade patterns. Prior to the 1970s, East Asian trade was dominated by a typical North-South vertical division of labour, whereby trade between Japan and developing Asia was characterized as typical inter-industry trade. The developing Asian economies exported resource-based and labour-intensive products to Japan, while Japan exported a wide range of final manufactured goods to its Asian neighbours. Subsequently, Japan shifted from labour- to

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capital-intensive industries in the 1970s due to the rising labour costs, while the Asian Tigers (Hong Kong (China), the Republic of Korea, Taiwan Province of China and Singapore) took over the labour-intensive manufactures. In the 1980s, Japan shifted further to high-technology industry, whereas the Asian NIEs took over some of the capital-intensive sectors and passed the labour-intensive sectors to the ASEAN-4 newcomers. Therefore, we observed a kind of three-layer inter-industry trade between Asian countries, in a trade pattern well explained by classical trade theory (Ando, 2006).

However, in the last two decades, and particularly the last 10–15 years, two important changes have emerged in East Asia. First, international production sharing¹ has become a unique feature of the region's economic landscape. Trade in parts and components (trade fragmentation) has not only grown faster than in any other part of the world, but also faster than Asia's trade in final goods. The production process is vertically sliced within one industry shared between East Asian economies, with each country/economy specialized in a particular stage of production. The consequence of this production sharing is the increased inter-dependency between more-developed and developing Asia nations. More-developed Asian countries and NIEs depend on developing Asia's cheap labour, rich resources and lucrative markets, while developing Asian countries depend on the importation of high-technology parts and components from Japan, the Republic of Korea and Taiwan Province of China. Secondly, China has moved from a periphery country to the centre of the Asian production network, transforming from a primary good supplier to a major manufacturing

and assembly centre within the regional production network. Indeed, many questions have arisen from these changes: What are the new trends of trade and production in East Asia? What is the impact of the production sharing on the trade balance in East Asian countries? Has China successfully upgraded its technology level by moving upward in the value chain? What is the impact of the production sharing on China's export competitiveness?

This chapter analyses the development and trends of production sharing and the trade pattern in East Asia, China's participation and its role in this network, as well as the impact of production sharing on China's technology upgrading and trade competitiveness. The study focuses on trade in "machinery and transport equipment", category 7 of the Standard International Trade Classification (SITC), and "miscellaneous manufactured articles" (SITC, category 8), given that these two categories account for more than 70 per cent of China's exports and around 50 per cent of China's imports. Moreover, these two categories are the most integrated industries in East Asia and the best examples of production sharing in the region. The data that we use is mostly from the United Nations Commodity Trade Statistics (*Comtrade*) database, while some is from national trade statistics. The remainder of this chapter is structured as follows. Section I reviews existing literature on this issue and related topics. Section II analyses the evolution and current situation of production sharing and trade fragmentation in East Asia, as well as China's role in the network and how it has changed. Section III discusses the impact of this phenomenon on China's trade balance and technology upgrading. Section IV presents the key conclusions and policy implications.

I. Literature review

International production sharing, namely the cross-border splitting of the production process within vertically integrated manufacturing industries, has been a key facet of economic integration over recent decades, particularly in East Asia. The associated spatial diversification of production activities has been the main driver of the rapid growth of trade in parts and components between developed and developing countries, largely motivated by taking advantage of cheap production costs in developing countries. Many alternative names have been coined for such a phenomenon, including "slicing the value

chain" (Krugman, 1995), "vertical specialization" (Hummels et al., 2001), "international production sharing" (Ng and Yeats, 1999 and 2001) and "outsourcing" (Hanson et al., 2001).

There is a sizeable body of theoretical literature examining the causes and modalities of international product sharing, as well as its implications for trade flows and policies (Cantwell, 1994; Venables, 1999; Jones, 2000; Jones and Kierzkowski, 2001; Jones et al., 2005; Baldwin, 2001; Deardorff, 2001). This literature assumes that intra-industry trade is much

more sensitive to inter-country differences in technology, labour supply, logistic efficiency and the overall production costs than inter-industry trade. Therefore, globally intra-industry trade has been growing faster than inter-industry trade due to the differences in processing technology production costs. Vertical intra-industry trade is growing faster than the horizontal intra-industry trade, particularly in East Asia.

Although trade in parts and components has generally grown faster than total world trade in manufacturing goods, the degree of East Asia's dependence on this new form of international specialization is proportionately larger than in North America and Europe. Accordingly, literature on the Asian production network and trade fragmentation have mushroomed since the early-2000s (Athukorala, 2003, 2011 and 2012; Ng and Yeats, 2001 and 2003; Athukorala and Yamashita, 2006 and 2008).

Most of the literature focuses on four areas: (a) the evolution and features of the East Asia production network (Ando, 2006; Kimura and Ando, 2005; Kimura et al., 2007; Athukorala, 2012; Athukorala and Yamashita, 2006; Ando and Kimura, 2003 and 2010); (b) the causes of East Asian production sharing and trade fragmentation (Ando and Kimura, 2003; Kimura, 2009); (c) the determinants of East Asian trade in parts and components (Athukorala and Yamashita, 2006; Kimura et al., 2007); and (d) China's role and impact upon East Asian production networks (Haddad, 2007; Yu and Xu, 2010; Yu and Wang, 2012).

Although the topic has been intensively explored in last ten years, the conclusions and opinions remain strongly divergent, particularly concerning China. This country is a relative newcomer in the Asia economic network. It has a different economic and political system and industrial structure and is far larger than other East Asian developing economies

in terms of size of land, population and resources endowment. Moreover, China began its integration as an extremely poor country with low education and technology levels.

From a methodology perspective, three main methods have been applied to analyse the international production sharing. The first such method involves measuring vertical specialization using input-output data, as developed by Hummels et al., 1998 and 2001; Ishii and Yi, 1997). The second method is to analyse trade in parts and components flow, identifying the vertical inter-industry trade relationship between countries and economies (Ando, 2006; Athukorala and Yamashita, 2006 and 2009; Ando and Kimura, 2008; Falguni, 2012). Finally, the third method is to analyse the intra-firm trade of multinational enterprises, identifying its impact on economic integration (Hanson et al., 2005; Miroudot et al., 2009).

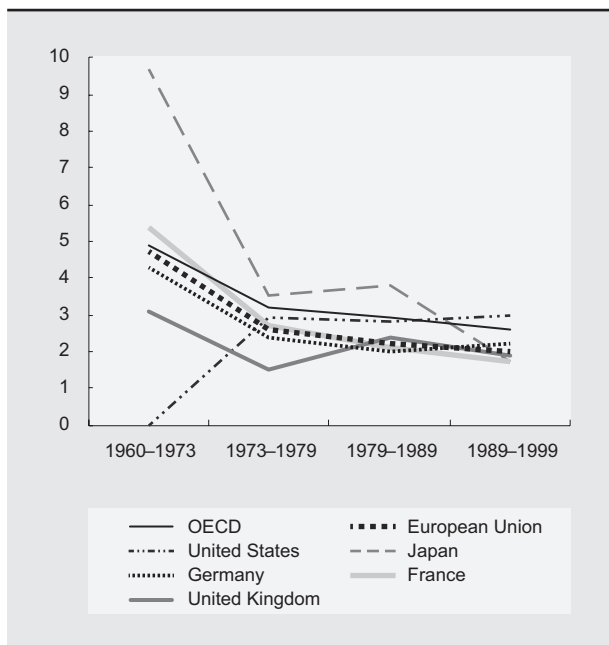
Although the first method has been widely used in many analyses, it has some drawbacks in terms of identifying a country's position in the international production network, particularly in developing countries where the data quality is not good. This method requires data for measuring foreign input or intermediary products among the total exports of a specific industry in one country. In China, there are different ways to calculate foreign inputs.² This causes vast differences in terms of estimating a vertical specialization index. The third methodology relates more to the enterprise level and could potentially better identify the technology level of one country in a certain production network, although enterprise-level data in China is not easy to obtain. Furthermore, China has a majority of State-owned enterprises in the so-called scaled enterprises, whose data does not always fit with the international statistical system. Therefore, this chapter follows the second method, using the *Comtrade* database.

II. East Asia production network: From the flying geese model to production sharing

From the 1950s to the 1990s, East Asia followed a so-called "flying geese model" in which one country leads others towards industrialization step-by-step with a V-shaped formation. The leader of the region passes its older industries (normally

low-value-added, lower-technology based industries) down to the followers as its own production cost rises and it moves into newer industries (higher-value-added, high-technology-based industries). From labour-intensive manufacture to capital-intensive

Chart 1
ANNUAL GDP GROWTH RATES AVERAGE IN
SELECTED OECD COUNTRIES, 1960–1999
(Per cent)



Source: Author’s calculations, based on OECD database.

manufacture and subsequently high-technology-intensive manufacture, the leader passes down its obsoleted industries to its close followers while upgrading its own industrial technologies.

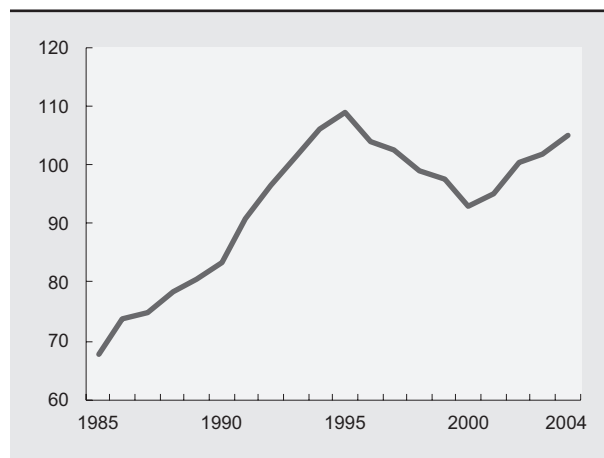
The flying geese model started soon after the Second World War, led by Japan, immediately followed by the NIEs and subsequently by the ASEAN-4 economies. China followed in the 1980s, as well as more recently Viet Nam and Cambodia. As the changes in comparative advantages of the “leading goose” oblige it to shift further away from low value-added production to more value-added and technology-intensive activities, it relocates the labour-intensive production to the followers through foreign direct investment (FDI). The cornerstone of the flying geese model is the waterfall technological hierarchy and differences of labour costs between East Asian countries, which allows vertical inter-industry division of labour in the region.

However, by the end of the 1990s, some new factors shook the foundation of the flying geese model, calling into question its ability to keep explaining Asian trade flows. One such factor is the slowing down of the Japanese economy (as shown

in chart 1). As the leader, the Japanese economy was the fastest among Organisation of Economic Cooperation and Development (OECD) countries during the 1960s, 1970s and most of the 1980s, although it stagnated for about 20 years thereafter. The annual GDP growth rate in Japan dropped from almost 10 per cent in 1960–1973 to only 1.7 per cent from 1989 to 1999. Japan’s GDP growth rates were not only lower than its Asian followers, but also slower than the United States, the European Union (EU) and the OECD average.

Secondly, the technology gap between Japan and the Asian NIEs was significantly narrowed, particularly with the Republic of Korea. From chart 2, we can see that the country’s firm’s total factor productivity (TFP) had caught up with that of the Japanese firms by the 1990s. In some industries like lumber and wood, furniture and fixture, food and kindred products, the TFP of the Republic of Korea’s firms has even surpassed that of the Japanese firms (Jung et al., 2008) (table 1). Therefore, the Asian NIEs are no longer receivers of the production activities shifted from Japan, but rather competitors of Japan in markets of high-technology products. Trade between Japan and Asian NIEs transformed from inter-industry trade into intra-industry trade.

Chart 2
TOTAL FACTOR PRODUCTIVITY CATCH-UP INDEX
OF MANUFACTURING FIRMS OF THE REPUBLIC
OF KOREA, 1985–2004
(Index numbers, Japanese firms = 100)



Source: Jung, Lee and Fukao (2008).

Note: The TFP level of all Japanese listed firms in each year was set at 100. The difference can be regarded as the percentage gap of TFP between the two countries because the values are natural log value of TFP. Data refer to the firm size-weighted mean of all manufacturing listed firms.

Table 1
PATTERNS OF CATCH-UP OF TOTAL FACTOR PRODUCTIVITY OF FIRMS IN THE REPUBLIC OF KOREA WITH THAT OF JAPANESE FIRMS, 1985–2004

(Index numbers, Japanese firms = 100)

Industry name	1985	1990	1995	2000	2004	Catch-up pattern
Food and kindred products	81.7	110.3	116.7	111.2	110.9	Over catch-up
Lumber and wood	124.5	141.1	131.8	137.9	150.9	Over catch-up
Furniture and fixtures	87.0	99.6	119.2	125.0	129.1	Over catch-up
Stone clay glass	80.0	92.2	108.9	108.6	112.6	Over catch-up
Petroleum and coal products	73.7	163.7	195.3	114.0	102.7	Just catch-up
Leather	108.5	104.3	128.0	121.1	104.2	Just catch-up
Fabricated metal	90.7	100.0	128.5	110.0	96.3	Just catch-up
Machinery non-electrical	91.8	92.5	122.0	110.2	108.5	Just catch-up
Electrical machinery	24.0	30.8	75.0	73.1	96.6	Just catch-up
Transportation equipment and ordnance	74.8	84.0	103.8	92.5	97.0	Just catch-up
Textile mill products	48.8	57.1	81.3	87.8	82.4	Under catch-up
Apparel	7.7	19.4	53.2	57.5	59.6	Under catch-up
Paper and allied	72.5	75.6	92.2	74.0	86.6	Under catch-up
Motor Vehicles	38.6	54.5	75.1	78.8	88.0	Under catch-up
Instruments	33.9	40.7	73.1	60.2	61.0	Under catch-up
Printing publishing and allied	81.6	98.4	106.4	111.1	88.3	Reverse catch-up
Chemicals	72.7	78.7	91.0	90.0	80.9	Reverse catch-up
Primary metal	67.2	70.0	89.2	78.8	61.3	Reverse catch-up
Rubber and misc. plastics	55.6	61.6	80.5	81.7	76.0	Reverse catch-up
Total	61.6	69.5	92.1	86.5	91.2	

Source: Jung, Lee and Fukao (2008).

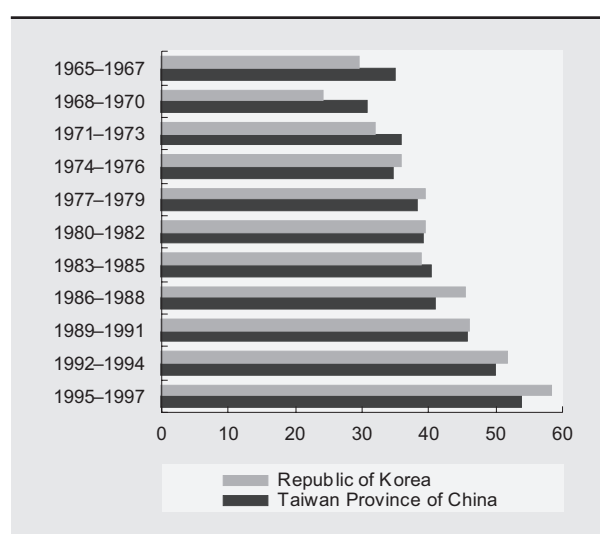
Note: Data correspond to the average of the TFP gap of firms of the Republic of Korea from the TFP of Japanese industry. The values also refer to the percentage differences of TFP because they are natural log differences. Reverse catch-up refers to the industries the Republic of Korea had first caught up with Japan, later on been caught up again by Japan.

It can be evidenced by the export similarity between Japan and the Asian NIEs. As we can see from chart 3, Japan's export similarities with the Republic of Korea and Taiwan Province of China consistently increased from the 1960s to the 1990s. By the end of the 1990s, the Republic of Korea and Taiwan Province of China were competing with Japan in the export market of more than 50 per cent of the latter's exports.

Thirdly, the rise of China in the 1980s and 1990s further reshaped the regional industry landscape. China's manufacture technology and labour productivity dramatically improved thanks to the technology spillover from foreign-invested enterprises (FIEs) and the improved education and training system. In some sectors, the processing technology caught up or even overtook the ASEAN countries. China's role changed from being a follower of ASEAN-4 to a competitor in labour-intensive and medium-low-technology products, which led to a strong similarity in export products between China and the ASEAN countries.

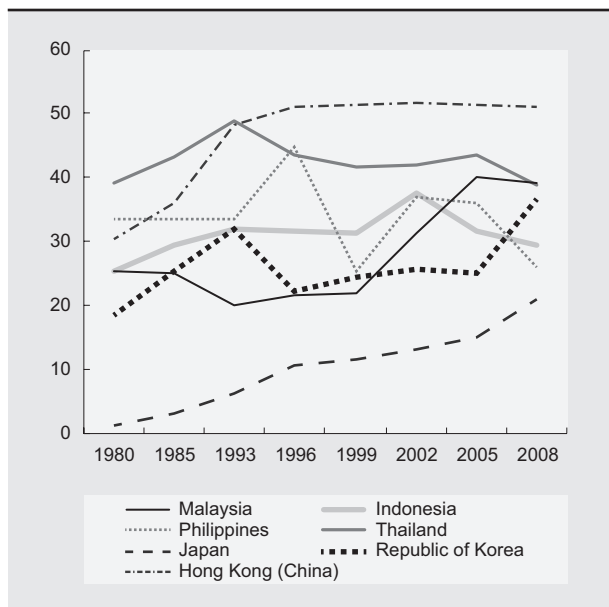
Chart 3
JAPAN'S EXPORT SIMILARITY WITH THE REPUBLIC OF KOREA AND TAIWAN PROVINCE OF CHINA: 1965–1997

(Index numbers, complete similarity = 100)



Source: Xu and Song (2002).

Chart 4
CHINA'S EXPORT SIMILARITY WITH SELECTED EAST ASIAN ECONOMIES, 1980–2008
 (Index numbers, complete similarity = 100)



Source: Xu and Song (2002) and Loke (2009).

Note: Data for the 1980s are from Xu and Song (2002), those from 1990s and 2000s are sourced from Loke (2009). Since Xu and Song calculate the gross export similarity whilst Loke's calculates the net export similarity, there is some inconsistency with the numbers.

Chart 4 illustrates the interesting trends in the export similarity index between China and its East Asian neighbours. As we can see, China's export similarity with Japan and the Republic of Korea has been continuously increasing, although it remains relatively low. China's export similarity with Indonesia, the Philippines and Thailand initially increased between the 1980s and the early-1990s but decreased in the 2000s, and particularly after 2005. With Malaysia, the export similarity has continuously increased, reaching a similar level to Thailand in 2008. Export similarity with Hong Kong (China) is the highest, although it has not changed since the mid-1990s. This might be because China's industry technology has surpassed the ASEAN countries since the mid-2000s, becoming a competitor to Hong Kong (China), the Republic of Korea, Taiwan Province of China and Singapore.

Apart from changes in technology relationship, there have also been convergences of labour costs in Japan and the NIES, as well as between China and ASEAN-4, resulting in a change of the international division of labour in East Asia. The vertical

intra-industry labour division, or production sharing, has replaced the inter-industry division. Within one industry, China, Japan, the Republic of Korea and Taiwan Province of China are focused on different production stages representing different levels of technology. The trade pattern in the region has also transformed from inter-industry trade to vertical intra-industry trade, which can be measured by the growing proportion of trade in parts and components in the total trade value. As illustrated by table 2, Asian trade of part and components as a share of trade in all manufacture products was growing considerably faster than in OECD Europe, North America and any other part of the world. By 2010, East Asian countries accounted for more than 40 per cent of the world's export in parts and components, as well as more than 35 per cent of the world's imports in parts and components. Within East Asia, exports in parts and components account for about one-third of the regional trade. It is particularly high in sectors such as electronics and telecommunication equipment. Almost three-quarters of all Asian imports of telecommunication equipment now comprise components for further assembly.

These trends were mainly driven by multinational enterprises (MNEs) relocating their production factories and reorganizing their business activities across different countries to reduce costs and improve their productivity. In East Asia, regional FDI roughly followed the technology hierarchy from Japan and the NIEs to China and ASEAN, helping the host countries to improve their labour productivity and technology.

Another noticeable change in East Asia is that China has moved from a peripheral country to being the centre of the East Asia production network. Due to the massive FDI flow from Hong Kong (China), Japan, the Republic of Korea, Taiwan Province of China and Singapore into China, East Asian MNEs have relocated a large percentage of their manufacturing bases to China, thus marking it as a new world factory by the end of the 2000s. As shown in table 3, China's share in world non-oil exports was merely 0.8 per cent in the early-1970s, whereas it had increased to 12.7 per cent by the end of the 2000s. During the same period, China's share in world manufacturing export also dramatically increased from 0.5 per cent to 14.9 per cent. Not only has the importance of China in Asia and global trade improved, but also the trade products structure of China has greatly improved, whereby manufacturing

Table 2
SHARE OF WORLD TRADE IN PARTS AND COMPONENTS, SELECTED COUNTRY GROUPS, 1992–2010
 (Per cent)

	<i>Exports</i>					<i>Imports</i>				
	1992	1996	2000	2005	2010	1992	1996	2000	2005	2010
East Asia	34.5	38.3	39.5	40.8	42.1	33.5	32.8	33.1	34.1	35.3
NAFTA	28.2	24.0	23.9	23.4	22.8	33.5	25.8	27.5	27.0	26.3
European Union	32.8	38.0	30.9	30.3	28.3	35.1	33.8	31.5	30.3	29.1
Latin America	0.6	0.6	2.1	3.8	4.6	1.3	2.2	3.7	4.2	4.5
South Asia	0.2	0.2	0.1	0.2	0.3	0.7	0.4	0.5	0.5	0.5
Africa	0.1	0.2	0.1	0.1	0.2	0.4	0.9	0.4	0.4	0.5

Source: Author's calculations, based on United Nations, *Comtrade* database.

Table 3
SHARE IN WORLD NON-OIL TRADE AND MANUFACTURING TRADE, SELECTED ECONOMIES, 1969–2008
 (Per cent)

	<i>Total non-oil</i>			<i>Manufacturing</i>			<i>Manufacturing share in total exports/imports</i>		
	1969/ 1970	1989/ 1990	2007/ 2008	1969/ 1970	1989/ 1990	2007/ 2008	1969/ 1970	1989/ 1990	2007/ 2008
Export									
China	0.8	2.9	12.7	0.5	3.0	14.9	45.1	83.6	93.4
Japan	6.3	10.4	4.6	8.9	12.7	7.4	93.4	98.0	93.2
Republic of Korea	0.3	2.2	3.0	0.3	2.6	3.5	75.4	93.6	87.6
Taiwan Province of China	0.6	2.7	2.0	0.6	3.1	2.4	71.5	91.9	91.8
Indonesia	0.3	0.5	0.9	0.0	0.4	0.6	3.8	55.6	41.5
Malaysia	0.8	1.0	1.6	0.1	0.7	1.6	7.2	60.4	70.9
Philippines	0.5	0.3	0.6	0.1	0.3	0.6	10.3	62.8	83.8
Thailand	0.3	0.8	1.3	..	0.6	1.3	7.7	59.6	76.5
East Asia	11.0	23.8	30.7	12.0	26.7	34.8	72.5	90.3	86.6
World							66.5	80.6	68.3
Import									
China	0.6	2.3	7.8	0.3	2.3	7.7	48.6	81.0	70.0
Japan	6.5	7.0	0.6	3.0	5.0	3.6	30.4	57.7	49.3
Republic of Korea	0.9	2.3	2.2	0.8	2.2	2.2	59.9	74.8	59.2
Taiwan Province of China	0.6	1.7	1.4	0.6	1.7	1.4	69.7	80.1	76.2
Indonesia	0.4	0.7	0.6	0.5	0.8	0.6	80.7	83.0	57.7
Malaysia	0.5	1.0	1.1	0.5	1.0	1.1	63.9	85.6	72.3
Philippines	0.5	0.4	0.4	0.6	0.3	0.4	77.3	76.4	65.3
Thailand	0.5	1.1	1.1	0.7	1.1	1.1	85.9	84.1	68.5
East Asia	11.6	19.9	24.4	8.3	18.3	24.6	47.6	74.1	67.0
World							66.5	80.6	67.8

Source: Athukorala (2011a).

Table 4
THE SHARE OF CHINA AND JAPAN IN EAST ASIAN TRADE, 1969–2008
(Per cent)

	1969–1970	1989–1990	2007–2008
China in East Asia's non-oil trade	7	12	41
Japan in East Asia's non-oil trade	57	44	15
China in East Asia's manufacturing trade	4	11	43
Japan in East Asia's manufacturing trade	74	48	21

Source: Author's calculations, based on United Nations, *Comtrade* database.

products now account for 93 to 95 per cent of China's total exports.

Meanwhile, China has also replaced Japan as Asia's largest economy and largest trader. From the end of the 1960s to the end of the 2000s, China's

share in East Asia's non-oil trade increased from 7 to 41 per cent, whereas Japan's share dropped from 57 to 15 per cent. In the manufacturing sector, China's share of East Asia's trade also vastly increased from 4 to 43 per cent, while Japan's share decreased from 74 to 21 per cent during the same period (see table 4).

III. The impact on China's technological upgrading

In the transition from the flying geese model to production sharing, China has moved from being a peripheral country to the centre of the East Asia production network, overtaking Japan as Asia's largest economy and the most important trade partner for Asian countries. This prompts the question of how much has China moved upwards on the value chain in East Asia. Can this transformation be explained by the improvement of China's industrial technology or is it simply the consequence of its export-led development strategy, which has focused on labour-intensive products? In this section, the chapter analyses the technology embodied in China's foreign trade.

There are a few methods for measuring a country's technology level of traded products. Lall (2000) developed a classification system in which manufacturing products were grouped by their technology intensiveness. According to Lall's classification, there are four types of manufactures: natural resource-based manufactures, low-tech manufactures, medium-tech manufactures and high-tech manufactures (see table 5). This system is based upon the SITC (Revision 2), in which 18 out of 161 three-digit coded products are marked as high-technology manufactures based upon available indicators of technological activity in manufacturing (Lall, 2000).

OECD has a different yet broader classification system based upon the third revision of the International Standard Industrial Classification of All Economic Activities (ISIC). In this system, manufacturing industries are grouped by their R&D intensities in production. High-technology industries include pharmaceuticals, aircraft and spacecraft, medical, precision and optical instruments, communication equipment, office, accounting and computing machinery, etc. (see table 6).

The third method is to measure a country's technology level by computing the share of parts and components (P&C) among total exports, based upon the assumption that they have higher technology contents and research and development (R&D) intensity. Aside from these three methods, some scholars have also developed a so-called export sophistication index to assess the technology level of traded products (Hausmann et al. 2006; Gang et al., 2006).

The major drawback of the OECD classification is that it does not reflect the R&D intensities in developing countries, since the calculation is based upon 12 OECD countries. Many scholars have questioned the export production sophistication index because it links technology to GDP per capita, whereby it

Table 5

LALL'S CLASSIFICATION OF MANUFACTURING INDUSTRIES BY TECHNOLOGY-INTENSIVENESS

Category	Examples	SITC, rev. 2
Natural resource-based manufactures	Prepared meats/fruits, beverages, wood products, vegetable oils, base metals (except steel), petroleum products, cement, gems, glass.	012, 014, 023, 024, 035, 037, 046, 047, 048, 056, 058, 061, 062, 073, 098, 111, 112, 122, 233, 247, 248, 251, 264, 265, 269, 423, 424, 431, 621, 625, 628, 633, 634, 635, 641, 282, 288, 323, 334, 335, 411, 511, 514, 515, 516, 522, 523, 531, 532, 551, 592, 661, 662, 663, 664, 667, 681, 682, 683, 684, 685, 686, 687, 688, 689.
Low-technology manufactures	Textile fabrics, clothing, footwear, leather manufactures, travel goods pottery, simple metal structures, furniture, jewelry, toys, plastic products.	611, 612, 613, 651, 652, 653, 654, 655, 656, 657, 658, 659, 831, 842, 843, 844, 845, 846, 847, 848, 851, 642, 665, 666, 673, 674, 675, 676, 677, 679, 691, 692, 693, 694, 695, 696, 697, 699, 821, 893, 894, 895, 896, 897, 898, 899.
Medium-technology manufactures	Passenger vehicles and parts, commercial vehicles, motorcycles and parts, synthetic fibers, chemicals and paints, fertilisers, plastics, iron and steel, pipes and tubes, engines, motors, industrial machinery, pumps, ships, watches.	781, 782, 783, 784, 785, 266, 267, 512, 513, 533, 553, 554, 562, 572, 582, 583, 584, 585, 591, 598, 653, 671, 672, 678, 786, 791, 882, 711, 713, 714, 721, 722, 723, 724, 725, 726, 727, 728, 726, 727, 741, 742, 743, 744, 745, 749, 762, 763, 772, 773, 775, 793, 812, 872, 873, 884, 885, 951.
High-technology manufactures	Data processing and telecommunications equipment, television sets, transistors, turbines, power generating equipment, pharmaceuticals, aerospace, optical and instruments, cameras	716, 718 751, 752, 759, 761, 764, 771, 774, 776, 778, 524, 541, 712, 792, 871, 874, 881.

Source: Lall (2000).

assumes that rich countries always have higher export sophistication than poor countries. Therefore, in this chapter, we use the first and third methods to assess China's technology structure of export products.

Generally speaking, China's industrial technology has quickly improved during the Asian economic transformation. As shown in chart 5, the share of exports in natural resource-based manufactures maintained a relatively constant proportion from 1994 to 2011. Moreover, the share of low-technology manufactured exports decreased from 58 to 31 per cent. By contrast, the share of high-technology manufactures increased from 12 to 34 per cent and medium-technology manufactures increased from 18 to 25 per cent.

Given that natural resource-based industries do not reflect technology intensiveness and only reflect a very small part of China's exports, we can derive a clearer picture of China's technology embodied in exports when we omit such industries from our study. As shown in chart 6, the share of exports in both high and low-technology industries decreased from

1994 to 2011, while the share of exports in medium-technology industries significantly increased.

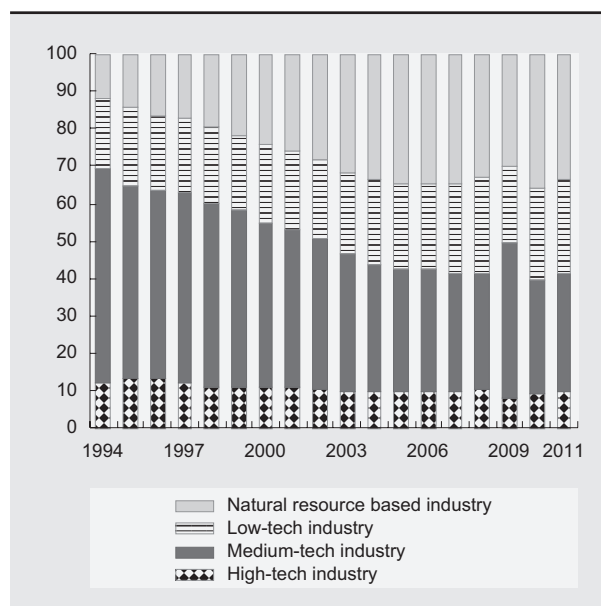
The second approach to assess China's technology upgrade and its position in East Asia's production network is to consider the trade in parts, components and accessories. Upon first glance, we find that China's importance in East Asia's trade of intermediate products has become increasingly significant. Its share of parts, components and accessories in total exports has caught up with Indonesia and Thailand, although it remains behind Malaysia, the Philippines, the Republic of Korea and Singapore (see table 7).³

When exploring the details of the region's trade in P&C, it is evident that China's trade with its neighbours is highly imbalanced. China reports large trade deficits with Japan, the Republic of Korea and Taiwan Province of China in the P&C trade. This shows that China is an assembly centre that heavily depends upon the import of P&C from more-developed Asian economies to support its massive exports in final goods. Chart 7 illustrates the trade balance between China and Japan, the Republic of Korea and Taiwan

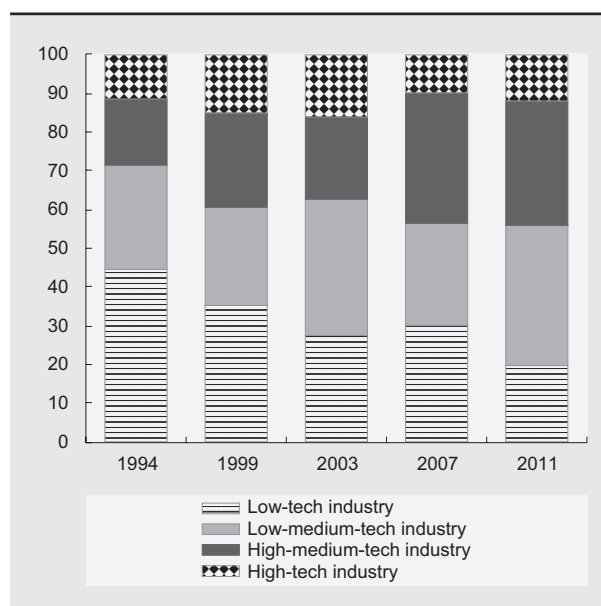
Table 6**OECD CLASSIFICATION OF MANUFACTURING INDUSTRIES BASED ON R&D INTENSITY, 1999***(Per cent)*

<i>Industry name</i>	<i>ISIC Rev. 3</i>	<i>R&D-intensity by production</i>
High-technology industries		
Pharmaceuticals	2 423	10.5
Aircraft and spacecraft	353	10.3
Medical, precision and optical instruments	33	9.7
Radio, television and communication equipment	32	7.5
Office, accounting and computing machinery	30	7.2
Medium-high-technology industries		
Electrical machinery and apparatus, not elsewhere specified (n.e.s.)	31	3.6
Motor vehicles, trailers and semi-trailers	34	3.5
Railroad and transport equipment, n.e.s.	352+ 359	3.1
Chemical and chemical products	24 (excl. 2423)	2.9
Machinery and equipment, n.e.s.	29	2.2
Medium-low-technology industries		
Building and repairing of ships and boats	351	1.0
Rubber and plastics products	25	1.0
Other non-metallic mineral products	26	0.8
Basic metals and fabricated metal products	27–28	0.6
Coke. Refined petroleum products and nuclear fuel	23	0.4
Low-technology industries		
Manufacturing, n.e.s.; recycling	36–37	0.4–0.5
Wood, pulp, paper products, printing and publishing	20–22	0.4
Food products, beverages and tobacco	25–16	0.3
Textiles, textile products, leather and footwear	17–18	0.3

Source: Author's calculations, based on OECD, ANBERD and STAN databases.

Chart 5**TECHNOLOGICAL STRUCTURE OF CHINA'S MANUFACTURED EXPORTS, INCLUDING NATURAL RESOURCE BASED INDUSTRIES, 1994–2011***(Per cent)*

Source: Author's calculations, based on United Nations, *Comtrade* database.

Chart 6**TECHNOLOGICAL STRUCTURE OF CHINA'S MANUFACTURED EXPORTS, 1994–2011***(Per cent)*

Source: Author's calculations, based on United Nations, *Comtrade* database.

Note: Selected manufactured exports exclude natural resource-based industry.

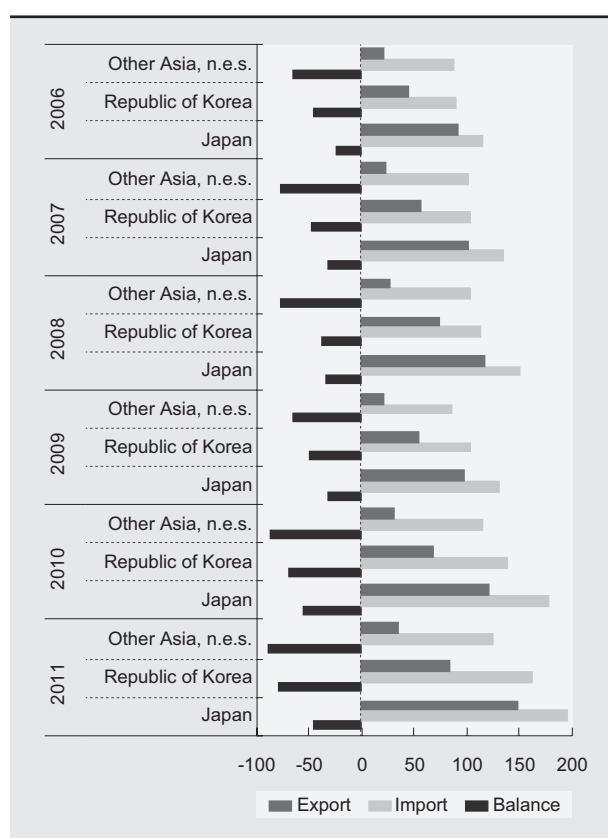
Table 7
SHARE OF PARTS, COMPONENTS AND ACCESSORIES IN TOTAL EXPORTS
IN SELECTED COUNTRIES, 1994–2013

(Per cent)

	1994	1998	2002	2006	2009	2013
China	4.8	7.8	12.8	14.2	9.9	10.8
India	2.4	2.4	3.4	3.7	3.2	3.5
Indonesia	2.4	3.7	6.3	4.6	3.9	4.8
Malaysia	28.0	32.5	35.9	28.8	16.1	13.2
Philippines	11.2	55.3	54.6	50.3	41.9	41.8
Republic of Korea	19.9	19.5	21.6	22.4	11.4	18.3
Singapore	29.1	34.5	38.8	40.3	16.1	20.3
Thailand	13.1	25.2	20.5	17.5	9.8	9.6
Argentina	3.5	2.6	2.8	2.4	1.9	1.7
Brazil	5.7	6.3	5.4	5.1	3.5	3.3
Mexico	14.7	15.4	16.5	15.1	11.0	10.3

Source: Author's calculations, based on United Nations, *Comtrade* database.

Chart 7
CHINA'S TRADE IN PARTS AND COMPONENTS
WITH EAST ASIA, 2006–2011
(Billions of dollars)



Source: Author's calculations, based on United Nations, *Comtrade* database.

Note: Data refer to SITC 7 classification. "Other Asia, n.e.s." refers to other East Asian economies but a large proportion is from Taiwan Province of China.

Province of China, showing that China holds trade deficits with all of these countries.

Regarding China's technological upgrading, one important factor that should not be neglected is foreign content in exportation. Indeed, more than 50 per cent of China's foreign trade involves processing trade and more than 60 per cent of China's exports are conducted by FIEs. Foreign companies not only dominate China's export but also play a much more important role in high-tech sectors than in the European Union, Japan and the United States. As we can see from table 8, foreign content accounted

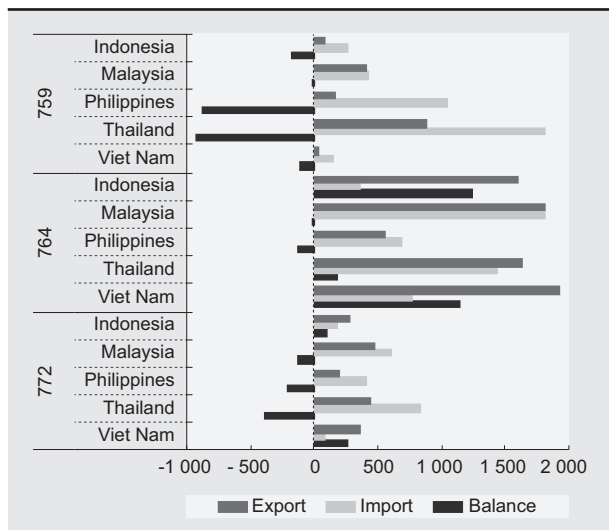
Table 8
FOREIGN CONTENT IN EXPORTS, SELECTED
COUNTRIES AND COUNTRY GROUP, 1995–2005

(Per cent)

		<i>In gross export</i>	<i>In high-tech sectors</i>
China	1995	15.5	20.1
	2005	27.4	48.5
Japan	1995	8.2	10.0
	2005	15.2	21.5
United States	1995	9.5	16.6
	2005	12.3	17.4
European Union	1995	20.8	24.1
	2005	27.8	31.4

Source: Author's calculations, based on IMF database.

Chart 8
CHINA'S TRADE IN HIGH-TECH PARTS AND COMPONENTS WITH SELECTED ASEAN COUNTRIES, BY SITC CODE, 2011
 (Millions of dollars)



Source: Author's calculations, based on United Nations, *Comtrade* database.

Note: Since the trade value of SITC 77689 is too small, it is taken off of the chart.

for 48.5 per cent of China's high-tech export in 2005. Although China's high-technology product exports have generally increased, the extent to which this reflects Chinese innovation and technology remains uncertain. If we look more closely at the domestic content in China's export, we can see that FIEs operating in China created almost 45 per cent of the domestic content in Chinese exports, whereas processing Chinese-owned enterprises only contributed by less than 5 per cent (Ma et al., 2014).

Trade between China and ASEAN-4 in high-technology products is more diversified, whereby China holds a trade surplus in P&C of office equipment, telecommunications and transport equipment, but trade deficits in semi-conductors. Within ASEAN-4, China holds a trade surplus with Indonesia and Viet Nam, but has a deficit with Malaysia, the Philippines and Thailand in P&C (see chart 8). Accordingly, China has caught up with some of the ASEAN countries, although its innovation capability and manufacturing technology remain far behind Japan and Asian NIEs, and even behind Malaysia and the Philippines in some industries.

IV. Conclusion

In recent decades, production sharing has become the new feature of East Asia's production network. Manufacture sectors in East Asian economies are highly integrated according to the vertical intra-industry division of labour, whereby regional trade is also fragmented and characterized as intra-industry trade. Compared to other parts of the world, trade in parts and component accounts for a much larger share of East Asia's total trade, particularly in manufacturing sectors. Accordingly, this chapter analyses China's position in East Asia's production network and how it influences China's industrial and technological upgrading.

This chapter has found that China has moved from being a peripheral country to the centre of the East Asia's production network. China has replaced Japan as the largest economy and most important trade partner of the region. China is now the largest market for almost all East Asian economies, with the share of China's export of manufacturing goods in East Asia having increased from 4 to 43 per cent, while Japan's share dropped from 74 to 21 per cent. A great proportion of the Republic of Korea, Japan

and Taiwan Province of China's high-technology P&C are exported to China, while a large percentage of their consumer goods are imported from China. For developing East and Southeast Asian countries, China is a major importer for raw materials and a major exporter for final products.

China has improved its technology of manufacturing products thanks to a massive inflow of Asian FDI. The shares of high-tech and medium-high-technology exports in China's total exports have constantly increased, while the share of exports in low-technology and medium-low-technology products has steadily declined since 1990s. According to Chinese statistics, the export of high-technology products accounts for more than one-third of China's total export value.

While there is a technology convergence between China and ASEAN-4, the gaps between China and more-developed Asian countries remain fairly large and noticeable. Considering that 50 to 60 per cent of China's foreign trade is conducted by FIEs, we can

conclude that China is still at the lower end of the Asian value chain. In high-technology sectors, China depends upon the import of P&C from Japan, the

Republic of Korea and Taiwan Province of China. Despite its large trade value, China is still not a technology supplier but rather a demander.

Notes

- 1 International production sharing is defined here as the internationalization of a manufacturing process in which several countries/economies participate in different stages of a specific good's production. The process holds considerable economic importance since it allows stages of production to be located where they can be undertaken most efficiently. If production sharing is increasing in relative importance, this implies that countries are becoming more economically interdependent.
- 2 Many scholars estimate this by calculating the proportion of so-called processing trade in total export without a clear definition of what is processing trade.
- 3 Table 7 also shows that the Philippines' trade in parts and components is fairly high, even higher than the Republic of Korea and Singapore. This is possible because the Philippines has the well-educated, English-speaking skilled workers, which attract many high-technology companies of Japan and the Republic of Korea relocating their manufacture for parts, components and accessories to the Philippines. The difference between China and the Philippines is that China imports vast quantities of P&C, whereas the Philippines exports most of the parts and components they make.

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MACROECONOMIC POLICY FOR A SOCIAL-ORIENTED DEVELOPMENT STRATEGY – THE BRAZILIAN CASE*

Pedro Rossi and André Biancarelli

Abstract

In the recent debate on the Brazilian growth model, the accuracy of the economic tripod (inflation targeting, primary fiscal target and floating exchange rate regimes) was pointed out as being responsible for lowering Brazilian economic growth and hindering its development. However, over time the macro regime has proved flexible, allowing changes in the form of management of policies within the same institutional framework, especially after the 2008 crisis. Within this context, the present chapter aims to discuss the relationships between these macroeconomic policy fronts and a social-oriented development strategy for the Brazilian economy. The background question is whether the actual macroeconomic regime, inherited from an orthodox perspective is compatible with the deepening of a social-oriented development, which depends on a strong role of the State, income distribution and the expansion of social infrastructure.

Introduction

According to any of the several possible definitions, economic development is a medium- and long-term process. Moreover, it is always a set of structural changes, which are not to be confused with the short-term fluctuations in the macroeconomic variables that generally attract more attention in the economic news, namely the exchange rate, interest rates, inflation, unemployment and public deficit. From the perspective of governmental actions, development is oriented by issues such as the role of the government in the economy, industrial policy, regulation, infrastructure, financing and income distribution policies and other social action fronts, among many other policies. Accordingly, it takes much more than macroeconomic management (understood

here as the handling of the monetary, exchange rate and fiscal policies) to characterize a development strategy, although there are several points of contact between the two dimensions. The former president Lula's administration is a clear example of gradual and important changes in the development strategy, with an activist view of the role of the State, which occurred despite the visible continuities in the management of a very orthodox macroeconomic regime.

Using an expression to the liking of economists, the macro regime is thus a necessary yet non-sufficient condition for development. However, it seems a necessary condition, mainly due to the negative influences and barriers that it can impose

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on the conduct of procedures defined by the broader strategy. Again, the process under way in the Brazilian economy over the past few years reflects a clear example of these restrictions.

Thus, the present chapter deals with these relationships between the macroeconomic policy fronts themselves (exchange rate, monetary and fiscal) and a development strategy whose constituent elements were presented, in part, over the past presidential terms, but whose contents need to be revisited, deepened and complemented. The background question is whether the actual Brazilian macroeconomic regime, derived

from an orthodox perspective, is compatible with the deepening of a social-oriented development, which depends on a strong role of the State, income distribution and the expansion of social infrastructure.

The social component of this strategy, termed here as “social-developmental”, is contextualized and summarized in the first section.¹ The second section focuses on the institutional framework of each of the three macroeconomic policy fronts and assesses their recent conduct in Brazil in the light of the preceding considerations. Finally, some brief conclusions complete the text.

I. Deepening and renewing the social emphasis of the Brazilian development

In conceptual terms, very distinct development ideas, practices of economic policy or even “recipes” can be reunited under the label of “developmentalism”. According to Fonseca (2004), developmentalism is the ideology that preaches government intervention, nationalism and industrialization for development. In this conceptual framework, developmentalism can assume various strategies such as those observed in the 1960s and 1970s, when the rapid economic growth that transformed the productive structures was accompanied by a deterioration in income distribution. This is certainly not the best-suited style of development considering Brazil’s current needs and conditions.

Therefore, we must qualify the “developmentalism” that is defended here, as well as differentiating it from other proposals and strategies of the past and present. Starting from the recent Brazilian experience, this qualification specifically comprises incorporating and emphasizing the social dimension as a central and guiding development element. Resuming the argument, we understand that it is possible to be developmentalist only in economic terms. In other words, there are theoretical formulations and policy propositions, and there were several relevant historical experiences, in which the defence of the national interest, government intervention and search for a more sophisticated production structure were associated with a worsening in income distribution and/or other dimensions of the social differences that are characteristic of capitalism.

In Brazil, the economic and social dimensions have been reconciled, or reinforced, in a virtuous

way in recent years. It is impossible to separate the growth cycle in the second half of the 2000s from the expansion of domestic demand, with the latter greatly influenced by the accelerated personal income distribution process during this period. In practice, there has been an expansion of the mass consumer market as a dynamic engine of economic activity – a relationship that was already in the theoretical formulations of progressive economists for some decades and happened diametrically opposed to that seen in the 1960s and 1970s, when the concentration was functional to growth.

In addition to the favourable international framework, four major tools have been instrumental in this recent process, not all of which are duly recognized in the Brazilian public debate. The most famous were the policies of income transfer to poorer layers of the population – led by the “Bolsa Família” programme – which have been heavily enhanced and expanded.² In addition to these more focused actions, the other instruments of the Brazilian social security system that have a wide scope and very important impact, despite many problems, deserve being highlighted.³ The policy of the real appreciation of the minimum wage is the third element of this explanation, involving a direct expansion of purchasing power of a broader layer of society than those directly affected by the focused actions. Finally, and related to the previous three, there is the favourable behaviour of the labour market over the last decade, which is marked by major transformations still to be better explained, but has resulted in an intense process of formalization and a gradual

reduction in the unemployment rates to historical low levels.⁴ As an additional impulse to the dynamism of the economy in recent years, the expansion of bank credit has positively influenced the purchasing power of the population and played an important role in the expansion of the domestic market.

Looking forward, a developmentalism separated from the reduction of the huge social inequalities that mark the Brazilian society does not seem very suitable – or very promising in practical terms – in the current context. The social dimension must be at the centre of the development strategy, and hence the name “social-developmentalism”. However, this emphasis should not only serve to explain or praise the recent trajectory, much less to consider sufficient or secured the changes. On the contrary, the social character of the Brazilian development is justified more by the challenges (and, in the virtuous sense proposed here, opportunities) than the progress achieved.

The concentration of income in Brazil remains among the highest in the world. Furthermore, the positive results in recent years have occurred in one of the dimensions of inequality: personal income concentration (and not least in the indices of misery and poverty). Indicators of inequality with other approaches (living conditions and consumption, with an emphasis on the access to sanitation, education and health) have shown more timid improvements in recent years, or the differences have even increased.⁵

Another more important motivation to the social emphasis is the fact that the progress achieved thus far has largely been of a personal and private nature, strongly associated with the power of consumption.

As previously mentioned, this had positive impacts on the economy, but little explored another venue of economic dynamism and reduction of inequality, namely the social infrastructure, or the commonly termed collective or public goods, such as education, health, transportation and conditions of urban life, sanitation, etc. By contrast, there was a “private solution” for the social services in several of these dimensions that expanded them and increased access while commodifying social relations without ensuring their quality.

Therefore, the way forward is to go beyond the expansion of the mass consumer market, advancing in the social rights dimension (incidentally provided for in the Constitution of 1988). Moreover, this is not only a goal in itself; rather, the progress in this direction is also one of the motors for the future growth of the country. In addition to those effects that have already been verified (and have not depleted) about income distribution on the consumer market, the expansion of social infrastructure also has a great economic impact in sensitive areas. In the short-term, this means the expansion of investment, whereas in the long-term, it influences the competitiveness of the productive sector by improving the educational, health and quality of life levels of the workforce.

In this way, next to the strengthening and efficiency gain of the government, as well as the reversal of troubling processes underway in the production structure, the renewal and deepening of social progress is one of the pillars of the “social-developmental” strategy held here.⁶ In relation to this aspect, the macroeconomic policy considerations are detailed in the following sections.

II. Brazilian macroeconomic regime: A critical assessment

The institutionality of the Brazilian macroeconomic regime currently in force dates back to 1999, when the tripod floating exchange rate, inflation targeting and primary fiscal target was set. The elaboration of this institutional architecture involved the assumption of a liberal conception about the role of the government and follows the Washington Consensus headlines. In this perspective, development is an emptied concept delivered to a commonly called natural character of the capitalist system, whose operation free from government interference

would lead to an efficient resource allocation. Thus, the architecture of this regime sought to limit the government’s discretion in the handling of macro policies. It was advocated that the macroeconomic instrument should be mobilized for the – almost exclusive – search of price stability, identified as a primordial condition for the development.

This restriction to the government role lies at the root of the discussion concerning the macroeconomic regimes (Lopreato, 2013). To the new classical

theory, the macro regime must submit the government to an “inter-temporal restriction” to avoid spoiling the economic dynamics that works harmoniously under the reins of market. In a stylized manner, the goals of a macroeconomic regime in a neo-liberal project must focus on the exclusively price stability and solvency of the public sector in the long run, preferably with reduced public spending over time, to reduce the size of the government and thus increase the efficiency in resources allocation.

For a social-developmental project as envisaged here, development is assumed as a political intention and not as spontaneity from the automatism of the market. In this way, the macroeconomic regime must be compatible with the government’s active role in search of an economic dynamism capable of ensuring the deepening of the income distribution process and the expansion of social infrastructure. For this purpose, the government should enjoy a higher degree of discretion in the handling of macro policy, although this does not necessarily mean that rules and boundaries should not be established. These are essential so that the management is not restricted to the short-term horizon and can be reconciled with the long-term goals.

In the recent debate about the Brazilian growth model, several critics have pointed to the accuracy of the economic tripod as being responsible for the low growth of the Brazilian economy and as a hindrance to its development. However, the macro regime has proved flexible over time, allowing changes in the form of management of policies, within the same institutional framework. Especially since the 2008 crisis, the foreign exchange policy now includes the capital controls among the instruments, the monetary policy now considers the supply-side shocks for its decisions and the fiscal regime has incorporated, at least in terms of intentions, an anti-cyclical concern.⁷ This prompts the question of whether this flexibility is enough to admit, among other things, a more active role of the government in the economy, the sustained growth and structural changes inherent to the process of economic development.

In the following subsections, we engage in critical discussion concerning the institutionality and management of the regime of macroeconomic policy in force in Brazil, characterized by the floating exchange rate, fiscal targets and inflation targeting.

A. Exchange rate policy and the need for greater control

Despite the redundancy, it is worth mentioning that the main virtue of the floating exchange rate regime is its flexibility. In the face of the current international context, involving a high degree of uncertainty associated with the high volatility of financial variables and commodity prices, the exchange rate flexibility allows absorbing external shocks that could otherwise have a strong impact on the domestic economy. For example, the abrupt changes in relative prices, when not quickly absorbed by the exchange rate, can generate inflationary pressures and thus overburden the monetary policy. Therefore, the institutionalization of an exchange regime with some reference rate (goals, foreign exchange bands, etc.) can generate important macroeconomic imbalances.⁸

If some degree of flexibility is welcome, an excessive flexibility can lead to distortions of various natures, as the exchange rate determined by the market is not necessarily best suited to the process of economic development. For analytical purposes, we present below four reasons that justify an active exchange rate policy. These are divided into two groups, namely those linked to the trade account of the balance of payments and those linked to the financial account.

The first reason for an active exchange rate policy is the cycle of commodity prices. Considering the system of Hicks (1974), which differentiates the markets between fix-price and flex-price based upon the nature of the production process (product cycle, idle capacity, etc.), the sectors that produce industrial goods tend to adjust the quantities produced given the demand shocks, while those that produce commodities tend to adjust prices. Thus, the export revenue of the country producer of commodity tends to be more volatile than that of a country exporter of industrial goods, meaning that the supply of foreign currencies arising from external trade will depend on the price cycle of basic products. This instability is transmitted to the exchange rate, which affects the rest of the economy. Thus, in countries with an export agenda heavily based upon commodities, the foreign exchange policy is important to lessen the impact of this price fluctuation in the exchange rate.

The existence of a high competitive commodities exporter sector leads to the second argument linked to current account, which justifies the use of an active exchange policy. As explored by Bresser-Pereira (2008), the role of this sector in a national economy is subjected to the risks of the commonly termed “Dutch disease”, which is manifested as a chronic tendency to currency appreciation. One of the relevant points of approach is the identification of an equilibrium exchange rate for the current account, whose level is more appreciated than that required for the development of a competitive industrial sector.⁹ In this case, the role of the foreign exchange policy is to prevent an excessive appreciation of the exchange rate and a specialization of the domestic economy in the production of primary goods. Even if the concept of “equilibrium rate” and the “chronic” character of the appreciation tendency are questionable, they are important thoughts for economies such as Brazil.

Specific exchange policies can be designed to meet these distortions, such as taxes on the exports of commodities, which are causes of Dutch disease, or the constitution of stabilization funds, such as those established by oil exporting economies (the Islamic Republic of Iran, Kuwait, Norway, the Russian Federation, the United Arab Emirates and the Bolivarian Republic of Venezuela) or other commodities, such as Chile (Cagnin et al., 2008).

The third reason for the exchange rate policy is the need to neutralize the temporary or cyclical distortions caused by the financial sector. This is because the financial market does not necessarily lead the exchange rate to an alleged equilibrium and thus the exchange rate policy has the role of containing the excesses, avoiding overshootings and exaggerated volatility. This volatility is particularly harmful to countries such as Brazil, with high pass-through between the exchange rate and inflation. For this purpose, it is appropriate to use capital controls on short-term financial flows that are inherently volatile, as well as regulatory measures on the foreign exchange derivatives market.

However, in the Brazilian case, the financial distortions go beyond volatility and cause long processes of exchange rate appreciation interspersed with short and sharp depreciation periods, such as that experienced in June 2013. This pattern of exchange rate behaviour is pronounced in the Brazilian economy

due to the high profitability of financial investments and mainly the high interest rates practised in the country. Carry trade operations have been a constant pressure on the Brazilian currency appreciation in the recent period (Rossi, 2012). This operation is one of the main transmission mechanisms of international liquidity cycle to exchange rates and comprises an inter-currency investment involving the formation of a liability (or a short position) in the currency of low interest rates and an asset (or a long position) in the currency of higher interest rates.¹⁰

In a pendulum motion, carry trade operations tend to appreciate currencies with high interest rates during the ascending phase of the liquidity cycle and undervalue them in the reversal phase. The important detail is that this movement tends to happen asymmetrically: the process of optimism that characterizes the international liquidity expansion occurs more gradually, while the mood reversals are usually more abrupt. As shown by McCauley and McGuire (2009), as well as Kohler (2010), the most depreciated currencies during the more acute period of the 2008 financial crisis were the target of carry trade, while the funding currencies served as a safe haven of financial flows and consequently appreciated during the crisis.¹¹

In those terms, the reasons related to the financial account justify adopting foreign exchange policies to avoid excessive volatility in the exchange rate, as well as an excessive appreciation of the domestic currency. In this context, the architecture of exchange rate policy must be assembled to neutralize financial distortions, given that the subjection of the national currency to the speculative cycles from the financial sector is incompatible with long-term economic development.

Since the 2008 international crisis, Brazil has advanced in the direction of a more active exchange policy. The accumulation of foreign exchange reserves was complemented with measures of control of financial flows (taxes on investments in equities, fixed income and loans), market regulation measures of interbank exchange (encumbrance of excessive short positions of banks in the cash market) and the foreign exchange derivatives market (tax on short positions in dollar). These measures implemented and partly withdrawn between 2008 and 2013 proved efficient for both the qualitative improvement of capital flows and a lower volatility of the exchange rate.¹²

B. Fiscal policy, anti-cyclical action and the search for room for investment

An important task of the macroeconomic regime is to avoid sharp movements in the pace of activity, called the anti-cyclical role. This action must be guided by the goal of sustaining economic growth, and particularly the rate of investment, to enable the advancement of structural changes inherent to the development project. To this end, the guidance of public spending is strategic because it is an autonomous source of aggregate demand. In addition, the entire emphasis on the social infrastructure and public services defended here as a guide for a “social-developmentalism” require significant fiscal resources for their implementation.

According to these criteria, the conduct of the fiscal policy as presented in Brazil – guided by annual fiscal targets – can and should be improved. This is because not only is the fiscal result pro-cyclical within this regime, but also the search for the fulfilment of the goal throughout the year reinforces this pro-cyclical character. Therefore, there is an inadequacy in the establishment of annual targets that have the purpose of long-term debt sustainability yet disregard the economic cycle and the endogenous relationship between public spending and growth.

By definition, the government has control over its decision to spend, although its revenue depends on income generation, or economic growth. Thus, the establishment of an annual goal implies that the government undertakes a fiscal result at the beginning of the year based upon an expectation of revenues, considering the estimated economic growth. However, the growth might not perform as planned during the year, resulting in a smaller tax revenue than expected, thus undermining the fiscal result.¹³ Given this, the government can: (a) announce that it will not fulfil the goal and be accountable to society; (b) announce nothing and fulfil the accounting of the primary goal through rebates and the anticipation of dividends; or (c) take additional measures to raise taxes or reduce spending to ensure the fiscal goal of the period.

Of these three options, the first two are bad for the government’s credibility and the latter is more adjusted to the prevailing tax regime. However, it is the worst among them, given that the search to fulfil the goal through an emergency and contractionary fiscal policy removes stimuli to the aggregate demand of an already sluggish economy and further reduces

economic growth. Added to this, the most common output for this type of adjustment is the curtailment or postponement of investment projects, given that a large part of public expenditure is bound and thus tax increases or expenditure cutting are not always politically feasible. In other words, the search for fiscal goal adds an anti-investment bias to this tax regime in the short-term.

Similarly, the annual target for the primary surplus is inappropriate when economic growth is greater than that projected by the government. In this case, there is an incentive for the excess revenues to be materialized in the expansion of the public spending. By influencing the already heated economy, this additional spending can generate an excess aggregate demand and place pressure on the price level. Thus, the conduct of fiscal policy does not cooperate with the regime of inflation targeting, given that it potentially increases demand inflation and imposes the need for a contractionary monetary policy to control prices.

In summary, in the regime of annual fiscal targets, not only is the fiscal result pro-cyclical, but also the search to fulfil the fiscal goal throughout the year reinforces this pro-cyclical character and accentuates the economic cycle. As addressed here, surplus goals are established for annual periods through a model that estimates the long-term debt sustainability. The criticism that arises is the inadequacy of establishing annual goals in the long-term model, disregarding the economic cycle and the endogenous relationship between public spending and growth.

However, there are two ways to neutralize this problem and reconcile the targeting regime with the anti-cyclical management of the fiscal policy. The first one refers to lengthening the periodicity of the target to encompass the economic cycle. A medium-term goal would give more flexibility to the fiscal policy to have expansionary and contractionary moments, ensuring the expected surplus on average for the period. The drawback of this proposal is that it assumes a conjecture about the nature of the economic cycle and its periodicity, which does not always follow a pre-determined pattern.¹⁴

The second proposition is to establish an institutional mechanism with clear rules, allowing the public spending to be expansionary in times of low growth and contractionary in times of high growth, thus preserving the continuity of a surplus goal with

annual periodicity. This might be feasible through a budgetary fund with public resources reserves, which, when used, must have the specific purpose of public investment. Thus, there would be a legal apparatus that allows the expansion of public investment in the low economic cycle and obliges the government to save the excess revenues in the high economic cycle.¹⁵

An anti-cyclical policy that guarantees the sustainability of the growth process also opens up fiscal space to expand public investment, as already pointed out as an economic expansion engine and one of the main axes of the development strategy defended here. Larger investments in social infrastructure would have important multiplier effects in terms of employment, income and boosting local economies. Moreover, as the coverage and quality of public services (of education, health, transport, etc.) are expanded, the increasing portion of family income committed to these expenses would be released for other uses. This second effect is greater for poorer layers of the population. The expansion of disposable income seems a more powerful (and fair) instrument of income distribution than the extension of subsidies to the private providers of social services of these social rights, which are often of poor quality, thus only reinforcing the need for a new public pro-investment fiscal policy.

C. Inflation targeting and the flexibility needed

The regime of inflation targeting has the advantage of establishing a public commitment to price stability and a reference framework for the monetary policy. This regime is flexible when compared with the alternatives of monetary targeting regime and nominal anchor exchange rate policies,¹⁶ and comprises different forms of institutionalization of the regime and its management. The analysis of the Brazilian case points to a need for greater flexibility of the inflation targeting system, given the structural transformation processes of the economy.

According to the recipe of the commonly called “new macroeconomic consensus”, the management of the targets system must rely on using the interest rate instrument with the aim of affecting aggregate demand. However, the causes of inflation are not restricted to a problem of demand; moreover,

structural issues associated with the development process are sources of price increases on the supply side.

For example, the process of reducing income inequality can cause a configuration drift between wage growth and productivity. In a first moment, real wage increase generates increased pressure on production costs. In a second moment, the re-composition of the profit margin of entrepreneurs generates a new round of price increase, which in turn reduces real wages.¹⁷ Additionally, the process of income redistribution also results in changes on the demand side, given that the entry of new consumer classes widens the market and requires adjustments in the supply conditions, which can take time.¹⁸

The fluctuation of commodity prices is another important source of cost inflation. In the recent past, the exchange rate has been an important channel of monetary policy transmission and the absorption of supply shocks from commodity prices. However, the use of the exchange rate for this purpose is extremely problematic due to the volatility pattern of commodity prices. Insofar as the exchange rate reproduces this volatility pattern, the industrial exports and productive investment are undermined.

As an alternative instrument, we can highlight the management of import and export tariffs as an aid to the regime of inflation targeting. In the case of predominantly imported products such as wheat, the reduction of import tariffs can be used in times of this product’s increasing price in the international market. In the case of the increasing price of Brazilian export products that have a major impact on the inflation index, export tax represents an alternative. This increase will prompt the redirection of the production for export to the internal market, thus boosting supply and lowering prices.

In the case of commodities and other cases in which inflation stems from supply problems, the effectiveness of using the interest rate as an instrument of monetary policy is extremely limited, given that the increase in interest rates tends to inhibit investment and retract the offer, thus reinforcing the causes of inflation.¹⁹ Accordingly, the monetary contraction might affect the aggregate demand, thereby reducing the growth without affecting the original cause of inflation.²⁰ Thus, instruments that are alternative and auxiliary to the monetary policy under the inflation targeting regime should be considered.

Put briefly, the regime of inflation targeting might be appropriate for the developmentalism project defended here, given that it is flexible. However, its management must consider three important points: (1) that inflation targeting is not an exclusive goal of the monetary policy; (2) that inflation targeting is flexible enough to accommodate price pressures arising from structural changes inherent to the development process and other supply shocks; and (3) that the interest rate is not the only instrument to achieve the goal of inflation and that other instruments are used depending on the origin of the phenomenon and the nature of the inflationary impulse.

In addition to these issues, the regime of inflation targeting should be compatible with the Brazilian economy's transition to a pattern of lower interest rates. This transition is absolutely necessary to create a macroeconomic environment that is more suited to productive investment and enables the development of a credit system of long-term financing and the improved competitiveness of the productive sector. This transition will be responsible for profound

structural changes in the economy, since the fall of the basic interest rate must be accompanied by the fall of the other profitability rates of the system.

The management of the regime of inflation targeting in Brazil has shown some progress in recent years. In particular, we highlight the concern about economic growth that was manifested in recurrent speeches of the monetary authorities, as well as the use of macro-prudential policies as an alternative instrument to the interest rate in terms of controlling inflation. The Central Bank's significant reduction in the levels of the SELIC rate (short-term interest rate) over the course of 2011 and 2012 was an explicit demonstration of the intent to reduce this anomaly of the Brazilian economy, taking advantage of the favourable conjunctures and even facing the powerful resistance against the reduction in the cost of money in Brazil. However, this key price has subsequently increased since April 2013, in a movement that actually responds to a rise in inflation but should not mean a return to the levels – and the rigidity of the objectives and instruments – verified on the economic policy until 2011.

III. Final remarks

In light of the recent Brazilian experience and its future possibilities, this chapter has sought to reflect upon the relations between two dimensions of economic reality and the economic policies that are usually analysed separately, namely macroeconomic management and the development strategy. The final message is that despite the necessary separations between these two perspectives, they need to be tuned, especially when it is believed that the task of development cannot be solely undertaken by market forces.

In more accurate terms, we need the exchange rate, fiscal and monetary policies, which alone are not a sufficient condition for development, to create minimum conditions (and the least possible constraints) for the longer-term objectives of the country, namely defending the national interest, a relevant role for government action, the modernization of the production structure and, in the point highlighted here, the reduction of the social inequalities that have historically characterized Brazil.

This last aspect, which justifies the “social-developmental” label, must mean an advance

in relation to the undeniable achievements of the last decade, mostly in the form of the expansion and improvement in the supply of public goods. Investment in social infrastructure and the living conditions of the population, especially in urban centres, is a necessary and urgent complement to the improvements in personal income distribution, which should continue, given the long path until acceptable levels are attained. To justify such choices, we not only have the political and moral imperatives, but also the positive economic impacts that the social improvements have caused and continue to cause in the country, especially in the light of a number of external constraints that show the domestic market as a large (and perhaps the only) source of dynamism.

The macroeconomic regime is a necessary condition to account for this renewal and deepening of the social character of the Brazilian development. Therefore, it must be part of the strategic planning and reinforce the articulation with other development policies, such as social, industrial, technological, public investment, infrastructure, wage and other policies.

The analysis of the floating exchange, annual primary fiscal target and inflation targeting regimes shows that the theoretical assumptions that give substrate to them do not converge with the social-developmental project. This macroeconomic regime was originally designed to impose limits on the discretion of the government's action and submit the political authorities to the principles of a liberal vision of development, within which the market is the main protagonist. However, a direct correspondence cannot be established between these theoretical principles and the operationalization of the macro regime, which has been shown to be flexible.

In this sense, we have assessed that the current macroeconomic institutional framework can be flexible enough to accommodate a development project in which the government has an inducer role and the social is the central focus of its activities. As pointed out, it is clear that we must move forward in this

direction to increase the control over the functioning of the foreign exchange market, turn the fiscal policy effectively into anti-cyclical and with more room for public investment, as well as ensuring that the flexibility allowed by inflation targeting translates into sustainable reductions in interest rates in the country.

Nonetheless, this analysis is ultimately optimistic about the compatibility between the two dimensions addressed. Perhaps better phrased, it does not consider that the debate concerning the possible abandonment (or not) of the so-called macroeconomic “tripod” should be the focus when the goal is to deepen and renew the virtuous traits of a development style that has made advances in recent years. Considering some enhancements and more appropriate management, the institutionality of the floating exchange, primary fiscal target and inflation targeting regimes can accommodate the social-developmental project.

Notes

- 1 The discussion around social developmentalism is recent and much broader than the space given in this paper. In relation to this topic, we recommended reading Carneiro (2012), Biancarelli (2013), Bastos (2012) and Bielschowsky (2012), although the latter does not make use of this term.
- 2 The “Bolsa Família” is a social programme that provides a benefit to families with less than R\$ 70 per capita monthly income (around \$ 30). According to ANFIP (2014), in 2013 the Bolsa Família programme benefited 14.1 million families with a basic income of around \$ 70 per family per month.
- 3 According to ANFIP (2014), the Benefits of Continuous Support (BPC) amounted to R\$ 32.1 billion in 2013 and were distributed to 4.1 million elderly and disabled persons.
- 4 Concerning the social protection system and its relations with the recent process of the Brazilian development, see the panoramic analysis of Castro (2012). In relation to the transformations underway in the Brazilian labour market, see Baltar (2015). In addition to the novelty in the Brazilian history, the virtuous relationship between growth and income distribution is a very rare feature in today's world (by contrast to other times, mostly in Western Europe during the post-war period).
- 5 A multisectoral approach to the issue of inequality is presented by Dedecca (2015).
- 6 For further details about these other pillars, as well as the ideas presented in this and the next section, see Biancarelli (2013).
- 7 This article does not aim to discuss whether or not the economic policy carried out from 2008 was correct, but rather to assess the possibilities of changes and ways of managing the macroeconomic regime.
- 8 Additionally, the definition of an exchange rate target implies an institutional commitment and allows failures in the conduct of the exchange rate policy. Faced with a large financial openness, the definition of an exchange rate target also exposes the regime to speculative attacks such as those that occurred in emerging countries in the 1990s, as described in Prates (2002).
- 9 “The Dutch disease or the curse of natural resources can be defined as the chronicle overvaluation of the exchange rate of a country caused by Ricardian rents that the country gets when exploiting abundant and cheap resources, whose commercial production compatible with an exchange rate of current balance is clearly more appreciated than the industrial equilibrium exchange rate” (Bresser-Pereira and Gala: 2010: 671).
- 10 “It is therefore a leveraged investment that implies currency mismatch. The generalization of this type of operation gives specific features to the dynamics of exchange rates. It follows that, the way that the financial wealth allocation is promoted by the carry trade is not restricted to an allocation process of financial asset, but also to the formation of liabilities” (Rossi, 2012: 26).
- 11 It is interesting to note that, at the peak of the flight-to-liquidity of the 2008 crisis, the Japanese currency was the only one that appreciated against the United States dollar. According to McCauley and McGuire (2009) and Kohler (2010), the explanation for this lies in its role as the carry trade funding currency.

- 12 However, despite the expansion of foreign exchange policy instruments, some structural aspects have not been modified. In particular, the Brazilian exchange market permeability to financial speculation is a critical element that needs to be addressed. The speculative nature of the Brazilian exchange market is mainly due to the interest rate differential of the Brazilian currency in relation to the others, as well as the liquidity asymmetry existing between the market of derivatives and the foreign exchange cash market, as discussed in Rossi (2012). Therefore, for an exchange rate that is less subject to financial distortion, a reform in the Brazilian exchange market is necessary to increase liquidity in the cash market and reduce the activities of speculators, whose work primarily focuses on the future market.
- 13 One way to measure the impact of the cycle in the primary result is by estimating the structural primary result. Concerning this measure, see Gobetti et al. (2010).
- 14 Another form of addressing the same problem is by assuming a “structural fiscal target”, which is a measure with cyclical adjustment. In the case of Chile, it considers economic activity and the price of copper among other variables, as shown in Marcel et al. (2001).
- 15 It is worth noting that the recovery of the Brazilian government’s capacity to plan and execute public investment is necessary for a more efficient use of the anti-cyclical fiscal policy.
- 16 Evidently, it is less flexible than a purely discretionary monetary regime.
- 17 In turn, the transfer of the high production costs to prices depends on the structure of the productive sectors. “It is reasonable to consider that, in general, oligopolistic sectors (with greater market power) tend to create more inflation for at least two reasons: (i) have a greater ability to pass-through to prices increases in costs, and (ii) may be relatively immune to monetary policy contraction, since it does not necessarily compete via prices” (Modenesi et al., 2012: 204).
- 18 This process is associated with the expanding of the internal market of mass consumption proposed by Bielschowsky (2012) and already commented in section I.
- 19 In addition, nominal interest should be considered as a cost component for businesses, as both a financial cost for indebted companies and an opportunity cost of capital for all firms (Serrano, 2010).
- 20 Depending on the combination of factors, the interest increase might even lead to a rise in inflation, since it reduces the supply ability.

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IS CHILE A ROLE MODEL FOR DEVELOPMENT?*

Ricardo Ffrench-Davis

Abstract

The Chilean economy is usually highly praised as having been successful since the imposition of neo-liberal reforms under the dictatorship of general Pinochet in 1973. However, the four decades that have elapsed include sub-periods with quite different policy approaches and notably diverse outcomes; thus, there is neither one unique model nor only one outcome. The four decades' growth is moderate, averaging 4.2 per cent per year: it averaged 2.9 per cent (meagre) during the 16 years of dictatorship and a good performance of 5.1 per cent during a quarter-century of democracy, albeit with a vigorous 7.1 per cent in the initial years (1990–1998) and a modest 3.9 per cent in the last 15 years. Hence, sometimes, Chile has performed closer to becoming a “model” for development, and at other times the opposite or something in between. Focusing on three episodes (1973–1981, 1990–1995 and 2008–2013), we explore the underlying explanatory variables and some lessons for building “a model for development”.

Introduction

The Chilean economy is usually highly praised by some international financial institutions (IFIs), diverse political authorities and international analysts. A generalized view prevails that there has been “one” successful Chilean *model* since the imposition of neo-liberal reforms under the dictatorship of general Pinochet in 1973. However, the four decades that have subsequently elapsed include several sub-periods with different policy approaches and external environments, as well as notably diverse economic and social outcomes. Accordingly, there is neither one unique *model* nor only one outcome. Sometimes, Chile has performed closer to become a “model” for development, and at other times the opposite or something in between.

Economic development at least includes the production of goods and services and its distribution among citizens. Accordingly, we will explore how both have evolved along the four decades, given that a role model case should be consistently achieving success in terms of both economic growth and its distribution.

In section I, a summary evaluation is presented of policies and outcomes during the four decades. Section II focuses on three episodes: one corresponds to the first half of the dictatorship, in 1973–1981; a second one during the first years of return to democracy, namely 1990–1995; and finally the period since the contagion of the global crisis, 2008–2013. Section III concludes.

* This chapter is based on material developed in Ffrench-Davis (2010, 2014). Most figures cited come from these publications, based on Central Bank, Ministry of Finance and National Institute of Statistics. I appreciate the support of CIEPLAN and the assistance of Simón Ballesteros and Nicolás Fernández.

I. An overview of four decades

In the five Governments under democracy (1990–2013), industrial or productive development policies have been largely absent, as they had been under the dictatorship; the Pinochet dictatorship had eliminated most of them in the early years of his regime. On the contrary, macroeconomic and social policies have undergone significant changes; in particular, the macroeconomic regime experienced notable contrasts among and within the periods 1973–1981, 1982–1989, 1990–1998, 1999–2007 and 2008–2013.

The first deep reforms were launched in 1973. This stage of the reforms (1973–1981) was characterized by the implementation of a neo-liberal model in its purest and ideological form. Trade and financial liberalization practically free from prudential regulation, as well as the adoption of “neutral” economic policies – under the view that “always the market knows better” – were accompanied by massive privatizations. By 1981, success had been generally achieved in reducing inflation and eliminating the fiscal deficit inherited, albeit at the expense of the external balance, a highly appreciated exchange rate and huge external debt, while recording climbing financial savings yet a low investment ratio. The outcome was a banking and foreign exchange crisis with huge economic and social impacts in 1982, including a gross domestic product (GDP) drop of 14 per cent, high unemployment exceeding 30 per cent of the labour force and a significant increase in poverty, with a worsening income distribution.

The second stage of the dictatorship (1982–1989) implied moves toward more pragmatic policies to overcome the effects of the deep crisis. It involved a series of foreign debt renegotiations, several policy interventions aimed at balancing the external deficit – such as tariff increases and “selective” export incentives – and the Government’s direct take-over of the collapsed financial system, before subsequently privatizing it again when their balance sheets were in order, thanks to heavy public subsidies to banks and debtors, costing the Treasury some 35 per cent of annual GDP. At the end of this period, the economy had recovered, while income distribution had worsened even further than in the 1970s. During recovery, actual GDP grew vigorously, but after due consideration of the 1982 recession it emerges that average annual growth was 3 per cent or under in both halves of the Pinochet regime.

A third variant of the economic model began in 1990, during the return to democracy, when the Chilean economy faced the challenges of achieving a sustained high average GDP growth and serving the great social debt accumulated in the years of dictatorship. The formal slogan of the Concertación Democrática, a centre-left coalition of socialists and Christian democrats, was “change with stability” for achieving growth with equity in the socio-economic dimension of the programme of the new Government.

There were significant reforms of the market model, strengthening the social component and correcting severe pro-cyclical failures of economic policies, including labour and tax reforms to improve social expenditure. In addition, substantive counter-cyclical changes in fiscal, monetary, capital markets, exchange rate and regulatory policies were implemented, aiming at a sustainable *real* macroeconomic environment (beyond inflation and fiscal balance under control, an aggregate demand consistent with potential GDP and sustainable external balance and exchange rate).¹

The new authorities considered these balances of the real economy crucial for development (meant as GDP growth with reduced inequality). One outstanding feature of this period was the regulation of the capital account, with a flexible reserve requirement (*encaje*), which was quite active in these years of large supply of financial flows to the emerging economies. The counter-cyclical active regulation helped to control the volume of inflows, shifting its composition to the long term and their allocation in productive investment; moreover, it provided space for monetary policy and avoided undue exchange rate appreciation and instability. The economy benefited from comprehensive real macroeconomic stability, which is meant to be development-friendly, although there was practically no room for direct industrial or productive development policies nor for direct support to small- and medium-sized enterprises (SMEs). The constitution inherited from Pinochet and the strong ideological fashion against selective development policies represented two particular obstacles.

Owing to the reformed macroeconomic policies, most of the period’s economic activity was close to potential GDP, which had only been the case in 1974, 1981 and 1989 during the dictatorship. It was in this reformed macro-environment that Chile expanded its

productive capacity in a sustainable manner between 1990 and 1998, with actual and potential GDP growing in parallel at annual rates averaging 7.1 per cent, while also improving social indicators (table 1).

After the mid-1990s, Chile (actually the autonomous Central Bank) gradually moved towards the neo-liberal fashion of capital account and exchange rate liberalization. The Treasury and the Ministry for the Economy were initially critical of the move, although some years later the Treasury also joined the fashion. Consequently, the exchange rate and domestic demand came to be led by financial flows and fell victim to their volatility. Thus, Chile became vulnerable to the turbulences originated by the Asian crisis in 1998, since it had allowed the exchange rate to appreciate “too much” and external deficit to double in 1996–1997 in comparison with 1990–1995. This was in acute contrast with the situation when Chile was immune to the Mexican financial crisis in 1995.

Vulnerability was aggravated with the full liberalization of the exchange rate in 1999 and the capital account in 2001. Subsequently, the economy exhibited a stagnating actual output and a drop in the growth of potential GDP during 1999–2003, when unemployment increased, while the richer/poorer quintiles ratio rose (back to 16 times). After a partial recovery in 2004–2008, led by a sharp improvement in the terms of trade, it suffered the arrival of the contagion of the global crisis in late 2008 and 2009. Export volumes and prices fell and capital inflows were reversed. Thanks to a sharply improved domestic macroeconomic management, with strong counter-cyclical fiscal policy and a progressive bias (subsidies to youth employment and the unemployed), as well as the fortunate help of a rapid recovery of export prices, there was a solid revival of economic activity by late 2009.

Recovery was undeterred by a great earthquake in 2010, pushing actual GDP near its potential output by 2012. The average increase in GDP was 3.9 per cent between its peaks in 1998 and 2013.² While this figure was greater than the 2.9 per cent of the dictatorship, it remained far weaker than the 7.1 per cent recorded during the first nine years of democratic regimes.

The fluctuating growth dynamism implies a variable development gap with the developed economies. Indeed, table 2 shows that the gap with developed

Table 1
ABSOLUTE AND PER CAPITA GDP AND INCOME DISTRIBUTION, 1974–2013

	<i>GDP growth</i> (Per cent)	<i>Per capita GDP growth</i> (Per cent)	<i>Q5/Q1 ratio</i>	<i>Gini coefficient</i>
	(1)	(2)	(3)	(4)
1974–1981	3.0	1.5	15.1	51.9
1982–1989	2.9	1.2	20.2	56.7
1990–1995	7.9	6.0	15.3	52.7
1996–1998	5.8	4.3	16.0	53.2
1999–2007	3.9	2.8	15.4	52.7
2008–2013	3.9	2.9	12.3	49.2
1990–2013	5.1	3.8	14.7	51.9

Source: Ffrench-Davis (2014).

Note: Data refer to annual averages. For the 1992–1995 subperiod, the Q5/Q1 ratio is 13.7 and the Gini coefficient is 50.9.

Table 2
PER CAPITA GDP IN CHILE RELATIVE TO OTHER BENCHMARKS, 1973–2013
(Per cent)

	<i>United States</i>	<i>G-7</i>	<i>Latin America</i>
1973	23	29	82
1989	21	25	91
1997	29	34	128
2013	37	44	148

Source: Author's calculations, based on IMF, *World Economic Outlook* database; World Bank, *World Development Indicators* database; ECLAC database; and Central Bank of Chile data.

Note: Data refer to PPP dollars.

countries increased during the dictatorship. On the contrary, the rather good average performance in the two and half decades of democracy implied that Chile had reduced the distance with the developed world and left behind most of Latin America, as depicted in table 2. Nevertheless, this performance was not continuous. As shown in table 1, only the first half of the 1990s involved a vigorous GDP per capita growth (tripling the speed of the one of the United States), with a strong *development convergence* with the developed countries (the per capita income gap fell by one percentage point per year), including a significant reduction in income inequality with improvements in

income distribution (to a richer/poorer quintiles ratio of 13.7). This shortening distance continued in the long second half (1999–2013), although per capita GDP growth trend halved and the strong development

convergence exhibited in 1990–1998 was weakened (to only one half percentage point per year), as well as previous improvements in income distribution and the intensity of poverty reduction.

II. Three quite diverse experiences

A. *The neo-liberal revolution, 1973–1981*

Launched after the military coup of 11 September 1973, the first stage of the economic reforms (1973–1981) represented an extreme case due to the amplitude of the role granted to the market, the intensive privatization of the means of production, sharp liberalization of imports and the domestic financial markets, as well as the regressive changes imposed on social organizations. There was a determinant emphasis on the “neutrality” of economic policies, disregarding the high existing inequality, under the belief that the “market always knows better” and provides equitable outcomes.

The initial concerns of Pinochet’s Government lay with controlling the acute macroeconomic disequilibria inherited, particularly a 700 per cent hyper-inflation recorded in 1973, with the reduction of a huge fiscal deficit assuming top priority.

In 1973–1974, the Government benefited from a very high copper price (by far the main export, by a public firm – CODELCO), which increased public revenue and the availability of foreign currency. While it was evident to independent observers that the price was unsustainably high, the revenue from copper exports was fully spent by the Government *pari passu* with its collection. Economic activity significantly recovered in 1974, making use of installed capacity underutilized during the previous year. However, the price of copper sharply declined in late 1974, prompting the Government to introduce a tougher adjustment programme in 1975, led by fiscal and monetary contraction and significant exchange rate devaluation.

The acute monetary restrictions had a great impact on economic activity: during 1975, industrial output fell by 28 per cent, GDP declined by 17 per cent and total unemployment peaked at 20 per cent of the labour force. Since productive capacity was not destroyed but heavily underutilized – reflecting

a main real macroeconomic disequilibrium – a significant output gap between actual GDP and potential GDP emerged, whereby about 21 per cent of GDP was underutilized in 1975 (chart 1).

In 1975, the domestic capital market was fully liberalized under weak regulations (the “market knows”), import policy was moving toward free trade and taxes on profits had been drastically reduced, as well as public investment and real wages. Shortly after the fiscal budget shifted to a surplus.

In the meantime, international capital markets had become highly liquid, seeking newer destinations for their supply, including several Latin American nations. By 1977, Chile had started to receive huge capital inflows, mostly bank loans. Indeed, given that the public budget was then in surplus, they reached the private sector. A passive or neutral public policy allowed inflows, which appreciated the exchange rate and increased domestic demand.³ Naturally, the deepening exchange rate appreciation significantly contributed to the drastic decline in inflation by the early 1980s.

However, in parallel, trade liberalization plus exchange rate appreciation encouraged imports, which increased faster than exports, in a trend that continued for five years. Unavoidably, foreign debt of the private sector was accumulating.

In parallel, actual GDP was increasing fast, even though output capacity was rising quite slowly. In fact, the difference was made by the reutilization of the large output gap – as said, of about 21 per cent between actual and potential GDP – generated in the recession of 1975. Investment in new capacity was low, with the gross investment ratio averaging 16 per cent of GDP in 1974–1981, much lower than the 20 per cent recorded in the 1960s. Foreign loans were overwhelmingly used in imports of consumer goods, with limited imports of equipment and machinery. In the process, debt amortization and interest payments

rose quickly and the deficit on current account was climbing, reaching an unsustainable 21 per cent of GDP in 1981.⁴

Why did the investment ratio average merely 16 per cent of GDP? First, after the large output gap generated in 1975, actual GDP only became close again to potential GDP in 1981. Thus, the macroeconomic environment involved high rates of underutilization of productive capacity for several years. This persistent output or recessive gap was a main factor discouraging gross capital formation (Agosin, 1998; Ffrench-Davis, 2006). Naturally, when entrepreneurs are not using a significant part of their capacity, profits are lower and thus entrepreneurs have less liquid funds, all of which evidently discourage expanding their capacity. As a typical feature of financial crises, abrupt recessions being followed by gradual recoveries clearly have a significant negative impact on productive investment, thus pressing downward the trend of GDP growth and the quality of employment.

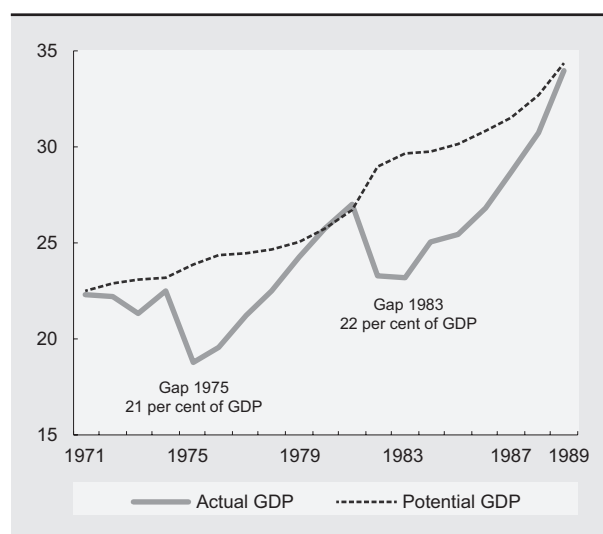
Second, the financial reform (mostly implemented in 1975) gave way to a short-term-oriented market with very high real interest rates on domestic loans. In fact, the most common loan held a 30-day term, while the activities of public investment banks were curtailed and annual real lending interest rates of the banking system averaged 38 per cent (reflecting a macro-price “outlier”) in 1975–1982.

Third, trade liberalization-cum-exchange rate appreciation reduced the cost of imports, principally of consumer goods, with their domestic output being crowded-out. Liberalization attracted investors in the production of exports with a much weaker force than the discouragement of domestic firms competing with imports, with an unexpected drop in the share of tradables in GDP.⁵ Additionally, large shares of bank lending were used by economic groups to purchase public firms being privatized (fewer in creating new activities), as well as by households purchasing imported consumer goods. Finally, financing productive investment through increased inflows was notably scarce. It is crucial who intermediates capital inflows, and those intermediated by foreign direct investors represented a minority.

By 1981, success had been achieved in eliminating inflation, exhibiting a large fiscal surplus (implying that the external deficit was completely from the private sector) and a rapid GDP growth.

Chart 1

ACTUAL AND POTENTIAL REAL GDP, 1971–1989
(Trillions of Chilean pesos)



Source: Author's calculations, based on Ffrench-Davis (2010).
Note: Data refer to constant 2008 Chilean pesos.

There was euphoria among the Government, IFIs and large business firms, holding the view that Chile was experiencing “an economic miracle”.⁶ However, vulnerability to the changing moods of financial markets had been created. Foreign borrowing had given rise to a domestic lending boom in an atmosphere of lax prudential regulation and supervision. Related-party auto lending rose rapidly, often with fictitious guarantees. The banks renewed loans (often on a 30-day term) and financed interest payments with new loans. Non-performing loans appeared low and the banks' profits high. Many loans were backed by stock and real estate, although the prices of such collateral were inflated owing to the financial boom, as well as the mistaken belief that the Chilean economy would continue to grow at around 8 per cent a year (the actual trend of potential GDP was closer to 3 per cent).

Underlying these disequilibria, there was a severely mistaken diagnosis, led by the belief in market spontaneous self-regulating adjustments. Since it had achieved a fiscal surplus and external borrowing was being decided by private debtors and lenders, the Government assumed that a foreign exchange crisis would never occur. Indeed, the Government was reassured in this false assumption by the explicit and strong support of the International Monetary Fund (IMF) (Robishek, 1981), ignoring that an unsustainable external deficit could be generated in the private sector (Marfán, 2005).

By 1981, bank debt per capita almost doubled the Latin America average. The current account deficit had risen to 21 per cent of GDP, with domestic savings having collapsed. Chile required growing net financial inflows quarter after quarter, which becomes increasingly difficult when the debt stock has been rising so much faster than wealth and income. It is evident that the probability of flows reversal sharply rises with an increase in the debt stock, size of amortizations and deficit on current account, as well as the consequent need for exchange rate devaluation.

The macro-adjustment started to take place in the first semester of 1982, well before the explosion of the Latin American debt crisis in Mexico, in August of that year. It is highly relevant that inflows remained quite large during 1982 (about 10 per cent of GDP), but much less than net inflows in 1981, to which the economy had become used. Actually, the economic authority was obliged to devalue by June. This intensified the deep recession already at work, with a 14 per cent GDP drop in 1982; open unemployment was affecting one in every three workers in 1983, there were countless bankruptcies including most of the private banks and a huge increase in poverty and income inequality was evident. In 1982, the Chilean economy – even with null inflation, fiscal surplus, widespread privatizations and free imports – experienced the deepest and more regressive adjustment in all of Latin America.

The combined changes to the production structure, the repression of labour rights and the financial reforms, combined with real macroeconomic instability, caused severe distributive setbacks. The ratio between household per capita incomes of the richest and poorest quintiles increased from 13 in the 1960s to 16 in 1976–81, (and to 20 during the 1980s, French-Davis, 2014), while the Gini index increased by 4 percentage points (and 5 more points in the 1980s).

In summary, prior to the debt explosion, the neo-liberal experiment had produced a society with increased inequality on many fronts in 1974–1981, a predominance of *financierism* over *productivism* (namely at the expense of increases in productivity of labour and capital, as well as productive entrepreneurship), a highly pro-cyclical macro-policy regime, as well as a meagre and regressive average economic growth. The 1982 crisis further worsened this mediocre outcome, which was so unfriendly with development. Only by 1988 was Chile able to recover the GDP per capita of 1981.

B. Counter-cyclical regulation of the capital account: 1990–1995

After the great debt crisis, Latin America regained access to private capital inflows by the early 1990s.⁷ Chile was one of the first to attract new funds and was among the countries facing the greatest supply of inflows in relation to its economic size.

With the return to democracy in 1990, the Chilean economy faced the challenges of achieving a high and sustained average growth and serving the vast social debt accumulated during the dictatorship. There were significant reforms of the market model, including labour reforms (which restored several labour rights), a tax reform reintroducing taxes on profits eliminated by the dictatorship (which raised public revenues geared to increase social expenditure and improve the distributive effects of the tax system) and a substantive counter-cyclical reform in macroeconomic policies.⁸

In fact, the shadow of the great recession of 1982, including its negative impact on growth and equity, was quite present in the minds of the new authorities. Consequently, the top priorities for implementing macroeconomic policies were achieving sustained equilibrium in financial markets and the real economy, diminishing vulnerability to external shocks and improving employment. The macroeconomic reforms were implemented in the capital account, exchange rate, monetary and regulation policies, under the view that the equilibrium of the “real” economy was crucial for growth with equity; in parallel, the Government took care of fiscal responsibility.

Chilean public policy in the first half of the 1990s represented a significant step towards a counter-cyclical approach to macroeconomic management. In brief, policymakers responded to the massive availability of foreign capital by implementing counter-cyclical policies to moderate short-term and liquid inflows, while keeping the door open to long-term flows. In a tightly coordinated action by the Ministry of Finance and the autonomous Central Bank, the authorities made use of a wide range of measures to regulate the surge in the offer of financial inflows in 1990–1995. As a crucial element, this included an unremunerated reserve requirement (called *encaje*) established to raise the cost of bringing in short-term capital, which is a market-based instrument that affects relative costs. The rate of

the *encaje*, its coverage and the term for which it was retained in the Central Bank were periodically adjusted according to the intensity of the supply of funds from abroad and the evolution of international interest rates (Ffrench-Davis, 2010). Up to 1995, the authorities systematically monitored avoidances that might be appearing in the effectiveness of the *encaje*.

The authorities also used exchange rate intervention to hold down its real appreciation to a level consistent with the external balance, as well as monetary sterilization to keep domestic demand consistent with potential GDP. These and other counter-cyclical policies supported a development strategy that encouraged export growth and its diversification, as well as productive investment and employment.

Three other policies contributed to the success in managing capital inflows. First, there was a responsible fiscal policy, whereby permanent increases in social spending were financed with permanent new taxes. Consequently, Chile had a significant non-financial public sector surplus in 1990–1997, averaging 1.8 per cent of GDP which was used to reduce the large external liabilities generated during the 1980s crisis. The prudential fiscal approach included a stabilization fund for public copper revenues, which contributed to stabilizing public expenditure and preventing excessive exchange rate appreciation. Of course, running a fiscal surplus does not guarantee financial stability; recall that the great 1982 crisis occurred despite Chile having had large fiscal surpluses.

Second, prudential banking regulations had been introduced in 1986 in response to the banking crisis of 1982–1983. The democratic authorities effectively resisted pressures to weaken supervision when lobbying sectors argued that the system was sufficiently mature to self-regulate. This deterred capital inflows to trigger another domestic credit boom.

Third, authorities continually monitored aggregate demand and its consistency with productive capacity. Consequently, macroeconomic disequilibria were not allowed to accumulate. Some overheating occurred in 1991 and 1993, although the authorities conducted a downward adjustment in aggregate demand in due time. Chile was able to make active monetary policy with a significant interest rate differential with the one of the United States when

needed for domestic equilibria, thanks to the policy space provided by the *encaje*.

The set of policies was highly successful, in the sense that during 1990–1995 – and especially when the contagion of the tequila crisis spread in 1995 – the current account deficit was moderate (2.3 per cent of GDP in 1990–1995), its financing mostly involved long-term inflows, international reserves were increased, the total short-term external liabilities were held to a fairly low magnitude,⁹ aggregate demand was consistent with potential GDP and the real exchange rate was kept at a sustainable level, as shown by the moderate deficit on current account financed by greenfield foreign direct investments. All these are conditions of comprehensive real macroeconomic balances. They would not have been feasible without regulating capital inflows, managed flexibility of the exchange rate (see Williamson, 2003) and pursuing an active monetary policy.¹⁰ Strategic features of the policies used were in frontal contrast with the mainstream fashion of full capital account liberalization and fully free or fully pegged exchange rate policy.

When the Mexican exchange rate crisis exploded, the Chilean economy proved immune to contagion; in 1995 it exhibited a vigorous GDP rise. In 1990–1995, average GDP growth peaked at 7.9 per cent, with some improvement in income distribution (see table 1) and a sharp drop in poverty. The producers of GDP – labour and capital, the real economy – benefited from comprehensive real macroeconomic stability.

One main merit of the policies during 1990–1995 is that Chile successfully resisted pressures of the fashion in academia in the United States and IFIs, as well as the temptation to achieve a faster disinflation by absorbing larger capital inflows at the expense of exchange rate appreciation and a larger external deficit. High productive investment was the main factor behind the outstanding sustained GDP growth. As empirical studies robustly show, given its irreversibility, private investment responds positively to real macroeconomic equilibria, whenever they appear to be sustainable (Agosin, 1998). For real sustainability, it must fulfil two key conditions: first, effective demand has to be consistent with the productive capacity being generated; and, second, key macro-prices (particularly the exchange rate) must be consistent with a sustainable external balance (Ffrench-Davis, 2006). In the six-year period

from 1990 to 1995, actual and potential GDP rose at similar rates, with the economy working close to the production frontier; namely, with a minor output gap and a sustainable external balance. Indeed, these are crucial ingredients of real macroeconomic balances.

However, macroeconomic policies lost their strength after 1995. Paradoxically, the autonomous Central Bank gradually moved towards the neo-liberal fashion of capital account and exchange rate liberalization. In fact, in 1996–1998, Chile did partially bend towards the powerful international fashion of promoting capital account liberalization, allowing a real appreciation of the peso and imbalances such as in the external accounts and a domestic aggregate demand growingly intensive in imported components. This fashion was generally in command in emerging economies, pressed by the United States Government, the IMF and World Bank, the OECD and generally in the Anglo-Saxon academic world. It had been reinforced under the belief that the management of the tequila crisis had shown that the world had learnt to control financial crisis; indeed, such over-optimism was also absorbed domestically by business leaders and some public authorities. The weakening of the counter-cyclical approach took the form of principally allowing leakages to the *encaje* and stepping-back in the managed flexibility of the exchange rate.

Therefore, when the Asian crisis contagion reached Chile in 1998, the economy had accumulated rather significant imbalances, whereby the real exchange rate appreciated by 16 per cent between 1995 and 1997 and the current account deficit jumped to 4.8 per cent of GDP in 1996–1997, versus 2.3 per cent in 1990–1995, which further worsened with a sharp negative terms of trade shock in 1998. Fiscal responsibility had been kept, with an actual surplus averaging 2.1 per cent of GDP, while a larger private deficit was financed by the rise in their external liabilities, encouraged by a weaker regulation of the capital account and exchange rate appreciation.

In 1996–1997, Chile continued to record vigorous growth, with both output and investment remaining at high levels. A determinant factor behind the record investment ratio was the high employment of productive capacity as shown. However, as previously mentioned, macroeconomic conditions were becoming vulnerable to changes in the international environment, with the appreciation of the exchange rate and rise of external deficit. As said, Chile did step

Table 3
GDP, EXPORTS, INVESTMENT AND WAGES, 1990–2013
(Per cent)

	1990–1998	1999–2013
GDP	7.1	3.9
GDP exported	9.9	4.3
Rest of GDP	6.5	3.8
Net capital formation (per cent of GDP)	13.1	12.6
Index of real average wages	3.9	2.1
Real minimum wage	5.3	3.5

Source: Author's calculations, based on Ffrench-Davis (2014, table I.7).

Note: Data refer to annual average rates of growth unless otherwise specified. Data for 2013 are provisional. Data for net capital formation in 2010 were not adjusted for an estimated drop of 3 per cent in the stock of capital due to the destruction generated by the earthquake of 27 February; which would cut the average 1999–2013 ratio by 0.5 points.

back in 1996–1998, albeit only to a mid-of-the-road position. While it did not dismantle regulations, it allowed a gradual weakening of their effects (Le Fort and Lehmann, 2003; Ffrench Davis, 2010, ch. VIII); accordingly, disequilibria were moderate after six years of counter-cyclicity and only a couple of years of soft pro-cyclicity.

Therefore, Chile had advanced towards development with the significant macroeconomic reform in 1990–1995, with some steps back in 1996–1997, while it only had made minor progress with respect to productive development policies. Later, it gave up liberalizing the exchange rate in 1999 and the capital account in 2001. Table 3 compares the average performance of GDP and wages in 1990–1998 and 1999–2013, showing a large contrast. The capital formation ratio is rather similar and suggests a sharp drop in total factor productivity, partly associated with real macroeconomic instability.

C. Contagion, counter-cyclical response and recovery in 2008–2013

When the contagion of the global crisis arrived in 2008, economic activity in Chile suffered a sharp recessive adjustment between late 2008 and 2009, led by a contraction of capital inflows, trade volume and copper price. In contrast with a mostly neutral

approach since the late 1990s, the Government adopted a resolute counter-cyclical approach, making use of the sovereign fund that had been accumulated during the boom in copper prices in accordance with the structural fiscal balance approach adopted in 2001.

Expenditure was increased by 17 per cent and some tax rates were reduced transitorily (on fuels, loans, SMEs), despite fiscal income having fallen 10 per cent in 2008 and 20 per cent in 2009.¹¹ This implied a transitory actual deficit of 4.4 per cent of GDP in 2009. The Central Bank sharply reduced the monetary policy interest rate, albeit in a delayed decision. The strong counter-cyclical fiscal policy was the main force compensating for the negative external shocks. The domestic economy (GDP non-exported) already exhibited a significant recovery push by the last quarter of 2009, outlining the effectiveness of the counter-cyclical fiscal policy.

The counter-cyclical behaviour of the Treasury had to coexist with huge outflows of funds from residents, principally the private social security firms, which transferred abroad the equivalent of 10 per cent of GDP in 2009.¹² The liberalization of residents' capital flows hampered macroeconomic management for their pro-cyclicality joined that of the financial flows of non-residents. The liberalization of the capital account continued to be costly for development.

By the last quarter of 2009, the economic recovery was well advanced, although it was momentarily stopped by a severe earthquake on 27 February 2010, only a few days before the end of President Bachelet's Government and the beginning of that of President Piñera. In a few weeks, the recovery recommenced. The high level of domestic demand, a consequence of the counter-cyclical policy of 2009, was further increased by reconstruction costs following the earthquake of February 2010. Given that installed capacity was significantly underutilized – despite the destruction caused by the earthquake and the subsequent *tsunami*¹³ – the accelerated public expenditure was consistent with a move toward macroeconomic equilibrium (using capacity) as long as a recessionary gap prevailed.

Indeed, in 2010, reconstruction spending strongly contributed to the reactivation of domestic demand and thus to that of GDP, without inflationary pressures. Of course, the recessive gap was being reduced during the adjustment period, increasing

employment and stimulating capital formation, although there were no structural progress in the generation of GDP, manufacturing remained depressed and export diversification stagnated. It was rather the recovery effect. With recovery, employment and income distribution improved, albeit returning to the social achievements already attained by the mid-1990s.

Actual GDP was increasing strong until 2012, with an average 5.7 per cent annual rate over the three-year period. To avoid the recurrent mistake of confusing sustainable growth with recovery of economic activity, it is necessary to measure performance from peak to peak. If growth is measured from the previous peak of 2007, actual GDP growth averaged 3.9 per cent, which is consistent with the fact that actual GDP only rose 4.1 per cent in 2013. The economy had reached full capacity and the 4.1 per cent reflected the fact that potential GDP growth was closer to that figure than to 5.7 per cent.¹⁴ It is similar to the 3.9 per cent growth of the previous nine year period (1999–2007), but much lower than the 7.1 per cent recorded in 1990–1998. Moreover, average real wages and minimum wages had risen much slower during the 15 years that followed since 1999 (see table 3).

Slow economic growth and social indicators returning to achievements conquered almost two decades ago do not provide a “model” of development. However, there is more. The transition from the recessionary gap to close to full employment and use of potential GDP undoubtedly reflects one essential macroeconomic balance. Nonetheless, macroeconomic equilibria cover other important dimensions than inflation under control, including external and comprehensive fiscal balances. Therefore, to achieve sustainability, fiscal and external accounts must also converge to a sustainable balance when the recessive gap disappears.

Very early in the transition of actual GDP toward potential GDP, there was a significant exchange rate appreciation and new permanent public expenditures without the corresponding permanent fiscal income. As a result, when the recessionary gap disappeared in 2012 and early 2013, two macroeconomic disequilibria had emerged: (i) a strongly overvalued exchange rate; and (ii) a public budget supported by transitory high copper prices. For several years, imports and fiscal expenditure were growing much faster than the quantum of exports and tax proceeds.

Table 4
SELECTED MACROECONOMIC INDICATORS, 2007–2013
(Index numbers, 2007 = 100)

	2007	2012	2013	Annual average growth (Per cent)
GDP	100.0	121.0	125.9	3.9
Exports	100.0	103.0	107.9	1.3
Imports	100.0	140.9	145.6	6.5
Real fiscal expenditure	100.0	146.5	152.4	7.3
Real fiscal non-copper income	100.0	132.0	136.1	5.3
Domestic demand	100.0	135.6	140.2	5.8

Source: Author's calculations, based on Ffrench-Davis (2014, table X.5).

During 2009, the external sector regained a surplus due to jumps in the copper price. Meanwhile, after having experienced a strong revaluation up to \$435 pesos to the dollar in March 2008, the exchange rate underwent a sharp devaluation, reaching \$650 by late 2008. Then, it responded to the subsequent dominant expectation that Chile was emerging from the crisis. Consequently, there was a new trend toward appreciation, with the exchange rate having appreciated to \$460 by mid-2011.

These intense fluctuations are in sharp contrast with the view that the exchange rate is a determinant variable for the allocation of resources for exporters and those competing with imports. Evidently, derivatives markets do not solve the obstacle that instability brings for decision-makers of irreversible investment; rather, this instability is quite detrimental to development.

Table 4 shows that imports grew notably faster than GDP and exports for a full decade, with the gap financed by a high price of copper. Notwithstanding that high price – probably a transitory high one – the current account was exhibiting a 3.4 per cent of GDP deficit in 2012–2013. Additionally, a previous trend towards some export diversification had been stagnating (a sort of *Dutch disease* was at work).

The fiscal disequilibria are also depicted in table 4. In this six-year period, GDP increased by 26 per cent, while fiscal expenditure rose by 52 per

cent, without any significant tax reform. The difference was covered by fiscal income from copper exports.¹⁵ In fact, there is a dangerous dependence of public expenditure and private imports on a high copper price.¹⁶ Several permanent increases in public expenditure – such as continued implementation of the social security reform of 2008, increase in post-natal benefits and elimination of a 7 per cent tax on some pensions – have been financed to a minor degree by a tax adjustment that raised the rate on profits but reduced the progressive income tax. Financing has mostly come from the transitory tax proceeds generated by copper. In 2012, the Treasury spent the equivalent of fiscal revenue from copper corresponding to a \$3.30 price per pound, compared with less than (a current) \$1.00 in 2004–2007.

Obviously, permanent expenditure already at work and other required to finance new public goods and inclusive productive development demand a substantive tax reform that collects in a progressive way.

In brief, the inflation rate had been notably moderate. In contrast, there have not been sustainable balances between (quantum) export supply and import demand, nor between permanent public expenditures and structural tax income, as well as between the evolution of aggregate demand and potential GDP. The real economy has responded with a modest 3.9 per cent average GDP growth, lower than the 7.1 per cent recorded in 1990–1998.

III. Closing remarks

One distinctive feature of neo-liberalism is its neglect of the implications of initial inequality and sectoral imbalances; of the heterogeneity in productive structures, among diverse economic agents, and in access to voice and power of different sectors; of the social and allocative implications of market segmentations; and of the difficulty of transparently transmitting information to diverse economic agents so that they can face comparable opportunities.

Ultimately, neo-liberalism underestimates the frequent presence of destabilizing adjustment processes, lags and overshooting, as well as the incompleteness of markets and institutions in developing nations. These elements represent severe obstacles that prevent “neutral” and indirect global economic policies from being effective.

Excepting the first years of return to democracy in 1990, an output gap prevailed for most of the time. The Chilean economy has been out of real macroeconomic equilibria, with significant output gaps, with only in 1991–1997, 2007 and 2012–2013 operating close to potential GDP. Furthermore, a quite unstable and outlier exchange rate has worsened trade performance.

The specific policies and approaches used in each of the three episodes varied, evolving from the extreme naiveté of the 1970s into the pragmatic approach of the early 1990s. The end of the century saw a move away from macroeconomic sustainability as authorities gave in to the temptation to move toward financial globalization without properly taking account of the underlying risks.

For both growth and equity, it is necessary to reach sustainable real macroeconomic balances. Beyond low inflation and fiscal responsibility, an exchange rate management functional for productive development and an active management of aggregate demand in levels consistent with productive capacity are also required. The recent performance has been deficient on this matter. In returning to macroeconomic policies for development, the regulation of speculative capital flows deserves top billing among the list of actions for inclusive development.

Nonetheless, real macroeconomics is not enough. The 1990s experience was notably successful in growth with stability, although productive structures improved too mildly, as well as income distribution. It implied progress toward development, albeit in an incomplete manner. For long-term sustainability, the economic agenda requires further deep reforms to “complete” long-term innovative financing for development (with pro-SMEs and pro-employment biases), labour training and technological innovation, among others.

The strong expressions of domestic discontent present in recent years can be interpreted as a reinforced message of the urgent need to design and implement coherent strategies and make major inclusive reforms to productive structures and public social and economic policies. The great challenge is to move towards comprehensive development with an increasingly inclusive and more equitable productive system.

Notes

- 1 Details are analysed in French-Davis (2010, chapter VIII) and Lefort and Lehmann (2003).
- 2 The measurement of economic growth should be made between comparable macroeconomic situations. We compare years with a high level of capacity use, namely those with actual GDP close to potential GDP. Significant recoveries of economic activity such as in 2004–2008 and 2010–2012 came after recessions that cannot be ignored. On the contrary, the vigorous growth from 1990–1998 followed an overheating economy in 1989.
- 3 In 1979, Chile moved to the then known as “monetary approach to the balance of payments”, which involved fixing the nominal exchange rate and determining that the money supply would only be increased (reduced) in response to purchases (sales) of dollars by the Central Bank. It is similar to the “currency board” adopted by Argentina in 1991 and that collapsed in the midst of a dramatic crisis in 2001–2002.
- 4 Pro-cyclical monetary and exchange rate domestic policies were aggravated by a huge jump in interest rates in the United States in late 1979 and the dollar appreciation in 1981, which additionally raised the cost of the outstanding foreign debt.
- 5 Based on the national accounts, the share of “tradables” was estimated to have fallen about 5 percentage points of GDP, instead of increasing as expected with trade liberalization.

- 6 In his interesting evaluation of the experiment, Foxley (1983) presents several revealing citations, including one from an editorial of the *Wall Street Journal*: “USA should borrow the economic team of Chile” (18 January 1980), referring to the incoming Reagan presidency.
- 7 See, for instance, the classical paper by Calvo, Leiderman and Reinhart (1993).
- 8 The reforms approved by the Parliament (including the tax reform) were always less comprehensive than those originally proposed by the Government. A determining factor was the group of senators appointed under the Constitution designed by the dictator Pinochet in 1980, which more than compensated for the majority achieved by candidates of the new democratic Government in 1989 and 1993 parliamentary elections.
- 9 In Ffrench-Davis (2010 and 2014), I conduct a detailed analysis of empirical literature critical and supportive of the working of the *encaje*.
- 10 Good luck also played a role, with a sharp improvement in the terms of trade in 1995, although it still remained 20 per cent below the average in the last biennium of the dictatorship.
- 11 Ffrench-Davis (2014, ch. IX, table IX.2). This chapter discusses policies between the contagion of the Asian crisis and the start of the global crisis.
- 12 Ffrench-Davis (2014, ch. X, table X.1). This chapter details the policy answer to the contagion in 2008–2009, recovery in 2010–2012, and building of dependency on a very high price of copper.
- 13 The Central Bank estimated that potential GDP had been reduced by 1.0 to 1.5 per cent by the earthquake and tsunami.
- 14 To be accurate, adjustment must be made for the destruction by the earthquake of February 2010 of capacity by adding 1–1.5 percentage points for the loss of potential GDP, thus arriving at an annual average for growth of close to 4.1 per cent in the six-year period 2008–2013. An additional adjustment could be made if it is assumed that the contribution of export volume to GDP growth would increase if world trade was normalized.
- 15 Real tax income from copper depends on both its real price and the costs of production, which have been increasing fast in real terms. Note that as the Chilean tax system is highly dependent on the VAT, tax revenue grows faster than GDP as the external deficit increases as happened in 2010–2013. See table 4.
- 16 Based on the significant revenue from copper mining, the opponents of tax reform have claimed that there are “sufficient fiscal resources.” They do so without examining the need to revise downwards sustainable revenue, with a “reasonable” trend estimate of copper prices.

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RETHINKING DEVELOPMENT STRATEGIES AFTER THE FINANCIAL CRISIS

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Alfredo Calcagno, Sebastian Dullien, Alejandro Márquez-Velázquez, Nicolas Maystre and Jan Priewe

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