Overview

The New Public Finance

Responding To Global Challenges

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"This book is a landmark—it provides the important beginnings of a field that will be tilled for years to come."

Excerpt from the Prologue to *The New Public Finance*
Joseph E. Stiglitz
Nobel Laureate in Economics (2001), Columbia University

"This is a bold and penetrating compilation of papers on the most profound challenges of modern public finance—how to construct better partnerships between governments and private sector players and how to strengthen cooperation between nations in pursuit of common interests."

Trevor A. Manuel
MP; Minister of Finance, Republic of South Africa

"*The New Public Finance* shows how we can equip people and countries for the future—for a new global economy that combines greater prosperity and fairness both within and across nations. *The New Public Finance* is important reading for today's policymakers."

Rt Hon Gordon Brown
MP; Chancellor of the Exchequer, United Kingdom

"As the global economy widens its reach, the principles and instruments of public finance face new problems and tasks. This volume takes an imaginative and down-to-earth look at the problems and the policy instruments needed to resolve them. It is a volume not to be missed."

Richard A. Musgrave
Harvard University

"*The New Public Finance* is a real eye-opener. It is a must for everyone with an interest in international developments in economics, law, business, and intergovernmental relations."

Sijbren Cnossen
University of Maastricht

"The problems facing policymakers in a globalized world require international cooperation. But efficient policy design also demands a reconsideration of the respective tasks of the public and private sectors. This is especially so for the need to create incentives for private agents to promote social goals. For those who are looking for a survey of current thinking in this field, *The New Public Finance* is an excellent reference."

Agnar Sandmo
Norwegian School of Economics and Business Administration

"This book shows luminously how public finance is responding to the challenges caused by increasing global integration."

Hans-Werner Sinn
Ifo Institute for Economic Research

"This book presents the reader with a fascinating option. It shows that through the development of financial markets and financial product innovation, achieving what the world wants to accomplish in terms of human betterment nationally and internationally is *not* beyond our means."

Frank J. Fabozzi
Yale School of Management

"This book is a welcome and important addition to the review of what we know and do not know about public finance in this new era of globalization. Looking at it through the eyes of a former finance minister, I see it as required reading for both scholars and policymakers."

Eduardo Aninat
Ambassador of Chile to Mexico, former Minister of Finance of Chile (1994–99)

"An essential contribution to shaping public-private partnering and the kind of international cooperation needed to achieve truly prosperous, equitable, and sustainable development. This book is bound to make a significant difference in the way we build our future."

Mauricio Escanero
Facilitator of the UN International Conference for Financing for Development (1999–2002); Consul General of Mexico in Shanghai

"The challenges and opportunities of globalization call for creative new approaches—and for new financing models to fund them. While there's no textbook on how to do this yet, *The New Public Finance* brings together some of today's most insightful thinkers to engage the issue and add considerably to our understanding."

Timothy E. Wirth
President, United Nations Foundation

"This volume presents recent thinking on policy actions, instruments, and financing technologies that are developing in response to the challenges posed by the intended and unintended openness of borders. It is a timely, well conceived, and very necessary book."

Rajendra K. Pachauri
Director-General, The Energy and Resources Institute (TERI)

"In a world of increasing globalization, the creation, financing, and delivery of global public goods are critical priorities. Existing mechanisms directed at nation states and companies have not been sufficient; innovative models of public-private partnerships are required. Global leaders should examine the analysis and insights contained in *The New Public Finance* and reflect on how to put them into action."

SETH F. BERKLEY
President and Chief Executive Officer, International AIDS Vaccine Initiative (IAVI)

"This book offers practical and highly relevant suggestions for adapting public finance to the conditions of globalization. Policymakers, researchers, and business actors alike stand to gain extraordinary insight from its analyses."

MICHAEL J. INACKER
Vice-President, External Affairs and Public Policy, DaimlerChrysler AG

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Foreword

Public finance is in transition. For the most part, the world still practices what might be termed conventional public finance—paying to achieve public policy purposes mainly from public revenue, now and in full. And we know that this way of meeting public policy goals often leaves many goals underfunded—something seen most acutely today in the Millennium Development Goals. Recent increased aid commitments notwithstanding, international aid and domestic public finance commitments still fall well short of what is needed to meet the 2015 deadline for the Goals.

Yet, as the provocative and varied analyses in the book demonstrate, public finance—an area often perceived as rule-ridden and stagnant—is undergoing a vibrant process of innovation. New policy approaches and financing technologies are emerging that could allow us to pursue public policy goals more efficiently—at lower cost and with higher welfare gains. Often involving public-private partnering that builds on the comparative strengths of all partners, these new approaches and tools permit better risk management (avoiding costly crises), more sustainable resource management (avoiding further loss of resources), a better understanding of incentives (motivating actors to abide by agreements and follow rules), and better ways of harnessing private finance and initiative (meeting challenges that would otherwise remain unmet or underfunded).

At the national level many of these new types of public-private partnerships are already visible and familiar. Less common, as the book shows, is international cooperation behind national borders: taking the outside world—both the risks and the opportunities—into account when making national policy. National public policy still has much to accomplish in adjusting to the increasing openness of national borders and to the interdependence of countries that comes with this openness. And cooperation at the international level still has a long way to go in responding to the growing capacity of markets to help deliver many important public policy objectives.

What the book has to say about current trends and future possibilities in the practice of public finance deserves careful consideration by all actors, public and private, national and international. Many of the ideas it presents have enormous potential. Especially in these times of great and growing public finance needs the world over, they merit serious attention by policymakers and practitioners alike.

Mark Malloch Brown
Administrator, United Nations Development Programme
New York, 1 August 2005

Prologue

Joseph E. Stiglitz

Globalization has meant the closer integration of countries, and that in turn has meant a greater need for collective action. The book provides one of the first systematic treatments of public finance for the new era of globalization—with the totally appropriate title *The New Public Finance.*

Over the years the focus of public finance has changed dramatically. At one time it was strictly about what the term proclaimed—how governments should raise money to finance public activity.[1] By the time I began teaching the subject, in the 1970s, it had been redefined to *The Economics of the Public Sector* (the title of the text I first published in the early 1980s; Stiglitz 1986), giving equal weight both to expenditures and taxation. Macroeconomics was left out—not because it wasn't an important area (and earlier texts by Richard and Peggy Musgrave had included the subject) but because the subject had to be circumscribed somehow.

A half century ago Tiebout (1956) opened up the formal study of competition among communities, which I expanded in a paper delivered in 1974 into the general theory of local public goods (Stiglitz 1977), goods whose benefits accrued only to people living in a particular community. Public finance differed fundamentally when factors (labor and capital) could choose where to reside from when factors were not mobile. In the extreme, there was no scope for redistribution (Stiglitz 1986a,b)—a subject that had been at the center of traditional public finance discourse.

The new public finance at the time had to deal with the interplay between national and local public finance, including what activities should be conducted at the national level and what at the local level. It was clear that national public goods, for instance, ought to be provided at the national level, and that responsibility for redistributive taxation also must lie there.

As we move further into a globalized world, analogous issues are again being raised. With increased mobility of factors, redistribution may become more difficult. Having formalized the concept of local public goods, it was natural to extend that to the concept of *global public goods,* goods whose benefits accrue to anyone living anywhere in the world.[2] It would make sense for responsibility for the provision of such goods to rest with a global authority. And yet there is no global body able to meet the needs for global collective action and to organize the provision of global public goods.

This makes the challenge of the new public finance all the greater. There is no pristine theory and no set of well functioning institutions reflecting a common understanding of the role of collective action. There are myriad challenges:

national authorities now must take into account the outside world as they formulate their tax and expenditure policies. With footloose firms, they must worry about how tax and expenditure policies affect the competitiveness of investments in their country.

Financing global collective action is particularly problematic. In the past, for instance, the United Nations has been financed mainly by "dues." The only enforcement mechanism is expulsion from the "club." More recently, however, a number of governments have put on the table a set of innovative proposals, from taxes levied on certain cross-border transactions, to revenues raised from managing global public resources, to income derived from creating a new global currency to replace the current reserve system.

The *New Public Finance,* of course, does not deal with public finance alone, narrowly defined, but with a host of concerns requiring global collective action. In response to the need for collective action, we have developed a system of global governance without global government, a patchwork of institutions and agreements, varying in the effectiveness and efficiency with which they deal with the needs for collective action within their purview. Understanding these *public* failures is no less important than understanding market failures. Just as political economy has become an important part of standard public finance at the national level, so too should it be at the international level. Regrettably, this remains a very underdeveloped area of research.

As a result, international organizations often miss correcting serious market failures—and sometimes even compound them through their actions. Capital market liberalization has been actively promoted and arguably has exposed developing countries to increased risk. Well developed financial markets would presumably shift the burden of that risk from those less able to bear it (the poor) to those better able to do so. But there is massive market failure, with enormous consequences. This is a market failure that the International Monetary Fund and other international organizations should have long ago addressed, but which, as the book shows, is only now emerging as a policy focus.

Still another problem that should have been addressed but that has been allowed to linger is the global reserve system, a system that imposes enormous costs on developing countries, exerts a deflationary bias on the global economy, and contributes to global instability. The dollar reserve system not only has not worked, but it is quickly fraying, as central banks around the world increasingly move out of dollars. The multiple reserve currency system that is evolving, however, does not promise to be much more stable, or any more equitable, than the current system. There are alternatives, including regular emissions of Special Drawing Rights, that need to be considered.

One of the most important areas of market failure is the environment. Without government intervention, firms and households have no incentive to limit their pollution. The new public finance is concerned with *global* externalities—in this case, global environmental problems, the most important being global climate change. Just as a standard topic within traditional public finance is the evaluation of alternative ways of "correcting" these market failures, so too here. The international community, through the Kyoto Protocol, has settled on a particular remedy—tradable permits. But this has involved difficult problems of assigning pollution rights. And while it is remarkable that so many countries have signed on to the protocol, with the largest polluter, the United States, refusing to sign, and with no commitments from developing countries—of increasing importance in greenhouse gas emissions—it is not clear that this approach will work. Alternatives, including common measures (an agreement, say, on common levels of taxation), entailing fewer redistributive issues, should be explored.

There are some areas where new institutional arrangements are clearly needed. One, dealt with here, is sovereign debt restructurings, a topic (bankruptcy) that at the national level traditionally falls under the rubric of industrial organization and policy. And yet the issues are so central to global public finance that they rightly belong here.

One of the most important issues in both the old and the new public finance is how to provide assistance. The old public finance debated questions of matched grants or lump sum aid. The new public finance debates issues of development assistance, of loans or grants to developing countries, of how to enhance private sector participation, and of the role of conditionality, among others.

It is a rich landscape: redefining the vast subject of public finance in ways that respond to global challenges. It entails revisiting virtually every topic that has been discussed within the old public finance, plus some that have not. The book is a landmark—it provides the important beginnings of a field that will be tilled for years to come.

Notes

1. Though the classic text of the mid-twentieth century, Musgrave and Musgrave (1989), did devote some attention to public goods.

2. Since I first developed the concept in 1995, the literature has blossomed. See, for instance, Kaul, Grunberg, and Stern (1999) and Kaul and others (2003). See also Stiglitz (1998).

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Why Revisit Public Finance Today?

What the Book Is About

Inge Kaul and Pedro Conceição

The reengineering of public finance in response to the rebalancing of markets and states is well established worldwide, a process that has been researched and documented (see, for example, Salamon 2002b). Contracting out, private solutions to externalities, private financing of public sector projects, among others, are making their way into public finance textbooks (see, for example, Bailey [1995] 2002, 2004; Hillman 2003; and Rosen 2005).

The responses of public finance to the openness of national borders have been more tentative—but they do exist. National subsidy policies are the subject of heated international debate and intense diplomacy. Nations are urged to support each other in adjusting fiscal and monetary policies to avoid macroeconomic imbalances that may spell trouble for the world economy. The spotlight of the international community is also turned on national spending priorities—how much developing countries allocate to poverty reduction or industrial countries to foreign aid, and how well all countries observe fiscal discipline and debt sustainability.

Modes of public finance are also being subjected to outside scrutiny and international debate. Government performance is measured by the openness to market competition or the credibility of policy commitments. There is also discussion of when to keep policy responses national and when to centralize them internationally—and of whether to create more international funds to support intergovernmental action abroad. And there are questions about the role of intergovernmental organizations, about whether some of their traditional functions could now be performed more efficiently and effectively by global market actors or by public-private partnerships.

The book takes stock of how public finance has responded to the policy challenges of greater openness. The focus is on how public finance has responded to the interlocking of national policy domains and the resultant globalization of its main "deliverables": public goods and equity in development, or fair life chances for all, including poverty reduction.

The findings corroborate the assertion that public finance has never stood still (Musgrave and Musgrave 1989). As realities have changed, public finance has evolved and adjusted its policies and tools to new circumstances—today in response to globalization.

Contrary to what might still be a widely held view, governments no longer merely act as aggregators of national policy preferences and national public policy is nested in global policy frameworks. And contrary to yet another perhaps still widely held view, the external policy expectations go far beyond promoting economic openness to promoting competitiveness, reducing negative cross-border spillovers, improving risk management, and sharing economic opportunities and gains more widely. The intended openness is to proceed, and the unintended (undesirable) openness is to be reined in.

The policy approaches and tools discussed in part 1 support this new policy function—the blending of domestic and external policy demands, or put differently, international cooperation *behind* national borders. Such cooperation is perhaps the preferred way of addressing global challenges today. But it cannot generate the desired policy outcome—say, the interoperability of national transportation systems. Meeting global challenges often calls for a "summation" of policy reforms in all or at least many countries. However, to ensure that the national policy reforms fit together and that all actors contribute their part—or to realize economies of scale or scope—it is frequently desirable for international cooperation behind national borders to be complemented by international cooperation *beyond* national borders.

Parts 2 to 4 examine international cooperation beyond national borders. They reveal that while global challenges have added a new function to the portfolio of national public finance—the blending of external and domestic policy demands—they have changed the rationales shaping international cooperation. Concerns about efficiency, often neglected, are taking their place next to the more conventional concerns of foreign policy, next to geopolitical and strategic military considerations and the moral and ethical concerns of foreign aid. Thinking about public finance is reaching into the realm of foreign policy.

International cooperation abroad, like national public policy, is relying more on public-private cooperation—and competition. The wave of market-state rebalancing that has swept across the world in recent decades and changed public finance practices nationally is now reaching the shores of intergovernmental organizations. And it is transforming international cooperation from an essentially intergovernmental process into a multiactor process. Investment thinking now shapes global public goods provision abroad (just as it generally does nationally). And efficiency-enhancing (rather than entitlement) thinking is reshaping foreign aid (as it did for domestic welfare and social insurance programs).

Why now? Globalization has brought with it a heightened awareness of its opportunities and its risks. The analyses in the book suggest that globalization is entering a new phase. Among private and public actors demand is growing for a better managed, less volatile, and less crisis-prone process. One possible reason: the costs of not addressing some of today's problems are rapidly mounting, while the costs of taking corrective action are declining as new financing technology becomes available. Ever harder to ignore is that openness entails interdependence, which is best addressed through cooperation.

Once embarked on the path to economic openness, states find that one step leads to the next. They need to ensure that their jurisdiction is competitive in more integrated and more efficient markets. National policy alignment under these conditions is no longer an issue solely of power politics. It becomes a self-reinforcing systemic trend.

Many of the new financing mechanisms and tools discussed in the book are recent innovations. Yet most have been tried and tested, and are ready to make the leap to the policy mainstream. If more widely adopted, they could generate significant cost savings and welfare gains.

The new public finance—anew

Many issues raised in the book require further debate, research, and testing. But one point seems clear: the policy approaches and tools of public finance tend to concentrate near the intersections of the public-private and the domestic-foreign policy axes. They form a distinct policy cluster: the new public finance 2. Why the "2"?

The responses of public finance to the porosity of borders between the private and the public sectors have just begun to be integrated into standard public finance theory. Still new, they are referred to here as the new public finance 1, because it breaks out of the statist mold of conventional public finance theory and practice (figure 1). It accepts the interaction of markets and states—and having public and private actors cooperating as well as competing.

New public finance 2, which incorporates modes of new public finance 1, is an emerging subfield of public finance, the financing of global challenges—or global public finance. New public finance 2 broadens the mainly national, single-economy focus of conventional public finance theory to cover the international and national aspects of global challenges (see figure 1). It is about how governments individually and collectively channel public and private financing to global public-policy challenges.[1]

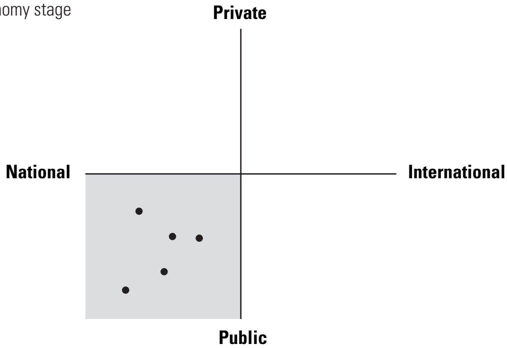
Understanding how this channeling of resources works—and how it could work better—is important for fostering globalization that delivers on its promise of greater efficiency and a better life for all. But it is not the purpose here to recommend any particular financing approach or tool. Decisionmakers will have to choose the best financing package for the challenges they face on a case-by-case basis. The book has a more limited purpose—to trace change and innovation in the practice of public finance.

FIGURE 1
The evolution of public finance

- Policy approaches and tools
- Origin and extent of partnering

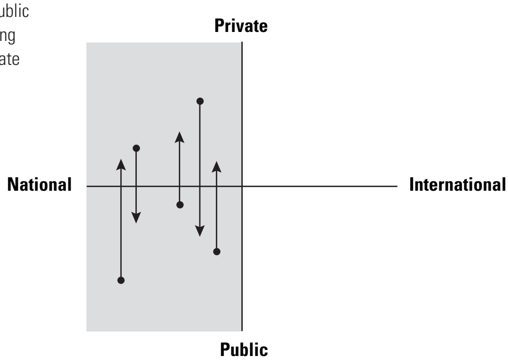
a. "Traditional" public finance

The statist, closed-economy stage



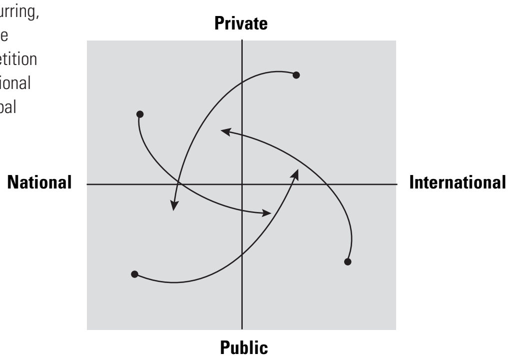
b. New public finance 1

Borderlines between public and private are becoming porous, and public-private partnering takes off



c. New public finance 2

Borderlines between domestic and foreign are also blurring, leading to public-private cooperation and competition behind and beyond national borders in meeting global challenges



The response of public finance to the rebalancing of markets and states: public-private partnering

Public policy outcomes such as law and order, peace and security, public health, and poverty reduction are still often referred to as "state-provided." But few goods or services are provided—produced and financed—solely by the state. Many public policy outcomes now result from public-private partnering. The state's involvement may be direct or indirect. And in some instances public goods and services, including welfare programs, may even be undertaken voluntarily and financed with private money.

Referring to public goods and services as state-provided reflects common practice until about the 1980s, when policy began to shift toward public-private partnering. Between 1945 and the end of the 1970s the state played an important economic role in most countries, reflected in rising public spending (as Tanzi documents in the book). This reflected a confidence in the state's ability and desire to correct market failures.[2]

As new research became available and new conditions emerged in the early 1970s, however, there was more awareness of distortions in political processes and of sources of government failure. The politicians and other policy advocates that advanced growth in public spending came under a more critical light. These new insights came from public choice theory, economic analysis of information asymmetry and agency, and incentives and game theory.[3] They led to a more cautious definition of the role of the state. And markets were seen to resolve problems when property rights are clearly defined (following on Coase's 1960 theorem).[4]

Market failure began to be viewed as merely a potential justification for state intervention, with the desirability of intervention needing to be assessed case by case, to avoid compounding market failure with public policy failure. More recently, greater understanding of the pervasiveness of market failure and of the comparative strengths and weaknesses of society's two major tools of coordination—governments and markets—has encouraged further rethinking. Markets and states are seen as an "interactive partnership" (Stiglitz 1998, p. 8), producing and financing various components of public policy outcomes in cooperation and in competition.

Taking public-private partnering even a step further, governments resort to outsourcing particular tasks (like the provision of meals for hospital patients or military personnel) or to contracting out whole public service lines (like the operation of a railway). The contracting arrangements are also known as private financing initiatives or public-private partnerships.[5]

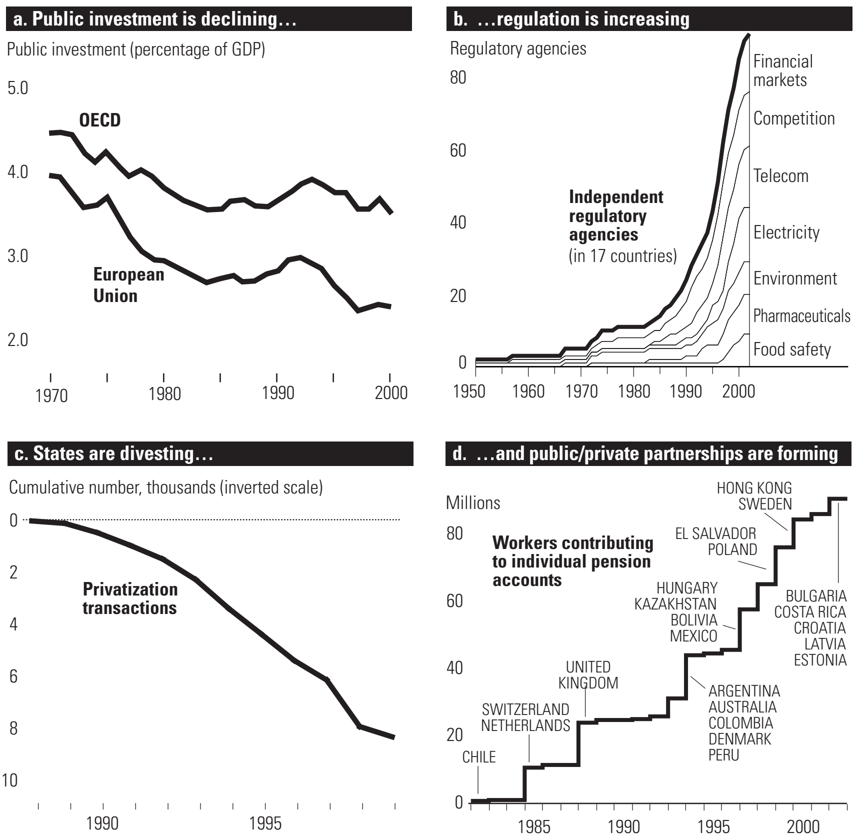
Thus public finance today is about more than taxing and spending public revenue. It involves channeling resources to public policy goals, with the government using fiscal, regulatory, and monitoring tools to encourage and complement private activities and private spending on these goals. It also involves being open to private sector competition and sharing responsibility and risks with nonstate providers in the interest of enhanced efficiency and effectiveness.

This diversification and refurbishing of the public finance toolkit reflects what Salamon (2002a, p. 2) calls the emergence of "third-party government" and what is here called new public finance 1.

Whether based on full-scale third-party government or on more limited government incentives, many public policy outcomes are now multiactor products, often resulting from a close interlocking of markets and states and drawing on public and private finance. For example, while public investment is declining (figure 2.a), government regulation and norm and standard setting are increasing in many fields (figure 2.b). And while governments are scaling back direct ownership (figure 2.c), private cofinancing of public programs is rising (figure 2.d).

FIGURE 2

The changing role of governments



Source: a. Kamps 2005; b. Gilardi 2004; c. World Bank 2005b; d. Palacios 2003.

Civil society is also assuming a more active part in shaping public policy, and private corporations are more concerned about demonstrating their social responsibility.[6] The growing trend toward public-private partnering echoes changes in the roles of all these actor groups—a broadening consensus on the shared responsibility of state and nonstate actors for public policy concerns, the concerns that potentially affect all.

What makes a good or service public or private is its consumption properties—whether it affects all or is available for all to enjoy. If regulated and monitored well, and perhaps if subsidized to some extent, public goods and services can be produced by markets while still retaining their public consumption properties. While public support will have to be greater for goods or services destined to serve the poor, even poverty reduction programs can be implemented through public-private partnering and incentive schemes that allow private actors to take the extra step of adjusting their behavior to generate social (public) benefits as well as adequate private returns.

But what happens in the case of global challenges, when public policy outcomes are to be achieved under conditions of porous borders between the public and the private sectors and between the domestic and foreign policy realms?

Global public goods and development: the new challenges confronting public finance

The list of global policy issues is long and growing longer. It includes a diverse set of concerns, including advancing international peace and security; fighting transnational terrorism; creating global communication and transportation systems; controlling global communicable diseases; averting and mitigating the risks of climate change; building an international financial architecture and fostering international financial stability; constructing a multilateral trade regime; establishing mechanisms to prevent intellectual piracy, money laundering, and drug trafficking; advancing the universalization of basic human rights and democracy; and reducing poverty and other forms of human deprivation.

These concerns require new policy approaches and new financing technology, presenting a challenge to public finance.

Traditional public finance has two distinguishing characteristics. It is largely state centered, on the assumption that public policy outcomes are state produced. This narrow perspective is now widening, both in practice and, to some extent, in theory, as new public finance 1 becomes more widely established and studied. And, especially important here, traditional public finance theory assumes a single economy, excluding from the analysis most of the outside world—external exigencies as well as opportunities. A recent survey of public finance and economics textbooks covering 170 titles found that few mention global or regional public goods or global equity concerns such as reducing world poverty (Sidikou-Sow

2005). Some of the textbooks address global challenges, especially greenhouse gases and chlorofluorocarbon emissions, but without discussing how dealing with them differs from internalizing externalities that stay within a local or national jurisdiction.[7] There is a wide—and perhaps widening—gap between the practice of public finance and the standard theory presented in public finance and economics textbooks.

Yet, policymakers are addressing global challenges. And in doing so, they have benefited from insightful new studies. Consider the voluminous literature on global warming, international finance and trade, and global poverty and foreign aid. These contributions are part of the new public finance puzzle. But the questions still to be answered are: What overall picture is emerging? How should the policy responses be interpreted?

Answering these questions (done later, when considering the findings of the analyses in the book) requires examining more closely the nature of the global challenges filling today's national and international policy agendas: What makes them global challenges? And why do they increase interdependence among countries?

Identifying the basic categories: global public goods and development

As currently viewed, public finance is expected to help provide public goods and to foster equity.[8] Promoting allocative efficiency is the main rationale for government interventions to support public goods provision—whether financial (subsidies or tax credits) or nonfinancial (regulation). Hence, the public goods-oriented branch of public finance is referred to as the efficiency or allocation branch, with a focus on issues and on particular goods.

The equity or distribution branch of public finance, seen to support society in realizing its goals of fairness and justice, may sometimes have to achieve its objectives through income redistribution and transfer payments. Its main focus is on actors, mainly groups of vulnerable actors such as poor people or people with disabilities.

The global issues on today's policy agendas can be grouped by these same two broad categories of public finance deliverables: global public goods and global equity in development. What is important to know about these two sets of concerns in the context of the book? We look first at global public goods and then at development.

Global public goods: links to globalization and the required production path

Global public goods, a special class of public goods, share with all other public goods the basic characteristic of being public in consumption—available for all to consume—because they are goods in the public domain.[9] Some of these goods are "naturally" global and public—the moonlight or the warming rays of the sun, which are pure global public goods. Others are impure global public goods—the atmosphere and the ozone shield—available for all yet rival in consumption and are subject to overconsumption and depletion. The gas composition of the atmosphere, if overloaded by pollutants such as carbon dioxide, may change, which could lead to climate change with worldwide (although differentiated) impact.

But many global issues today are not natural global public goods but globalized (formerly essentially national) public goods.

The link between globalization and global public goods. Globalization can be said to result from two main processes, one deliberate and one unintended. Deliberate policy change aimed at openness is usually based on a strategy of removing at-the-border economic barriers (trade-related taxes, capital controls) and fostering policy harmonization behind national borders to promote cross-border market integration (property rights, port facilities, banking codes and standards, educational certificates). A country that removed economic barriers without harmonization behind borders might drive away foreign investors or trading partners who judged its institutions to be nontransparent and difficult to assess for risk. Countries with internationally harmonized institutions, and therefore with lower search and other transaction costs, would be more appealing. Intended globalization is thus typically an outcome of efforts by national policymakers to meet such expectations by fostering behind-the-border policy harmonization, including globalization of market-supporting public goods.

But a second process is also at play: unintended openness. This is for the most part the result of positive or negative spillovers of private or national public actions that are not taken into account by the agents who generate the spillovers when making consumption or production choices.[10] Examples are plant, animal, or human diseases that may hitch a ride with international freight shipments or airline crews and passengers. Thus, intended globalization—freer cross-border movements of goods and services, capital, and people—often generates unintended forms of globalization. But spillovers may occur whether borders are open or not. For example, greenhouse gas emissions have always risen, whether the world was in an era of more open or more closed borders, more extensive or more limited travel across countries and regions. However, their potential effects were not identified until these gases had accumulated heavily in the atmosphere and scientific and technological knowledge had advanced.

Globalization and global public goods are inextricably linked. Globalization, especially economic liberalization, is often perceived as entailing greater privateness—freer trade and other cross-border movements. While true, globalization is quintessentially about enhanced publicness—about more accessible and transparent national policy domains, public policy convergence, and greater interdependence as people experience the effects of others' management of cross-border spillovers.

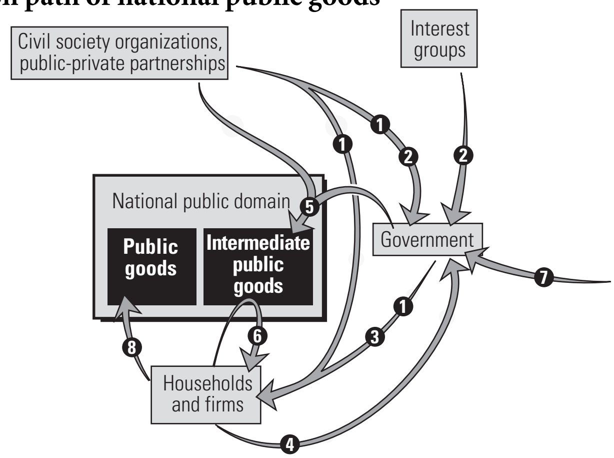
The production path of global public goods. By choosing whether and how much to foster economic openness, states choose their international competitiveness. And they choose whether and how much to work to contain global pollution, terrorism, or the risk of a financial crisis. Often, then, it is a policy choice whether to provide a desired public good and whether to allow undesirable externalities to go unchecked, perhaps at high costs to other countries or to one's own country. Privateness and "nationalness" as well as publicness and "globalness" are in many instances not innate properties of a good but social constructs, a form conferred by society. This means that public goods can be produced. But how to envision their production path?

Figure 3 illustrates the production path of a national public good and figure 4 that of a global public good.

National building blocks. Many global public goods emerge from a summation of national public goods. Consider market integration. Markets are public goods,

FIGURE 3

Production path of national public goods



❶ **Incentives**
Encouraging actors to deliver direct and indirect inputs or to change behavior to account for social concerns

❷ **Political pressure**
Lobbying governments to fund or deliver goods and services

❸ **Coercion**
Compelling individuals and firms to change their behavior to account for social concerns

❹ **Domestic preferences**
Reflecting the choices on desired state action by national constituents

❺ **Opportunity**
Offering households and firms the possibility of consuming goods and services that generate externalities that enhance the provision of the public good

❻ **Consumption**
Consuming goods and services made available to enhance the provision of the public good

❼ **External preferences**
Reflecting the choices on desired state action by international constituents

❽ **Externality**
Emerging as a result of individual action

Note: The figure is based on the assumption that the good follows a "summation" aggregation technology. Intermediate public goods (like norms and standards) serve as inputs to a final public good.

and integrating markets is a global public good. Integrated global markets could not emerge without country after country building up market-supporting national institutions and harmonizing them in a way that facilitates interoperability between national infrastructure systems and institutional frameworks.

While many global public goods follow such a summation process, important variations may occur.[11] The public effects of some goods or activities are perfectly substitutable and lend themselves to trading arrangements. Reductions in carbon dioxide emissions are a case in point. If actor B can reduce emissions more cheaply than actor A, actor A might pay actor B to provide A's contribution.

In other instances the public effects to be summed up are location specific and thus nonsubstitutable. For example, public health services might have to be improved everywhere to achieve effective global control of a communicable disease. If the goal is eradicating the disease, the smallest contribution will determine the overall provision level of the good. The same holds for terrorism control through improvements in aviation security. If such "weakest link" situations arise because an underproviding country lacks adequate resources, it might be in the enlightened self-interest of richer countries to financially support the poorer country. As Sandler (in the book) argues, richer countries gain little from continuing to upgrade their airport screening facilities, for example, if other countries are not doing the same.

Thus, global public goods often emerge as countries move in the same direction nationally in public good provision. But sometimes effectiveness reasons suggest complementing national actions with international action—as in a weakest link situation—and sometimes cross-border cooperation is desirable for efficiency reasons, as with carbon dioxide emissions trading.

But before examining the production path of global public goods, it is helpful to look further at the actors engaged in producing national public goods.

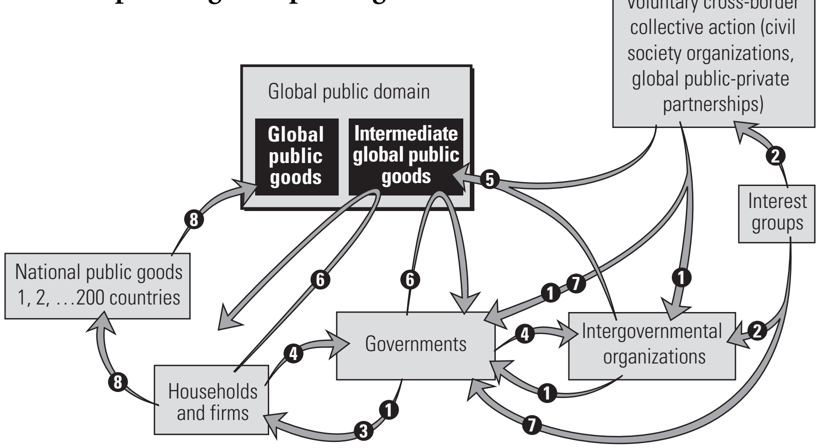
Figure 3 clearly illustrates how public goods are multiactor products to which all groups might potentially contribute. For example, civil society and lobbyists might nudge the government into taking action (arrows 1 and 2) while also seeking to influence the general public through their advocacy activities (arrow 1). As a result, public demand for a certain public good, say smoke-free public spaces, may build (arrow 4). In response, the government might provide an intermediate public good such as an information campaign on the ill effects of smoking in public places (arrow 3), hoping to alter the behavior of individual actors (arrow 6). Coercive measures might also be needed, such as a ban on smoking in public places (arrow 3). Together, the positive externalities resulting from the changed behavior of individuals (voluntary and coerced) would then produce the desired public good, smoke-free public spaces (arrow 8). The government might also be influenced by external preferences (arrow 7), for example, by foreign visitors who demand smoke-free airports and hotel rooms or by international conventions such as the World Health Organization Framework Convention on Tobacco Control.[12]

International-level complements. National and global public goods are often closely linked (arrow 7 of figure 3). National public goods are the main building blocks of summation-type global public goods (figure 4). International cooperation of various types (arrows 1, 2, 4, and 5) may alter the behavior of individual states or private actors (arrows 3 and 6), generating the required national contributions (arrow 8) to the global public good.

An important difference between collective actions at the national and the international levels is that coercion is not available at the international level, where all interactions and choices are voluntary. This intensifies the importance of the incentive challenges that various goods present and of the distribution of their costs and benefits across actor groups: Who might be motivated, and how strongly, to enhance the provision of a good? And if preferences do not overlap, how could a better match of incentive structures be achieved? Perhaps simply by defining global rules of the game? Or by adding "carrots" such as money or "sticks" such as trade sanctions?

FIGURE 4

Production path of global public goods



❶ **Incentives**
Encouraging actors to deliver direct and indirect inputs or to change behavior to account for social concerns

❷ **Political pressure**
Lobbying governments to fund or deliver goods and services

❸ **Coercion**
Compelling individuals and firms to change their behavior to account for social concerns

❹ **Domestic preferences**
Reflecting the choices on desired state action by national constituents

❺ **Opportunity**
Offering households and firms the possibility of consuming goods and services that generate externalities that enhance the provision of the public good

❻ **Consumption**
Consuming goods and services made available to enhance the provision of the public good

❼ **External preferences**
Reflecting the choices on desired state action by international constituents

❽ **Externality**
Emerging as a result of individual action

Note: The figure is based on the assumption that the good follows a "summation" aggregation technology. Intermediate public goods (like norms and standards) serve as inputs to a final public good.

Money—as compensatory financing—may also be required where a global public good follows the "best shot" aggregation technology. With scientific and technological knowledge, for example, a new technology need be invented only once to exist. One best shot suffices. A potential inventor may be able to finance the effort as long as the resources are available and there is an expectation that the research and development costs can be recovered. Where the individual returns will not cover expected costs, it may be necessary for other interested actors to share the costs.

International cooperation in sharing the costs of a joint international initiative always follows a summation process, whatever the aggregation technology of the goods' technical production path (Barrett in the book). The group of financiers can be quite different from—and usually smaller than—the group of actors involved in the production process as a whole, however. This is especially so where money does not simply feed into cost-sharing arrangements but serves as an incentive or as compensation for services rendered.

Since the production of many global public goods requires interventions by different actor groups, questions arise about which actors to involve and at what level to undertake particular interventions. Using malaria control as an example, table 1 lists several rationales that could guide these selections—from fostering cross-border collective action and preventing free-riding to subsidiarity and other efficiency, equity, and effectiveness concerns. For implementation five main levels or actor groups could be involved: intergovernmental agencies, national governments, businesses, global public-private partnerships, and individual households and the general public. Table 1 also shows the building blocks that each group contributes.

Development: its global dimension and production path

Traditionally, development has been thought of as an essentially national public good. Foreign aid in support of development was motivated largely by moral and ethical concerns—empathy with those trapped in poverty. International support for development, notably official development assistance, fell squarely into the distribution or equity branch of public finance—representing the international arm of this branch.[13]

This perception of development is changing. While still viewed by many as a moral imperative, fostering global equity for development is acquiring an added global dimension: to support international peace and security.

The broadened global dimension of development. Experience has shown that where development is stagnating or reversing, the consequences may be felt worldwide: civil strife and conflict may worsen and spill violence and refugees across borders. Basic social services may falter and allow diseases long thought to be under control to resurface and cross borders.

TABLE 1

Rationales for identifying the appropriate actor and the level of policy interventions: the case of malaria control

Outcome to be produced	Level of intervention/ actor chosen	Rationale
• Agreements to act in a coordinated manner • International purchase commitment or other type of research and development (R&D) incentives	Intergovernmental agencies	• To prevent free-riding by individual countries • To maximize efficiency by producing knowledge, a nonrival good, only once in a coordinated way, and by pooling national incentive resources to elicit pharmaceutical R&D
• Bulk purchasing facility for medicines, bednets, and other inputs		• To unlock economies of scale and of scope
• Public health system services	National governments	• To adapt to country conditions for efficiency and equity reasons
• Public awareness campaigns		• To adapt to country conditions for efficiency and equity reasons
• Subsidies for local bednet production		• To align private and national social returns
• Development of vaccines and pharmaceutical products	Private firms	• To achieve efficiency and effectiveness (because much of the relevant expertise is in the private sector)
• Bednet production		• To achieve efficiency and effectiveness (because bednets are a private good and can be traded in markets if subsidies are available)
• Development of vaccines and pharmaceutical products	Global public-private partnerships	• To facilitate the linking of equity to efficiency and effectiveness considerations through such arrangements as differential patenting

TABLE 1 CONTINUED

Rationales for identifying the appropriate actor and the level of policy interventions: the case of malaria control

Outcome to be produced	Level of intervention/ actor chosen	Rationale
• Development of new ways to deliver vaccines to rural areas (for example, by including cold storage facilities in private distribution networks)		• To add equity to efficiency and effectiveness considerations
• Consumption of medicines and bednets; provision of policy feedback	Private households	• To foster efficiency
• Policy feedback		• To strengthen policy relevance and ownership

The vital role of development in achieving global security and stability is recognized in the report of the High-Level Panel on Threats, Challenges and Change (2004, p. viii) established by the United Nations Secretary-General: "extreme poverty and infectious diseases threaten many people directly, but they also provide fertile breeding-ground for threats, including civil conflict. Even people in rich countries will be more secure if their Governments help poor countries to defeat poverty and disease by meeting the Millennium Development Goals."

Beyond such direct costs for the international community, lack of development also entails opportunity costs. For example, the U.S. African Growth and Opportunity Act states that while forging stronger commercial ties between Africa and the United States "helps to integrate Africa into the world economy…U.S. firms may [also] find new opportunities in privatizations of African state-owned enterprises, or in partnership with African companies in infrastructure projects."[14]

Meanwhile, altruism is not waning either. Greater cross-border economic activity and connectivity have transformed the causes of misfortune in its many aspects—from crime and violence to hunger, disease, premature death, and natural disasters—from local into common global problems. Global communications and nearly instantaneous transmission of news now expose human rights violations, poverty, and disaster to the entire world, sometimes in real time, as in the tsunami disaster that hit several Asian and African countries in December 2004. The international community was "present" at the disaster, seeing it unfold.

Public opinion surveys show that in many parts of the world a majority of the public, politicians, and business leaders support poverty reduction efforts to enhance development—in part, because they consider it to be a moral or ethical imperative and in part because they view it to be in their enlightened political or economic self-interest.[15] One of the clearest reflections of the heightened global concern with inadequate progress in development is the Millennium Development Goals,[16] which emerged from the Millennium Declaration adopted by world leaders in 2000 (UN General Assembly 2000). These goals aim to bring about a real difference in people's lives: halving world poverty and reducing other targeted forms of human deprivation by 2015.

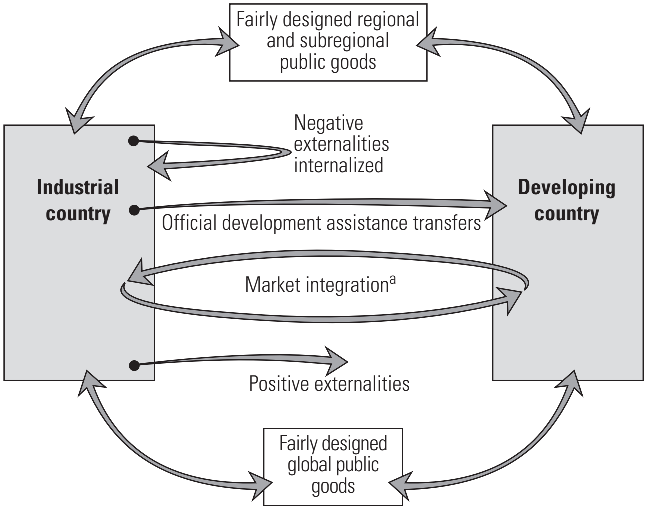
The production path of development. National factors—a country's location and size as well as its governance and policy choices—are key determinants of development (Sachs 2005; UN Millennium Project 2005). There is broad international consensus on this point and on the belief that external conditions also matter—the design of multilateral policy regimes, the policy choices of other countries, and the business strategies of market participants (Derviş 2005; UN 2002).

The main tool of external support for development has been official development assistance, bilateral and multilateral transfers from richer to poorer countries. More than 50 years of experience have shown that not only the level of foreign aid but also its timing and conditions are vitally important. Unpredictable aid flows may lead to costly disruptions in policy initiatives in developing countries (Bulíř and Hamann 2003; UN 2005). Tying foreign aid to purchases in donor countries also may do more harm than good to developing countries (OECD 2001; Jepma 1994).[17] And evidence is accumulating that in many instances the impact of foreign aid-financed initiatives was cancelled out by other international factors[18] and that adequately provided and fairly designed global public goods such as the multilateral trade regime and international financial architecture also matter. The same holds true for adequately provided regional public goods.[19]

Clearly, foreign aid for development must encompass more than financial transfers from governments of richer countries to governments of poorer countries. Besides the conventional government-to-government public resource transfers the major building blocks of foreign aid include adequately provided and fairly designed regional and global public goods and the coherence of industrial country policy objectives with global development—as also noted by the UK government-led Commission for Africa (2005) and the Group of Eight (G-8 2005).

Within this widened perspective on the production path of global development, foreign aid, like global public goods provision, involves national actions in recipient and donor countries and international collective action (figure 5). It also receives contributions from private actors through export earnings, foreign savings, and remittances.

FIGURE 5
The many roads to global equity for development



a. Attracting foreign investment, opening trade and employment opportunities, and generating remittances.

* * *

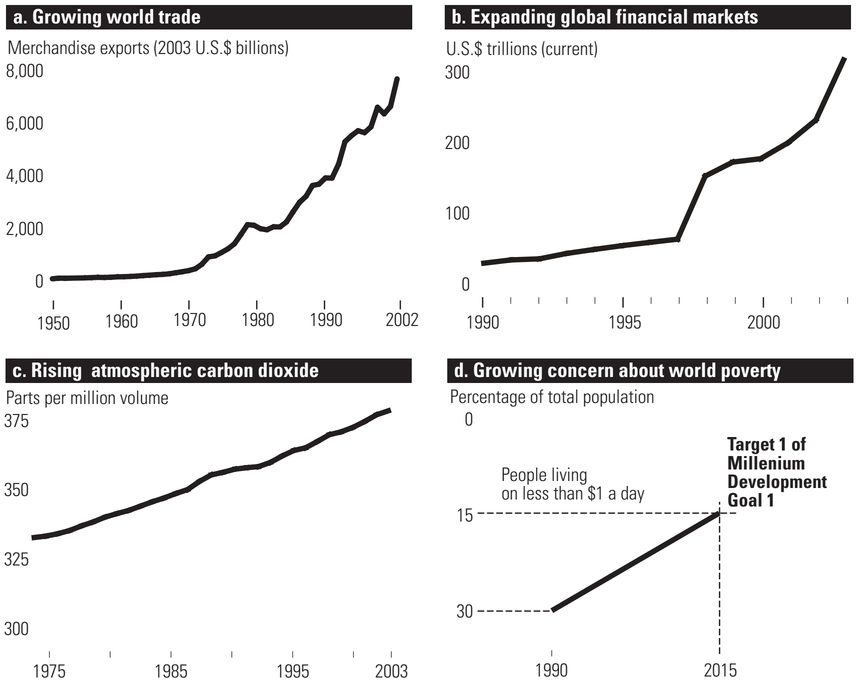
Globalization has changed the nature of the "deliverables" of public finance, both in how people experience them (consumption properties) and in what is required to achieve a policy result (production properties).

The rebalancing of markets and states led to an interlocking of the public and private sectors. Globalization has led to an interlocking of countries' national public domains—markets, public health conditions, law and order, security, and sociocultural conditions—and an increase in cross-border flows, both intended ones like trade and capital flows (figures 6.a and 6.b) and unintended ones like carbon dioxide emissions (figure 6.c) and the ill-effects of poverty, as reflected, for example, in the global resolve to step up poverty reduction (figure 6.d). And with greater openness (intended or not) and cross-border flows has come an intertwining of the public policy space of countries and the emergence of global challenges—problems and opportunities shared by all.

Has this growing importance of global challenges prompted changes in the policy approaches and tools of public finance, as happened with the rebalancing of the private and public sectors? That question is at the center of the book. There is strong evidence that new public finance 2 is emerging, bringing new approaches and tools to bridge the foreign-domestic divide.

FIGURE 6

The impact of openness



Note: Financial markets corresponds to the sum of stock market capitalization, debt securities (domestic and international), and derivatives (over-the-counter and exchange traded, notional amounts). Atmospheric carbon dioxide concentration is derived from air samples collected at Point Barrow, Alaska. Target 1 of Millennium Development Goal 1 is to halve, between 1990 and 2015, the proportion of people living on less than $1 a day (it is shown here in an inverted scale as a proxy of the growing concern with world poverty).

Source: a. WTO 2005. b. BIS 2004; World Federation of Exchanges 2005; IMF 2004.
c. http://cdiac.esd.ornl.gov/trends/co2/sio-bar.htm.
d. www.un.org/millenniumgoals/; http://ddp-ext.worldbank.org/ext/MDG/gdmis.do.

WHAT THE BOOK BUILDS ON

Above all, the book builds on the changing practice of public finance. The financing methods and tools discussed here are not untested or speculative. Most have been around for some time. They were selected for analysis precisely because they form part of a new emerging policy practice. These financing methods and tools are not about what "should" be done—but about what is being done.

The analyses in the book take their conceptual and analytical framework from the literature on public finance. But even a cursory look at the contents reveals that the chapters draw on a wide range of disciplines, from international economics and finance, financial markets, financial engineering and innovation, and environmental and health economics to international relations and cooperation theories and foreign aid studies. Contributors combine insights from behavioral, incentive, information, and institutional economics with those from public choice, principal-agent, and other theories. This multidisciplinarity reflects the nature of the global challenges—their position at the crossroads of the public-private and national-international policy axes.

While public finance and public economics textbooks tend to look inward from a microeconomic perspective, international economics and finance textbooks focus on macroeconomics, government policy action and conditions that affect—and are affected by—cross-border flows of goods, services, capital, and people.

Another strand of the literature looks at globalization and public finance from the outside in, examining such issues as how the lifting of at-the-border barriers to trade and capital flows affects national taxes and spending.[20] It examines mainly how globalization affects countries and domestic policy choices, not how state and nonstate actors reach out to each other to respond to and to shape globalization.

International relations studies examine collective action at the international level. These studies seek to explain how international, especially intergovernmental, negotiations work and why countries comply with or renege on agreements. Discussion of the financing of international cooperation tends to be limited to the foreign aid literature,[21] because much of the money required for cross-border cooperation on global public goods has so far been accommodated within the foreign aid portfolio.[22] The contributions to this literature focus mainly on the international dimension, leaving aside related issues of national public finance.

Thus strands of the literature contribute to an understanding of the financing of the global challenges discussed in the book,[23] but none integrates its national and international and public and private perspectives. The added value of the book is its integrated perspective on how public finance is adapting to the expanding globalizing nature of its main deliverables, public goods and equity, and reinventing itself along the way.

Notes

1. Another body of literature that emerged in the 1970s was also referred to as the "new public finance." Its focus was on introducing more quantitative methods (see Boskin and Stiglitz 1977). Today, quantitative, including econometric, studies are at the core of empirical research in economics, including public finance. So the label "new public finance" is available again and is used here to denote recent changes in the practice of public finance.

2. Market failures, which impede the efficient allocation of resources that is assumed to take place in perfectly competitive markets, may emerge as a result of six factors: imperfect competition, public goods, externalities, incomplete markets,

imperfect information, and unemployment and other macroeconomic disturbances (Stiglitz 2000).

3. Jones (in the book) describes aspects of the public choice critique. See Buchanan and Musgrave (1999) for a dialogue between the traditional public finance perspective and the public choice approach.

4. The Coase theorem states that efficient economic outcomes will emerge from market transactions after property rights have been assigned and exchange takes place in the presence of perfect competitive markets and without transaction costs; under these conditions the efficiency outcome is independent of the way in which property rights have been assigned (Coase 1960).

5. Public-private partnerships have many potential advantages. They can leverage private finance, transfer risk to the parties best suited to bear it, smooth the flow of public expenditures, and take advantage of each actor's comparative strength to improve results. These and other benefits help to realize public sector efficiency gains and provide scope for reducing public spending or for doing more with the same level of public resources, and so they have been the focus of much of the analysis of public-private partnering. Recent experience has also brought to light the potential risks. A rash of corporate scandals has underlined the need for stronger corporate governance, accountancy standards, and disclosure requirements. And while markets in most countries today are up to the task of mediating transactions in goods such as steel, soap, or matches, there is concern about contracting out such services as prisons, hospitals, defense, or airport security. These services are difficult to monitor and thus are at risk of "quality shading" (hospital rooms becoming more crowded, food portions less nutritious, security personnel less trained). Developing countries worry about the sudden withdrawal of foreign private capital from local projects, such as public-private partnerships in infrastructure provision. And investors in these countries worry about political risks, including governments reneging on contracts. See also Spackman (2002) and Harris (2003).

6. For a discussion of business responses to public policy concerns, see, for example, Froot (1999) and Labatt and White (2002).

7. Studies tracing the evolution of the changes in public finance scholarship over the past several decades reveal that the absence of such issues is characteristic not only of public finance textbooks but of the public finance field more generally. See, for example, Rosen (1997) and the special issue of the *Journal of Public Economics* (2002). A rare exception is the path-breaking 1969 book by Richard Musgrave, *Fiscal Systems,* which discusses a number of the topics referred to here as new public finance 2.

8. Earlier textbooks (such as Musgrave and Musgrave 1989) identified three branches of public finance, with the third being the stabilization branch. Its function was to correct the macroeconomic failure to ensure full employment with stable prices (Musgrave 1999). However, Rosen (1997) notes that this branch was not part of a representative public finance textbook of the late 1940s nor is it included in textbooks in the late 1990s.

9. More detailed definitions of public goods and global public goods are presented in the glossary in the annex to the book. Interested readers may also wish to consult Barrett and Sandler (both in the book) and Cornes and Sandler (1996); Ferroni and Mody (2002); Kanbur, Sandler, and Morrison (1999); Kaul, Grunberg, and Stern (1999); Kaul and others (2003); and Sandler (1997, 1998, 2004).

10. For a fuller definition of externalities, see the glossary in the annexes and the literature mentioned in note 9.

11. The concept of aggregation technology was introduced by Hirshleifer (1983) and by Cornes and Sandler (1984) and elaborated on by Cornes (1993).

12. This convention entered into force on February 27, 2005. For further information see www.who.int/tobacco/framework/en.

13. Of course, the motivation for development assistance or foreign aid has not always been based only on moral or ethical concerns. Only all too often commercial or geopolitical and strategic-military considerations also came into play. See, for example, Alesina and Dollar (2000).

14. The African Growth and Opportunity Act is Title 1 of the U.S. Trade and Development Act of 2000. See www.agoa.gov/faq/faq.html.

15. See, for example, Gallup International (2005) and McDonnell, Solignac Lecomte, and Wegimont (2003).

16. See www.un.org/millenniumgoals.

17. For more general assessments of the current shortcomings in the foreign aid system see Sachs (2005) and the analysis in UN Millennium Project (2005), among others.

18. Including, for example, lack of coherence in policymaking on the part of donor countries (see, for example, OECD 2003b).

19. See, for instance, Birdsall and Rojas-Suarez (2004).

20. See, for example, Cnossen and Sinn (2003); Kremer and Mehta (2000); Razin and Sadka (1999); Sinn (2002); and Sørensen (1998). See also the journal *International Tax and Public Finance.*

21. Important exceptions include Keohane and Levy (1996) and Sandler (1997, 2004).

22. See Atkinson (2004); Technical Group on Innovative Financing Mechanisms (2004), launched by the governments of Brazil, Chile, France, and Spain and joined by Algeria and Germany; Sagasti, Bezanson, and Prada (2005); and Working Group on New International Contributions to Finance Development (2004), known as "Landau report" for the chairman of the Working Group, Jean-Pierre Landau.

23. See also the Further Reading section in the annexes for additional literature consulted.

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The Changes Under Way

Financing Global Challenges through International Cooperation behind and beyond Borders

Inge Kaul and Pedro Conceição

The world seems to be caught in a web of crises, risks, and uncertainties. International terrorist attacks are penetrating deep into countries. Competition between firms and states is intensifying, giving rise to fears about outsourcing, economic restructuring, unemployment, and thinning social safety nets. Financial and housing market bubbles—or collapses—are holding people in a state of near-permanent anxiety. Uncertainty about the availability of oil at low and stable prices is generating concern about meeting the world's future energy demands. Incidents of avian flu are triggering fears of an impending pandemic.

As the book shows, the growing interdependence of countries and the accompanying volatility have prompted calls for managing globalization better, especially the downside—emerging global scarcities, negative cross-border spillovers, excess market swings, and world poverty. These persist in the midst of unprecedented wealth and rapid technological advance, undermining globalization's promise of a better life for all. Openness and competitiveness are now to be combined with sustainability and stability, including more broad-based development.

Public finance policy approaches and tools have responded to this widening of the policy focus with change and innovation. Nationally, public finance has taken on a new function: fostering a pattern of public and private spending to support the blending of external and domestic policy preferences or, put differently, international cooperation *behind* national borders. The objective is to provide the national building blocks that are crucial for meeting global challenges.

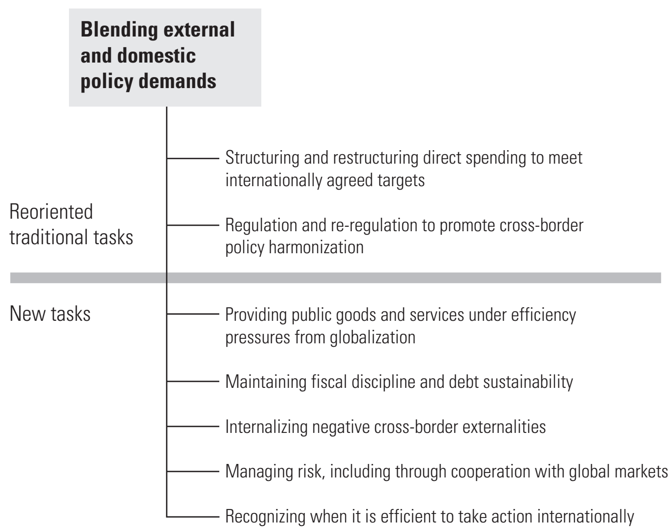
Internationally, economic rationales are becoming intertwined with foreign policy goals, engendering new modes of public finance 1 (see previous chapter) and transforming international cooperation *beyond* national borders from an intergovernmental process into a multiactor process of public-private partnering and competition. Governments cooperate on these issues not—or at least not only—to strengthen their international position or to expand or firm up territorial borders. Rather, their goal is to correct the underprovision of policy goals that promise high global as well as national and social returns—and to do so cost-effectively.

International cooperation behind national borders: incorporating global challenges into national public finance

Public finance is intimately linked to the policy priorities that governments pursue and to their relationship with markets and civil society. Part 1 of the book begins with an analysis of the new role of the state as intermediary between external and domestic policy preferences. It provides an overview of some of the reoriented traditional tasks and the newer, added tasks that are emerging and of how the pursuit of enhanced openness and competitiveness and, more recently, the emphasis on sustainability, stability, and a wider sharing of globalization's benefits have affected public finance at the national level (figure 1).

Subsequent chapters examine some of the newer national public finance tasks flowing from the state's role in blending external and domestic policy demands. These include maintaining fiscal discipline (preferably without jeopardizing prior development gains or the provision of public services), managing cross-border

FIGURE 1
Public finance tasks of international cooperation behind borders



externalities, using global markets to strengthen risk management, and knowing the limits to cooperation behind national borders or, put differently, knowing when it pays to seek the cooperation of others abroad.

A new function of public finance: blending external and domestic policy demands

States face a rapid increase in external expectations about desirable national policy that emanate from outside the domestic political process. As Kaul shows (in the chapter on the intermediary state), they arise from formal intergovernmental negotiations and, increasingly, from informal processes of norm and standard setting by nonstate actors, such as country credit rating agencies and other market analysts, global civil society networks, and international professional associations (accountants, lawyers, industry groups).

These external demands urge governments to pursue policies of sustainable globalization. Just as governments are encouraged to increase economic openness and enhance their country's competitiveness, so they are being asked to help people cope with the inevitable volatility that comes with economic openness and competitiveness, by managing cross-border externalities, including external risks to the economy. Worldwide, national public policies echo these expectations, in action as well as political rhetoric. Multiple influences, differing by country and issue, contribute to this alignment. Some are "push" factors, such as the political pressure one country or group of countries exerts on another. Others are "pull" factors, as with the prospects of reaping gains from participating in global networks such as those for international civil aviation or the multilateral trade regime.

Expectations of economic openness promote interaction between the public and private sectors and the adoption of new public finance 1 modalities. But such expectations also lead to a growing competitiveness among states. Once governments embrace openness, a gradual and self-propelling shift toward further policy alignment takes hold. With openness comes greater mobility of capital and, increasingly, of labor, while states remain shackled to their territory. A global "Tiebout effect" (Tiebout 1956) sets in, with mobile factors of production choosing the national jurisdiction that suits them best, pressuring governments to comply with what is expected of them if they wish to retain or attract those mobile factors. This pressure intensifies as more countries take the path of openness.

As states respond to these external pressures, goals from beyond the domestic arena move onto national policy agendas, shaping priorities and public and private resource allocation. Where once states may have insisted on exclusive policymaking sovereignty within their territory, today many states pursue a policy of responsive sovereignty, taking global concerns into account in formulating national policy. States are blending domestic and external policy demands.

Maintaining fiscal discipline and preventing negative cross-border externalities

National policy reforms to promote economic openness have strongly influenced the revenue side of public finance. In an important restructuring of national tax systems, states are shifting national tax bases away from at-the-border measures such as trade taxes toward domestic bases such as the value-added tax.[1] While these reforms are well advanced, some of the issues figuring prominently among the external expectations now directed toward governments suggest new forms of national closure: maintaining fiscal discipline and managing cross-border spillovers.

Is globalization pushing governments to spend more or to spend less? Analysts differ, but Tanzi concludes in his chapter that globalization is exerting efficiency pressures on governments, constraining public spending.

But important public policy concerns need not suffer. Governments can rely more on indirect measures of finance, leveraging private spending through tax expenditures (credits and deductions).[2] Where conditions are conducive, privatization is an option, with the government's contribution limited to regulation and oversight. Tanzi discusses these issues in a social welfare context (protection and insurance), an issue that ranks high on many international and national policy agendas since globalization and economic openness increase efficiency pressures on firms and workers as well as governments. Much the same logic applies to many other issues.[3]

The limits to increased public spending, as Heller shows, are compounded by growing pressures for fiscal discipline—which relate to demands for meeting global challenges and managing cross-border spillovers. He points out that many countries are facing longer term changes, such as aging populations and global climate change, that will heavily burden government budgets. Budgets may also feel the impact of many unpredictable events, such as outbreaks of communicable disease, terrorist attacks, or prolonged global recession. In Heller's (p. 131) words, "a slowly gathering fiscal storm" is on the horizon. If not managed in time, through improved internalization of externalities, these storms will lead to deep global fiscal crises.

To rein in negative cross-border spillovers, countries have used an array of policy measures such as regulation, fiscal incentives, national pollution trading schemes, and quota systems and are exploring other options. Countries are also initiating policy reforms for addressing predictable and unpredictable challenges. Heller identifies several as important for complying with fiscal discipline requirements: extended fiscal accounting, to promote longer term assessments of budget sustainability; balanced budgeting requirements, to create fiscal headroom to draw on as needed; and greater consideration of the political dimensions of the budget process, to avoid being taken by surprise by opposition to corrective measures such as a scaling back of current programs.

Cooperating with global markets to manage risk

Managing economic openness and volatility demands fiscal discipline. But stringent fiscal policies coupled with enhanced risk awareness can encourage excess precautionary public savings and depress economic growth and development. Following the financial crises of the 1990s, many developing countries (101 in a sample of 132) built up high foreign currency reserves ($292 billion in 2003 and $378 billion in 2004; World Bank 2005b, p. 2). With more effective ways to protect against shocks and reduce vulnerability, countries could free the resources tied up in reserves for more productive uses.[4]

Shiller (in the book, p. 152) reminds us that the "finance and insurance industries were the source of much of the world's economic progress in the twentieth century." They foster productive risk taking by sharing risks across large numbers of market actors, thus blunting the impact that the possibility of an unfavorable outcome could have on any one actor's incentive to undertake promising ventures. With globalizing markets, countries are increasingly able to trade and to disperse country-specific risks across borders through international capital markets.

Governments, like firms and households, are exploiting such opportunities, for example, by hedging against commodity price volatility in futures and options markets on behalf of farmers or consumers, as Morgan discusses. Risk-management products such as the government bonds indexed to gross domestic product (GDP) mentioned by Shiller are an example of a market transaction extended by a collective action component. Against a modest insurance premium paid by the issuing government, the yearly coupon payments on these bonds are lowered when GDP growth is worse than expected and raised when GDP growth is better than expected. By holding the GDP to debt ratio to a narrower range, such arrangements help debt-issuing governments to smooth tax rates and expenditures over time and to reduce uncertainty and risk for firms and private households, enhancing welfare.[5]

GDP-indexed bonds are a precursor to the more encompassing risk management options proposed by Shiller, such as macro markets. By enabling trade in securities indexed to macroeconomic aggregates such as GDP, macro markets would allow national actors to hedge against the risk of a major recession by taking a short position on the security tied to the country's GDP.

As new technologies and opportunities emerge in risk management and other areas, global markets are assuming functions once reserved to governments—a further sign of the public-private rebalancing.

Shifting policy components from the national to the international level

Meeting global challenges often requires combining national building blocks and complementary inputs at the international level (see figures 3–5 in the previous chapter). But where does the production path start? The discussion so far has examined primarily national policy responses to global policy demands—the top-down side of the production path, with demand coming from "above" and action occurring nationally. International cooperation is an iterative, looping process, sometimes proceeding from the international to the national and sometimes from the national to the international.

Bottom-up international cooperation can result from global exigencies that emerge abruptly and force themselves on national policy agendas (as with international terrorism, examined by Sandler) or emerge more gradually (as with taxation of the income earned by mobile factors of production, at the center of Musgrave's chapter). The analyses show that the incentives of states to move from acting unilaterally to cooperating with other states vary with the issue and with the power of states to shape the international policy dialogue.

Following the terrorist attacks on the United States on September 11, 2001, many industrial countries toughened their internal security measures. Yet as Sandler stresses, unilateral efforts, while important, may simply shift terrorist activity to countries that lack the capacity, resources, or political will for similar security upgrades. Control of terrorism through enhanced protection against attacks is a global public good of the weakest link type: "everyone's participation is essential since the smallest provision level determines the amount of the public good that generates benefits" (Sandler, p. 199). Security in air travel or container shipping, for example, depends on adequate screening of cargo and passengers in every country. Once industrial countries have attained a certain level of national security, instead of spending more on upgrading national security, it can be in their self-interest to help poorer, weakest link countries contribute to global security—and to move the issue up to the international level for complementary collective action.

Although the threat posed by increasingly open borders has long been recognized, it took a major crisis to jolt the international community into action and a comprehensive reassessment of effective response measures (see, for example, High-Level Panel on Threats, Challenges, and Change 2004). In other areas, too, the challenges of globalization are increasingly recognized, but most are being dealt with bilaterally rather than multilaterally.

One issue is how to tax mobile actors. Taxpayers that reside and pay tax in one jurisdiction may earn income originating—and being taxed—in another jurisdiction. Musgrave explains how to determine which jurisdiction should be entitled to tax which part of that income. She finds strong efficiency and equity reasons for addressing this question multilaterally, suggesting two principles to guide a multilateral approach: capital-export neutrality and internation equity. However, multilateral agreement on this issue would mean transforming the national public good of tax systems into a common, globalized system. Many governments are reluctant to take such a step.

Currently, tax cooperation occurs primarily through bilateral negotiation: there are more than 2,000 bilateral double-taxation treaties (UNCTAD 2002). Yet many income streams find their way around current treaty arrangements and escape national tax authorities. Tax avoidance and evasion, transfer pricing, and tax competition cause high revenue losses for both industrial and developing countries.[6] Musgrave and others (Bird and Mintz 2003; Reinhold 2004) note that more global tax coordination may gradually evolve, as electronic commerce and other factors continue to undermine states' capacity to tax.

The first steps in this direction are already discernible. More bilateral tax agreements are being based on the model developed by the Organisation for Economic Co-operation and Development (OECD) and the United Nations.[7] By proceeding incrementally, governments may find, as Musgrave (p. 168) argues, that "harmonizing measures can be taken to neutralize the differences with respect to resource allocation across jurisdictions, while preserving the variations in fiscal choices." Policy harmonization behind borders, far from implying the erosion of national policymaking sovereignty, can be a tool for avoiding excess competition between states, making all better off.

International cooperation beyond national borders: blending economic rationales with foreign policy goals

International cooperation abroad has so far been essentially an intergovernmental process, focusing on rulemaking on between-country and at-the-border issues. Politics, not economics, has underpinned most intergovernmental negotiations. And security concerns, colonial ties, and national commercial interests, as well as moral and ethical concerns, have shaped foreign aid.

This is changing. Politics are not leaving international affairs, but economics is asserting itself more strongly. The economic principles and practices underlying public finance nationally are also shaping international cooperation beyond national borders.

The most visible sign of this shift is in the institutional landscape. Service providers and financing mechanisms and tools are diversifying and multiplying, with public-private cooperation and competition increasing at the international level just as at the national level. Part 2 shows how intergovernmental organizations, like national governments before them, are being reengineered.

Parts 3 and 4 deepen this analysis, examining collective action efforts to provide the international components of global public goods and development: the two deliverables of public finance.

Part 3 suggests that global public goods tend to be approached from a dual investment perspective: concern with allocating resources to collective action initiatives that promise relatively high social and global returns and concern with producing the desired cooperation with as little burden to national budgets and as little pooling of national public revenue in international funds as possible.

Efficiency concerns are also gaining prominence in foreign aid, with the mounting urgency of reducing poverty and the tight financial constraints in donor countries. As part 4 shows, this strategy depends on getting the incentives right and on recognizing the importance of adequately and fairly provided regional and global public goods.

And recognition seems to be growing that, with greater openness and interdependence, national public policy goals are often best pursued by enhancing global welfare gains and aiming at a higher national share of a more prosperous and secure world. Realizing this goal requires a focus on efficiency, nationally and internationally.

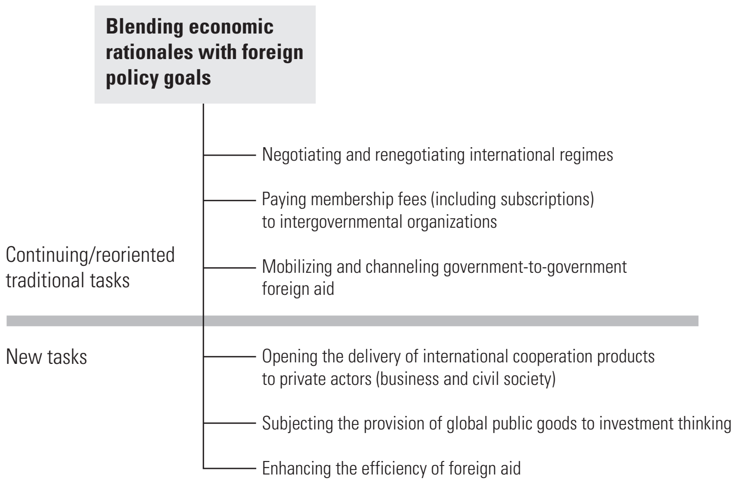
Figure 2 is an overview of the continuing, reoriented, and new tasks of public finance at the international level. Parts 2–4 of the book address, in particular, the new tasks.

Relying on global public-private cooperation and competition

International cooperation beyond borders has been profoundly transformed, from an intergovernmental process to a multiactor process. Intergovernmental and nonstate actors (businesses and civil society), like their counterparts at the national level, are cooperating and competing to deliver both public goods and equity more efficiently and effectively.

One manifestation is the rapidly expanding universe of global public-private partnerships, contributing to global public goods provision and foreign aid (see the chapter by Kaul in part 2). Up from about 35 in 1990, there are now at least 400 such entities, most with an independent legal status (either for-profit or nonprofit), and the rest hosted by an intergovernmental or civil society organization.[8]

FIGURE 2
Public finance tasks of international cooperation beyond borders



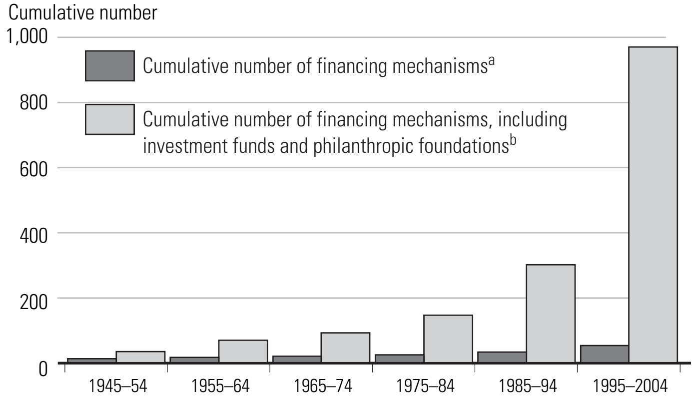
Partners include intergovernmental organizations, national governments, civil society organizations, foundations, and businesses.

Another manifestation of the transformation of international cooperation into a multiactor process is the rapid increase in the number and diversity of international financing mechanisms, again especially since 1990. In volume of financial resources the traditional multilateral organizations (United Nations, World Bank) are still the major channels for multilateral cross-border cooperation. However, as Conceição points out, the picture changes dramatically when the focus is on the number of institutions mobilizing and channeling financial resources to global challenges. More than 30 of the roughly 60 identified in his chapter were created in the last decade. Twenty of these are no longer pure intergovernmental entities. Many are nonprofit organizations, and many involve public and private actors. If private foundations and investment funds that address global challenges are added to the count, the number of international financing mechanisms climbs into the 900 to 1,000 range (figure 3).

Several factors seem to be driving these changes: the international policy agenda, which calls for drawing on the comparative advantage of both the public and the private sectors; the fiscal constraints of governments, coupled with the opportunities presented by the growing depth and breadth of international financial markets; and public choice considerations, notably the growing concern about transnational nonstate actors and intergovernmental cooperation failure.

FIGURE 3

Multiplication and diversification of international financing mechanisms



a. Financing mechanisms supporting cross-border initiatives pertaining to foreign aid and global public goods provision.

b. Investment funds and philanthropic foundations contributing to meeting global challenges.

Source: Conceição figure 3 (in the book).

Building on the comparative advantage of public and private actors. Policy issues often arrive on to the international policy agenda only after they have assumed crisis dimensions. Just think of global health challenges such as the HIV/AIDS pandemic. They evolved slowly but now demand urgent action: determined innovation (for new medicines and vaccines) combining public and private resources and entities capable of acting swiftly and flexibly. Many intergovernmental organizations have multiple mandates, making it difficult to pursue issues in the results-oriented way that many of today's challenges require. Public-private partnerships and single-issue financing mechanisms are stepping in and taking on some of these tasks.

Also, with market actors more involved in public policy delivery, market development is the subject of greater collective action abroad. Many global public-private partnerships engaged in market development involve both market participants and intergovernmental and governmental actors to ensure that evolving market institutions fit public as well as private purposes.

Overcoming resource constraints by turning to financial markets. Along with private actors, new financing technology is entering the international cooperation domain, including securitization and project finance, to allow responses motivated by economic rationales. Conceição, Rajan, and Shah show that projects are now designed to involve the private sector in resource mobilization as well as in the delivery of international cooperation products. To show these factors at play, the authors examine the proposal to establish an International Finance Facility to get around the budgetary constraints facing donor countries. Achieving the Millennium Development Goals on target would require huge investments now, whereas donor countries plan to increase foreign aid allocations only gradually. The International Finance Facility would enable the frontloading of foreign aid despite this constraint. It would back the issuance of bonds on international capital markets today by securitizing donor country promises of aid delivery in the future. These resources, otherwise available only over many years, could be used to finance the upfront costs of helping countries achieve the Millennium Development Goals. As a first step a planned International Finance Facility pilot project would raise resources to finance immunization projects in the world's poorest countries.[9]

Correcting intergovernmental cooperation failure. The growing involvement of nonprofit and for-profit firms in the provision of public services confirms expectations based on Jones's public choice analysis of international cooperation. If actors (voters, lobbyists, politicians, and bureaucrats) pursue their individual or organizational self-interests, there is no assurance that their policies will serve agreed-on public purposes. The failure of governments and intergovernmental organizations must also be reckoned with.

Involvement by market and civil society actors can counter some of this risk of failure. Part 2 shows that global market and civil society actors, including private foundations, often step in to correct public policy failures. They do so where global public policy outcomes that affect their interests are underprovided—because intergovernmental negotiations are bogged down in political stalemate or because national governments free ride and fail to contribute adequately to common international cooperation projects. Nonstate actors can correct failures of intergovernmental cooperation—which arise under conditions similar to those that make economic markets fail—by working through voluntary collective action and by prodding governments.[10]

Subjecting global public goods provision to investment thinking

Until recently, the foreign aid system has been the main operational system for international cooperation abroad. As global public goods issues moved to the fore and required operational activities at the international level, the public financing for such initiatives came largely from donor countries' foreign aid funds. Up to 30 percent of official development assistance may have gone into global public goods (World Bank 2001, p. 109).[11] Increasingly, however, foreign aid and global public goods provision are being disentangled, especially as businesses and markets play a larger role and demand sharper differentiation of purpose and approaches. Public goods provision at the international level is evolving as a distinct function—as the international arm of the allocation branch of public finance. And as this happens, public goods provision is increasingly shaped by investment thinking.

This new thinking is reflected in concerns to ensure that cooperation makes economic sense and in the emphasis on market-based solutions. Whether by design or by intuition, global public goods provision seems to be guided by the principle of subsidiarity.

Ensuring net gain. Does cooperation pay? Which interventions promise the highest returns?[12] Who will benefit? Questions such as these are being raised more frequently.[13] And data-driven policymaking, including cost-benefit analysis, is becoming more common (Esty and Porter forthcoming). Conceição and Mendoza build on this debate. Drawing on inputs from various studies (especially Barrett 2004 and Hertel 2004), they suggest a five-step methodology for determining the global welfare gains from more adequate provision of global public goods and the distribution of these gains across developing and industrial countries. The methodology for estimating net gains implies a goods-specific approach based on identifying the benefits of enhanced provision of the good and the costs of corrective action.

Applying the methodology to illustrative cases suggests that the global net gains would be huge—but also unevenly distributed.[14] Thus, some redistribution may be required to generate political support for the collective-action efforts required to unlock the potential gains. Barrett (in this volume) argues that such redistribution (in the form of transfers, for example) can bring on board countries that otherwise would not be net beneficiaries from the enhanced provision of the good or that would gain less than others. The Montreal Protocol Fund, an example mentioned by Barrett, has demonstrated the role of money as an incentive in international cooperation—making international cooperation work by allowing it to make economic sense for all concerned.

Emphasizing market approaches. King's chapter also highlights the incentive and compensation functions of financial transfers or, more concretely, of incremental cost payments between countries. These payments are intended to reimburse countries for the additional costs they incur when doing more than what they would need to do to address such global concerns as reductions in greenhouse gas emissions or preservation of biodiversity. Incremental cost payments, as employed by the Global Environment Facility, for example, can be viewed as a compensation or incentive tool. They can also be seen as signaling the emergence of a new market.

The Global Environment Facility is a precursor of today's emerging carbon markets. It facilitates trade between countries in the inputs to such global public goods as biodiversity preservation. On the demand side are the facility's donors, countries willing to financially support biodiversity preservation. On the supply side are the countries willing to offer this service within their jurisdiction. The Global Environment Facility acts as intermediary in this exchange.

When businesses become concerned about the adverse economic effects of global problems such as climate change or when a promising new trade opportunity emerges, market actors are likely to explore the creation of a "proper" new market. Sandor's chapter analyzes the development of the Chicago Climate Exchange.[15] He reveals that markets are constructs that demand deliberate steps, including the development of standardized products and a functioning trading platform. He also shows the importance of getting the word out about how the new arrangement work, lest it be ignored. All of this requires some public support, generally at the beginning before the market takes off. The Chicago Climate Exchange is set up as a public-private partnership.

Working with markets (engaging in public-private partnering) and helping to develop them (subsidizing exploratory activities or undertaking regulatory functions) are now an important focus of intergovernmental organizations. A third dimension of this market-related work is facilitating access to existing markets. Consider commodity futures markets, whose instruments for managing commodity risk can replace government-provided approaches such as buffer stocks and intergovernmental efforts such as international commodity agreements.[16] Commodity futures markets are difficult for producers in developing countries to access, depriving them of this tool for managing commodity price volatility. Facilitating their access, as Morgan discusses, would unlock unexploited efficiencies. One way is to establish national intermediaries in developing countries, and technical assistance and other services to help these intermediaries succeed.

Markets offer the double dividend of enhanced efficiency and reduced government involvement. Governments can limit their role to regulation and other complementary actions instead of tackling the task alone through conventional public finance. Governments might assign new property rights or quasi property rights such as pollution allowances and authorize and oversee trading arrangements, leaving the buying and selling and related financial transactions largely to private actors. Or they could provide financial incentives to private actors and assist them in overcoming market-access problems.

Even the challenging issue of the sovereign debt crises is now moving from a statutory and intergovernmental approach to a contractual and market-based solution. As Eichengreen discusses, sovereign bond issuance under New York law is beginning to follow the UK approach of incorporating collective action clauses into bond contracts, to permit more flexible responses to default. This shift was facilitated by limited but critical interventions by a few governments and the International Monetary Fund, aimed primarily at providing the model text for the clauses and demonstrating market acceptance.

Applying the subsidiarity principle. The basic policy choice in global public goods provision concerns which components of a good to provide nationally and which internationally. Part 1 suggests that many policy steps, even the responses to external policy expectations, are being taken nationally rather than through centralized reforms at the international level. Globalization appears to be more about cooperation behind than beyond national borders. Taking action nationally and addressing only selected components internationally (perhaps to exploit economies of scale or scope) is not only what technical and economic analysis of the production path of global public goods would suggest but also what is actually happening.

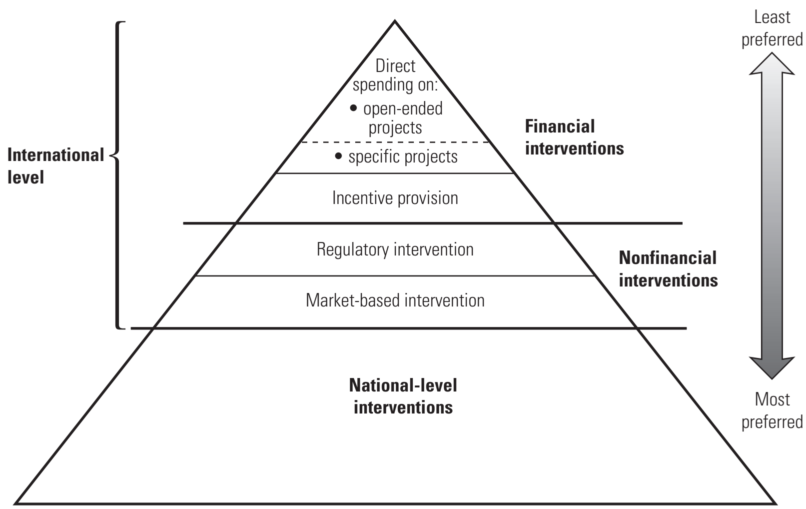
When interventions occur at the international level, a second choice arises: which instrument to employ. Until recently, the main instrument was pooled national public revenue executed through an intergovernmental agency. Today, there are other options, including markets and public-private partnering. And today a range of actors from (inter)governmental entities to businesses and civil society are selecting and applying these instruments.

Global public goods provision abroad can be seen to be guided by a five-tier hierarchy of preferences (figure 4), with each succeeding preference considered only if the preceding one is insufficient:

- *A preference for national action.* Taking corrective action at the national level and addressing only selected additional components at the international level (for example, to exploit economies of scale or scope).

FIGURE 4

Hierarchy of policy interventions to provide global public goods



Global public goods provision is subject to intense screening, minimizing international-level interventions, especially interventions with financial implications for national governments

- *A preference for market-based intervention.* Relying on market-based provision, such as markets for carbon-related products to reverse global climate change and financial and insurance markets to improve risk management.
- *A preference for regulatory intervention.* Limiting government action to norm and standard setting and regulation, such as the assignment of pollution allowances, a regulatory measure that fosters the creation of new markets.
- *A preference for incentive provision.* Encouraging private actors to undertake projects that generate global social welfare gains (for example, by forming public-private partnerships or supporting guarantee instruments).
- *International pooling and direct spending of public revenue—the least preferred option.* Governments' reluctance to go this route is reflected in the institutional pattern of financing collective action abroad. While many new limited-purpose and temporary financing vehicles have emerged in the past 60 years, the international community has added only a few permanent entities to the system of multilateral organizations established in the 1940s and 1950s. Most international cooperation is funded through voluntary, short-term commitments.

The evolution of global public goods provision appears to be echoing the EU experience with regional public goods provision, as Laffan describes. Although the

European Union is politically more cohesive and socioeconomically less diverse than the international community as a whole, a preference for the same general principles—coalescing in the form of the subsidiarity principle—is discernible.

Enhancing the efficiency of foreign aid

While development depends on adequate levels of foreign aid (Sachs and others 2004; UN Millennium Project 2005), efficient allocation and deployment are also vital. Greater aid efficiency would reduce resource waste and could persuade donors to support foreign aid and other actors, notably business, to get involved.

Some obstacles to greater aid efficiency are being addressed, from enhanced donor coordination and harmonization (High-Level Forum on Aid Effectiveness 2005; High-Level Forum on Harmonization 2003) and greater coherence of donor aid and other policies (OECD 2003b) to measures that bring aid programming closer to the national level (such as poverty reduction strategies[17]).

Part 4 points to additional measures under debate or already under way to increase aid efficiency: using loans and grants more rationally. Benefiting from nonrival regional and global public goods and economies of scale. Reducing the risks to private actors from investing in development. And fostering coherence between global public goods and foreign aid. Incentive compatibility is a central concern in devising aid arrangements in such a way that "participants in the process would not find it advantageous to violate the rules of the process" (Ledyard 1989, p. 141).

Clarifying the rationales for grants and loans. Grants and loans are the main instruments for aid delivery. Collier addresses how to choose between them to ensure that aid is allocated most efficiently across countries. He argues that the "current pattern of using grants and loans has little economic rationale" (p. 471) and suggests that the choice should depend on a country's level of income and institutional development. The poorest countries with weak institutions should receive only grants. As a country's institutions strengthen and income rises, the share of loans relative to grants could increase until aid is delivered entirely through loans. The amount of aid received through grants and loans should peak at the same time, so that there is no suggestion that loans are being substituted for grants.

Choosing more rationally between grants and loans could also avert some debt sustainability problems. As Collier argues, under more rational selection, a country that reaches some debt sustainability ceiling would not be precluded from receiving aid but would receive it through grants instead of loans. Countries in a stronger position to service their debt could receive aid through loans.

Thus, both loans and grants play a role in aid delivery. But where should the loans come from? Are they still to come from the international financial institutions created more than five decades ago? Akyüz explores the rationales for continuing multilateral lending, concluding that the rationale for countercyclical lending is stronger than ever because of the greater vulnerability of developing countries to external shocks, that the rationale for development finance is weaker today than it was some 50 years ago but continues to be valid especially for low-income countries, and that the rationale for development grants rather than loans is stronger now, again primarily for low-income countries.

And what type of grants and for whom? In discussing these questions, Radelet, not unlike Collier, suggests that assistance strategies should vary with the countries' commitments to governance and development. The stronger that commitment, the more flexible and attractive the aid modalities should be and the larger, more predictable, and longer term the resource commitment by donors, to ensure that aid is used efficiently. Such differentiation in grant conditions would challenge developing countries to reform. Thus these instruments are called challenge grants.

Benefiting from nonrivalry and economies of scale. Unlocking efficiency gains goes beyond using aid delivery instruments more rationally. It can also involve identifying and exploiting economies of scale. A key finding by Birdsall is that regional public goods are a highly promising yet underfunded development opportunity. This inefficiency arises because of the "donors' strong country orientation and focus on country 'ownership'" (p. 529), which creates problems of coordination, attribution, and incentives. Coordination problems arise because multiple governments need to negotiate and agree on how much of the good to provide, how to provide it, and at what cost to whom. Attribution problems result from donor concerns with the transaction costs of dealing with multiple interlocutors and the difficulty of establishing accountability for the results. The coordination and attribution problems in turn lead to incentive problems. Both donors and recipients may view regional public goods as more complex and hence riskier than the simpler and more familiar country-based projects.

Unexploited opportunities for efficiency gains also exist at the global level. Polak and Clark show that a new Special Drawing Rights issuance could significantly reduce the costly foreign reserve holdings of many developing countries and do a better job of protecting them against financial crisis. This issuance would be efficient because it would be costless, but it would require global, rather than regional, coordination.

Birdsall's suggestion for overcoming the incentive problems at the regional level is similar to the answer to the question presented earlier on whether cooperation pays: to identify and demonstrate the potential net gains from investing in regional programs. The benefits of meeting the challenge of underfunded regionalism could be huge, especially in Sub-Saharan Africa, where political and geographic borders impose high costs on small and landlocked countries.

As the pressures to demonstrate aid results and achieve the Millennium Development Goals rise, industrial and developing countries alike may be willing to cross the coordination and attribution hurdles and to use cost-benefit analysis investment in setting priorities.[18]

Facilitating involvement by private actors in development. The efficiency of aid may also be increased by engaging the most appropriate actor. In the past private actors had little involvement in development, because of missing or incomplete markets in developing countries or lack of information about them and the perception of aid as charity. As circumstances changed, interest has grown in using aid resources to engage private actors in promoting development.

Public funds can cushion the risks that private actors take on when investing in developing countries. Intergovernmental organizations use guarantees for this purpose, as the Multilateral Investment Guarantee Agency does, or co-investment, as the International Finance Corporation does.[19]

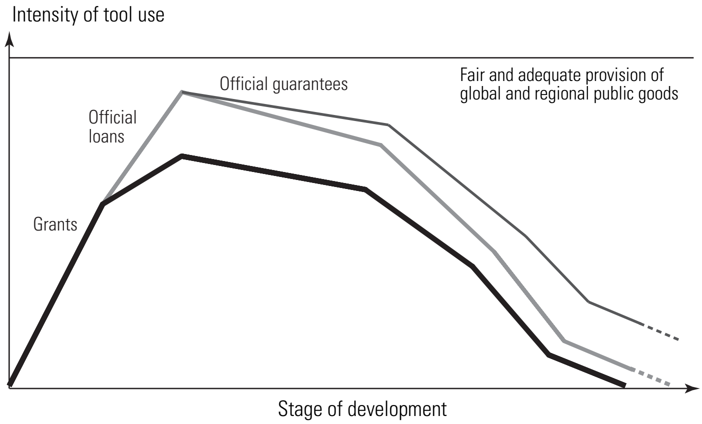
Kremer and Peterson Zwane describe yet another tool, advanced purchase commitments, which provide incentives for private participation in generating and diffusing pro-poor knowledge. Through advanced purchase commitments, a group of donors promises to compensate innovators for the development of specific technologies to address problems of the poor. Kremer and Peterson Zwane illustrate the use of purchase commitments for technological innovation for tropical agriculture. An advanced purchase commitment is similar to a guarantee, in that it provides incentives for private investment without requiring immediate disbursements. However, whereas guarantees require disbursements for unfavorable outcomes, purchase commitments reward successful innovators—but only if they develop the product specified in the commitment.

An advantage of guarantees is that they strengthen incentives for investment without necessarily requiring a financial outlay by the guarantor. Griffith-Jones and Fuzzo de Lima suggest that currency-related risks for foreign investments in developing countries are inadequately covered and that new instruments are needed to help infrastructure projects withstand shocks that compromise borrowers' ability to repay debts incurred in foreign currency. They propose three guarantee-related instruments to complement existing political and partial credit guarantees: contingent liquidity facilities, countercyclical guarantees, and sovereign guarantee pools (which development agencies would extend to groups of developing countries engaged in a common project).

Phasing in the tools. Thus, there is growing recognition that an efficient use of foreign aid requires knowing which type of tool to use at what intensity to match a country's development stage and when to phase out the tool as the country advances.

A graphic depiction of the intensity with which various tools are being applied—individually and in combination—as development progresses might

FIGURE 5
The phasing of policy interventions to foster development



Note: Combination of governance and level of income per capita. The assumption is that the higher the stage of development the higher the level of income per capita and the better the quality of governance.

look like figure 5. Grant assistance is the first tool to come in and move out. Official loans arrive next and—in line with Collier's suggested strategy—peak and then decline together with grants. However, they are not being phased out completely because countries sometimes need to revert to official loan support (notably when experiencing external shocks to their economy). Guarantees from bilateral or multilateral aid agencies are the third tool in development assistance, progressively taking over from the other two. As developing countries find it easier to access markets, and market actors become more familiar with them, countries might need external support only in issuing guarantees—and this only initially and occasionally, as the dotted ending of the line marked "official guarantees" indicates.[20]

But recognition is also growing that both the efficient use of aid and development effectiveness depend on according a high and steady level of importance to a fair and adequate provision of regional and global public goods. The potential benefits to developing countries from the provision of these public goods can be substantial. For example, changes to the multilateral trade regime could generate benefits for developing countries estimated at nearly double current official development assistance.[21] And better ways for migrant workers to transfer remittances to developing countries could further increase benefits (remittances currently total nearly $130 billion; World Bank 2005b, p. 28).

Yet, despite the strength of this and other economic evidence, the link between fair and adequate global and regional public goods provision and development is still tenuous. This suggests that although economic rationales have a stronger influence now, politics has not left international cooperation—just as it has not left national public policymaking.

The new public finance: combining the "behind" and the "beyond"

The globalization of public goods and development concerns creates new tasks for public finance and requires new policy approaches and tools behind as well as beyond national borders. Increasingly, national and international initiatives on global concerns are progressing in tandem (figure 6), trying to avoid the Scylla of excessive centralization (tackling tasks intergovernmentally that are better left to individual governments or markets and civil society) and the Charybdis of excessive decentralization (trying to go it alone nationally where cooperation with other state and nonstate actors would be the better way to proceed).[22]

Globalization not only calls for new public finance tasks, like the internalization of cross-border spillovers, it also affords governments and intergovernmental agencies new means to tackle these tasks. Cooperation with global markets is one such means. Trade between governments in global public goods services such as carbon reduction credits is another. Governments have many possibilities for tapping into the pool of global resources—capital, expertise, or knowledge—to pursue public goals.

Just as the greater porosity of the borders between the public and the private sectors has led to new modes of public finance, new public finance 1, so the growing porosity of the borders between domestic and foreign has led to other new modes of public finance, new public finance 2. While new public finance 1 provides policies and tools for meshing the gears of public and private finance, new public finance 2 provides policies and tools for international cooperation behind and beyond borders.

The key issues in this new global public finance are essentially the same as those of traditional public finance. But they now reflect an active partnership between markets and states in a global—national and international—context (see figure 1 in the previous chapter). The key questions of global public finance are:

- *Which* global public policy goals are being—or should be—pursued?
- *What* production path is being—or should be—followed in each case?
- *Where* are public policy interventions being located—or where should they be located—to ensure efficient and fair provision of the desired outcome, nationally or internationally?
- *Who* is—or should be—receiving net benefits and how should the benefits be distributed?

While these issues are dominating policy dialogues nationally and internationally, current institutional frameworks—the way policymaking is organized and the concepts being used to analyze challenges and think about costs and benefits—are not well suited to finding the right answers, including making greater use of the innovative approaches discussed in the book. What can be done to move forward?

Moving from innovation to adoption

Innovation usually happens by fits and starts (Shiller 2003). The new public finance—now a collection of measures being developed, tested, or applied sporadically—is no exception. Wider adoption will require adjustments in concepts and terms, ways of thinking, and institutional framework—from changes in laws and rules to new organizational structures. Policymakers and scholars have a role in this. Some changes would be minor, but still critical. Others would involve more fundamental policy issues and require deeper rethinking.

Advancing the new public finance will entail costs—for dialogue, public awareness building, financial product development, empirical and theoretical studies, and perhaps compensation for those who eventually lose out as the changes are introduced. Will the potential gains warrant the effort?

The potential gains

The thought experiment in box 1 shows what difference enhanced risk management could make to people's lives and ultimately to national economies and budgets and, if replicated across countries, to global welfare. Without adequate risk management the woman whose story is told in the box may not be able to pursue her career. She and her relatives could lose their jobs and become a burden on society instead of contributing to it.

Table 1 tells much the same story in quantitative terms for tools that include but go beyond risk management. It considers six applications of the new public finance tools discussed in the book. It indicates who would gain how much from using each tool—either because the tool would make it possible to address the challenge or because it would do the job more efficiently than another tool. The total gains come to about $7 trillion in net present value terms—or $360 billion annually for the six tools.

Clearly, pursuing the public finance innovations already under way holds considerable promise of gains to many—and perhaps even to all.

So what can be done to enhance the conditions for change so that new financing policies and tools stand a better chance of becoming standard practice and so that globalization evolves, combining openness and competitiveness with enhanced stability, sustainability, and a wider sharing of its benefits.[23]

Next steps: decisionmakers' options

Laying the foundation for new approaches to the financing of global challenges requires national and international measures.

FIGURE 6

International- and national-level public policy moving in tandem on global issues

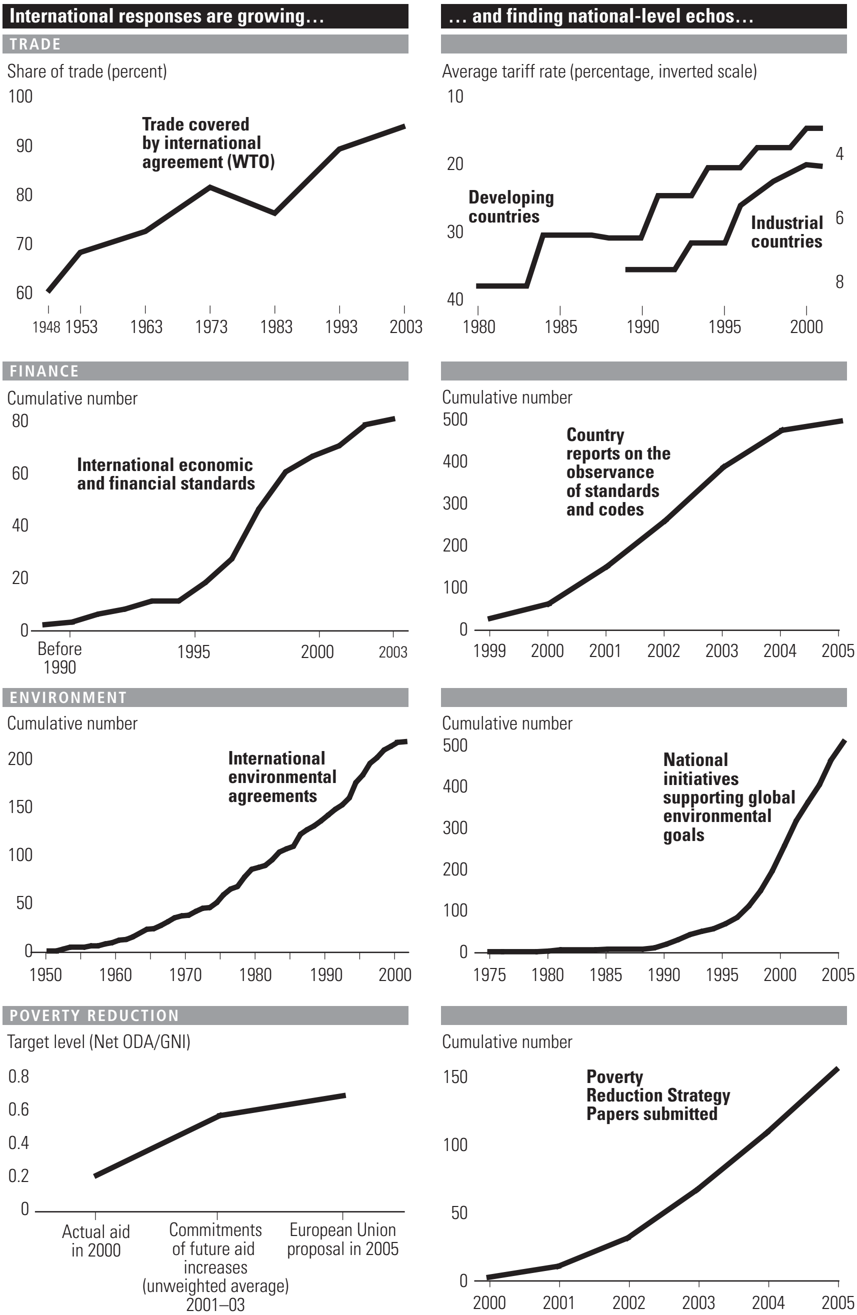
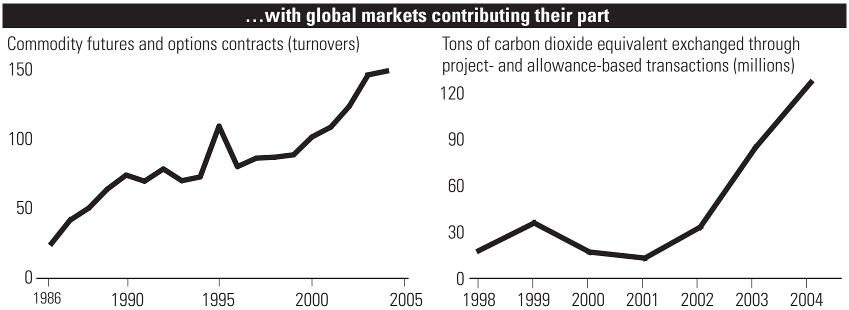


FIGURE 6 continued



Note: For trends in the four global issues, see figure 6 in the previous chapter.

Source: First panel, WTO 2005; UNCTAD 2004 (pp. 69 and 71). Second panel, Financial Stability Forum 2005; IMF 2005. Third panel, Barrett 2003; Merlen 2005. Fourth panel, EC 2005b; OECD 2004; UN 2003a; World Bank 2005a. Fifth panel, BIS 2005 (p. A105); Lecocq and Capoor 2005 (pp. 20 and 31).

Box 1

A NARRATIVE OF THE OPPORTUNITIES LOST WITHOUT ADEQUATE—AND FEASIBLE—RISK MANAGEMENT TOOLS

Consider a young woman from India, living in Chicago, Illinois, who wants to be a violinist. She finds it worrisome to borrow the money for her training because her future income as a musician is so uncertain. But new financial technology enables her to borrow money online that need not be fully repaid if an index of future income of violinists turns out to be disappointing. The loan makes it easier for her to pursue her favored career by limiting her risk. Her risk over time would be measured by indexes of occupational incomes maintained by computer networks. Most of the risk of her career is ultimately borne by portfolio investors all over the world rather than by her alone.

This same woman worries about members of her extended family in a small town in India, many of whom work in an industry in danger of closing and rendering their special skills obsolete. But their company buys a newly marketed livelihood insurance contract to protect its workers in the event of adverse economic developments. The insurance company then sells the risk on the international markets. Moreover, the Indian government makes an agreement with other countries to share economic risks, further protecting her family.

The young woman worries, too, about the neighborhood in a small industrial town in the United Kingdom where her parents live. The neighborhood is undergoing economic and social change, and she worries that

Box 1 Continued

A NARRATIVE OF THE OPPORTUNITIES LOST WITHOUT ADEQUATE—AND FEASIBLE—RISK MANAGEMENT TOOLS

her parents may lose their savings if their house loses value. But in a new financial order, her parents' mortgage comes with an attached home equity insurance policy that protects them against such an unfortunate outcome by paying a claim if the resale value of their home declines. Moreover, an intergenerational social security system and an inequality insurance system will further protect them.

New digital technology, with its millions of miles of fiber optic cable connections, can manage all these risks together, offsetting a risk in Chicago with another in Rio de Janeiro, a risk in the income of violinists with the risk in the income of wine producers in South Africa. The result will be the stabilization and enhancement of countries' economies and people's lives.

Most long-term economic risks are actually borne by individuals or families alone. Social welfare exists primarily for very poor people, but it is limited even for them. Today's world cannot insure against risk to people's paychecks over years and decades, cannot hedge against the economic risk that their neighborhoods will gradually decay, and cannot diversify away the risk that economic and societal changes will make old age difficult. Elderly people are left vulnerable to the risk that a stock market crash will wipe out their retirement savings, and many people live in relative poverty today because of a failure to control other risks.

To the extent that individuals are aware of these ever-present risks, they tend to be overcautious, sometimes avoiding opportunities because they justifiably fear having to bear the consequences of failure. They may tend to work cynically instead, treading water, staying in an unsatisfactory job, pretending to achieve, fearing to venture out into the rapids where real achievement is possible.

Under present conditions the woman in Chicago thus postpones her career as a violinist, waiting for some better time that may never come. She lacks information about the prospects for such a career and has no way to protect herself economically except to choose an uninspiring career.

Her uncle in India is laid off from his job and is unable to secure a comparable job. He goes into unwanted early retirement with only a meager income. Her parents in the United Kingdom see the value of their house fall as their neighborhood declines. At the same time the economy in their region slows, and the value of the UK stock market where they had stashed their other savings drops. As a result, they lack the wealth to support themselves well in their remaining years. Worrying about the risks to other members of her family can make the young woman's own life more difficult—and dreams of a career as a violinist even more remote.

Source: Shiller 2003 (pp. 6–8). Reprinted by permission of Princeton University Press.

TABLE 1

Six tools, $7 trillion gain
(billions of U.S. dollars)

Tool	Challenge addressed	Primary beneficiary	Annual gain	Net present value of gain[a]
Guarantees issued by aid agencies	Infrastructure investment	Developing countries	1.1	22
Securitization of future flow receivables	External borrowing	Developing countries	1.5	31
Advanced purchase commitments[b]	Malaria control	Malaria-endemic regions, especially Sub-Saharan Africa	1.4	47
GDP-indexed bonds	Public expenditure/ debt repayment smoothing	Developing countries	30.0	600
Macro markets[b]	Risk management	Group of Seven industrialized countries	145.1	2,902
International pollution permit trading	Reduction in greenhouse gas emissions	Industrialized countries	182.0	3,640
Total[c]			~360	~7,000

Note: For more details on the calculations, see the appendix to this chapter and the additional references mentioned there.

a. The sum of the gains is provided here for illustrative purposes only, since the methods used to estimate the gains refer to different base years.

b. The gains from these tools are expressed net of costs.

c. The discount rate is 5 percent for all the tools, except for advanced purchase commitments, where a discount rate of 3 percent is used in line with the common practice of using lower discount rates in health-related cost-benefit analyses.

Source: The estimates are based on data from Wormser and Babbar (2001); Kektar and Ratha (2001); Ratha (2002); Kremer and Glennerster (2004); Mills and Shillcutt (2004; 2005); Borensztein and Mauro (2004); Athanasoulis and Shiller (2001); and McKibben and Wilcoxen (1999).

Steps at the national level. Four measures at the national level seem especially important for realizing the policy potential of the new public finance:

- Strengthening demand for new financing technology, notably in risk management.
- Promoting the supply of such technology.
- Adjusting budgetary rules that stand in the way of meeting global challenges.
- Reaching more broad-based consensus on the role of the state as intermediary between external and domestic policy demands.

Paradoxical though it may sound, to increase demand for some of the new financing technology, especially the new risk management tools, policymakers should be more explicit about the risks of globalization while also demonstrating how the risks will no longer be allowed to unbalance, or even destroy, people's lives. The means to spread and share risk are at hand—such as bond indexation, commodity options, weather and terrorism insurance, guarantees, macro markets, and other income-smoothing technology. This new financing technology can better protect people against economic volatility and encourage productive risk taking, adding to an economy's dynamic efficiency.

One way to help people accept some of the newer finance and insurance instruments is to humanize the instruments (as in box 1) and to attach hard numbers to some of the potential gains (as in table 1). For Posner (2004, p. 139) cost-benefit analyses are "an indispensable step in rational decision-making." Such analysis could help persuade the general public and decisionmakers in the public and private sectors that investing in change, whether at home or abroad, can yield high social returns.

For policymakers in developing countries, where financial and insurance markets are usually less advanced and the potential gains are therefore especially large, the issue may be more one of letting their development partners and the markets know their interest in strengthening their finance and insurance systems (taken up again below, under next steps at the international level).[24]

Some of the new public finance instruments may need further testing and adaptation to the conditions in each country. Governments, in cooperation with industry and in consultation with the main stakeholders, may want to support research and development on new public finance instruments. The private sector has long recognized that finance is about more than money: it is a system and a craft. It would pay for governments to explore how to use more of the new technology for public policy purposes while safeguarding public benefits.

Some basic budgetary rules might also require revision. For example, in many countries line ministries may not financially support operational activities abroad, although ministries are increasingly involved in such activities. In industrial countries ministries often turn to foreign aid agencies to meet such objectives, contributing to the siphoning off of aid funds already noted. As a result, many countries not only underfund international cooperation abroad but also have no record of how much they actually spend on international concerns, at home or abroad. To avoid the type of fiscal illusion problems to which this gives rise and the consequences for resource availability (limiting what could be invested to supply new finance technology), legislators might consider redesigning budget laws and rules to make them more supportive of today's international cooperation requirements.[25]

But the importance of any one step may ultimately depend on how policymakers and the general public answer the most basic public finance question: what economic role for the state? If there is consensus that the role of the state in a globalized world is as intermediary between external and domestic policy demands, many of the other policy measures fall into place. This does not mean that they will be less controversial. They won't be, because they require change. And even when they result in enhanced national welfare, they may also entail redistribution of income and of other opportunities. Politics will not leave economics. But it is essential for society to gain a new common understanding of what role the state is to play, of when it is exercising responsive policymaking sovereignty that takes outside exigencies and opportunities into account to maximize national welfare.

Steps at the international level. Several measures could be undertaken at the international level to advance some of the new public finance practices:

- Reengineering intergovernmental organizations systematically and deliberately.
- Adopting a new approach to financing international cooperation, especially global public goods components.
- Strengthening demand for and supply of new financing technology, complementing the efforts of governments nationally.
- Creating an international high-level public-private finance council to foster and propel change along these lines.

National efforts to realign market-state relations have tended to reassess the government's role by exploring several questions (Stiglitz 1998). A similar battery of questions could be used to systematically review the role of intergovernmental organizations:

- Is there a role for public policy intervention at the international level (specifically, for intergovernmental organizations to complement national governments, markets, and civil society organizations)?
- If yes, what is it?
- What is the best way of performing that role?
- Do current policy practices reflect this best way?
- If not, what reforms are required?

Some intergovernmental organizations have begun to adjust to the new realities. Using a common set of criteria to examine these reforms across agencies could help to identify the new generic operational role of intergovernmental organizations. Such analysis could also help in formulating systematic criteria for the interaction between intergovernmental organizations and markets and public-private partnerships. A next step would be to develop methodologies for assessing how global public policy concerns would gain from such public-private interactions, which occupy a policy space between markets and governments. Preparing such assessments according to rigorous methodologies could allay many of the concerns that surround public-private partnering.[26]

Intergovernmental agencies (like governments nationally) also would benefit from a more dynamic view of what it means to correct market failure. They may need to do less about substituting for market imperfections and more about removing these imperfections and building capacity—within the private and the public sector—for market development.

It is common for intergovernmental organizations to mobilize resources based on a "business plan" sketched in broad strokes and only then to decide precisely how to use these resources. Encouraging greater use of modalities such as public-private partnerships could turn this practice around—bringing more specificity to the outputs to be produced and allowing financing packages to be structured on a product-by-product basis. This might imply a clearer differentiation between the financing provided to intergovernmental organizations to meet their regular budget costs and the financing intended for particular cooperation initiatives.

To encourage innovation, intergovernmental organizations could complement national research and development efforts, especially where the new financing technology involves products to be traded in global markets or the creation of a new international market. An example is the Prototype Carbon Fund, which is becoming a learning platform for the development of markets in carbon-related products.

But, as Jones points out, organizations are also guided by self-interest. Why assume that intergovernmental organizations would move along the new policy routes discussed here? Certainly, many international decisionmakers are fully committed to improving global conditions, achieving gains in efficiency and effectiveness, and promoting development wherever possible. One way to make the task of managing such change easier is to create an international high-level public-private finance council.

Composed of chief executive officers of private financial markets and finance ministers, the council could scan finance and insurance markets and the international public finance architecture for new developments, assess new financing needs, and advise intergovernmental organizations on how to promote more adequate financing of global challenges. Council members could hold consultations with concerned stakeholders, including civil society organizations, to gain new insights. The council's advice would be addressed to the operational agencies of the UN system and the international financial institutions, including the International Monetary Fund, World Bank, and regional development banks. In this way, intergovernmental organizations would be continuously prodded to innovate—something that may not come naturally to them (judging from the literature on the comparative advantage of public and private actors; see Shleifer and Vishny 2002).

Issues for further research

There is close interaction between policymaking and research. The concepts and analytical frameworks devised by scholars strongly influence how reality is described and interpreted. As Keynes (1936) cautioned, "Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back." Yet when faced with new realities, the "practical men" also deviate from standard theory. And, as is the case now in public finance, policymaking generates new insights that inform research and analysis and call for new research and "scribbling" to allow standard public finance theory to catch up with changed realities and the changed practice of public finance.

Public finance scholars will find a host of issues in the book that require further research and study. Three issues in particular came up repeatedly during the preparation of the book:

- Optimal provision of (global) public goods.
- Market failure and government failure.
- Transnational—global and regional—public goods.

At present, the "Samuelson condition" (Samuelson 1954, 1955) is the main criterion helping policymakers frame the determination of the efficient provision level of public goods. The condition is met when the marginal cost of providing the public good equals the sum of the marginal amount each person affected by the good is willing to pay. There are two main reasons why it may be useful to revisit the application of the Samuelson condition.

First, the state is no longer the sole producer or financier of public goods. Today, other actors provide many, if not most, public goods. Thus, in line with the changes characterizing new public finance 1, the relevant question is what types of public policy incentives are needed to ensure efficient provision as actors come together to provide the good. Is the government's input meant to cover the full cost of providing the good or only a fraction—say, the cost of a fiscal incentive?

The question of optimal provision becomes even more complicated for global public goods, where states may provide incentives nationally, intergovernmental organizations may offer additional incentives at the international level, and private actors respond to these public policy incentives with different private spending decisions. The usefulness of the Samuelson condition, as traditionally presented and applied, in answering these questions is limited. The issue to clarify is whose marginal willingness to pay for which input to the public good is to be aggregated; and whose costs are being taken into account on the other side of the equation?

Second, the blending function of the state also presents challenges. In the traditional analysis the Samuelson condition relates to the aggregation of national preferences. But today preferences for the provision of public goods often come from outside national borders as well as inside. If the external preferences demand a higher level of provision than domestic preferences suggest, and if the state aligns provision to the external demand, the Samuelson condition would not be met: the marginal cost of providing the good might exceed the sum of the marginal willingness to pay of the country's (tax-paying) residents. If the state ignores external demands, provision of the good would meet the Samuelson condition, leaving some of the domestic population content but, because provision falls short of external demand, costing the country internationally.

These analyses consider only the short run, but the time dimension may be crucial in both cases. For example, asking domestic constituencies to pay more than they are currently willing to pay could generate benefits for national actors in the longer run. Trade liberalization is an example. In other instances where external policy demand exceeds domestic demand, the state may justifiably seek compensation from the international community (incremental cost reimbursement) or suggest to the world community that time for adjustment is needed before outside demands are taken into account.

Thus, it seems that it might be useful to revisit the Samuelson condition and explore how it could be refined to better reflect the current reality that most public goods are provided by many actors rather than the state alone and that states are increasingly expected to blend external and domestic policy demands.

A further possible concern relates to optimal provision when information problems cause people to undervalue a particular public good (say, prevention against avian flu). Applying the Samuelson condition may lead to inadequate (over- or under-) provision. Global public goods—because of their complexity—are especially likely to generate such problems. The challenge thus is how to improve the availability of information about the costs and benefits of the current provision status of various global public goods and the net benefits to be derived from any enhancement measures. Might the concept of adequate provision and the assessment methodology suggested in the chapter by Conceição and Mendoza perhaps be a useful step forward?

Governments continue to have an important role in correcting market failure. But markets and civil society are also correcting state failure and failures of intergovernmental cooperation. With the globalization of markets and the increased mobility of factors of production and with states competing for these mobile factors, markets may exercise de facto coercive power over states. States, which remain shackled to their territory, may be tempted to free ride on global public goods provision, whereas the participants in globalizing markets and global civil society may want enhanced provision of various global public goods. Sometimes that interest is so strong that, as documented in Kaul's chapter on global public-private partnerships, these private actors may move ahead with voluntary provision rather than wait for the state to respond. And at times private actors may impose high penalties on noncompliant states, such as increased borrowing costs for states that do not offer what is generally perceived as a good business climate.

This, of course, raises the question of who is correcting whose failure.

Global public goods (perhaps more so than pure local, national, or even regional public goods) demonstrate that publicness in consumption does not imply that all enjoy the good in the same way. It only means that many, sometimes all, are affected by the good's costs or benefits. But they may be affected in different ways. The vast differences and disparities that exist in the world mean that preferences for global public goods are likely to vary considerably. This raises questions about the distributional consequences of the trend toward increased voluntary and private provision of these goods: whose preferences do global public goods reflect?

Preference aggregation at the intergovernmental level gives rise to related questions. A number of proposals for fairer decisionmaking on global issues are being considered.[27] Also important is understanding why agreements on global policy initiatives (like halving world poverty or reducing greenhouse gases) and agreements on how to share the costs of these initiatives are often negotiated separately, leading to many unfunded mandates (intergovernmental resolutions that lack financial backing) and many nonmandated funds (financing mechanisms linked to global concerns but created outside of intergovernmental processes).[28] This raises once again the question of how well global public policy and expenditure priorities are matched.

Another area requiring further study is the identification of the appropriate actor and level (local, national, or international) of policy intervention. In global communicable disease control the issues are how to ensure coherence between vertical, disease-specific interventions that are essentially international, and horizontal interventions (such as enhancing health systems), which are primarily national initiatives (see the example of malaria control in table 1 in the previous chapter). Empirical studies could draw on the experiences of global support initiatives such as the Global Fund to Fight AIDS, Tuberculosis, and Malaria to provide policy clues.

Many other questions can be raised, including how much the lessons from the fiscal equivalence principle apply internationally, how to conceptualize trade in public services between governments (like the ones brokered by the Global Environment Facility), and how to use aggregation technologies or the wider notion of the production path to identify which building blocks of the public good to assign to which actor or level.

The research outputs on such issues could ultimately lead to a comprehensive theory of the new public finance—a theory that combines international cooperation behind borders (the blending of domestic and external policy preferences) and international cooperation beyond national borders (the blending of economic and foreign policy goals).

Looking ahead

For centuries the world has been concerned with developing and strengthening the institutions of independent states and national policymaking sovereignty. Public finance has evolved to support these concerns. Today, however, globalization requires states to use their policymaking power more flexibly, taking actions nationally and internationally, wherever they can best be implemented. It challenges states to think in terms of "global public policy networks" (Reinicke 1998): international cooperation behind and beyond borders.

Governments are responding to this challenge, and public finance, as one of the major policy instruments of governments, is also changing as new issues and new policy avenues arise.

The book is about how public finance is being reinvented to enable its policy measures and tools to cross public-private divides and domestic-foreign frontiers to meet the growing agenda of global challenges. It aspires to broaden and advance the debate on this emerging global public finance.

New issues can take a long time to be recognized. The new global public finance discussed in the book is not as new as one might think. Richard A. Musgrave in his 1969 book *Fiscal Systems* raised many of the topics discussed here. He had already envisioned the challenges we are facing today with ever greater urgency. Now may be the time to take them on.

Appendix. Calculations behind table 1, six tools, $7 trillion gain

New public finance tools are attractive because they allocate resources more efficiently than traditional tools do. The quantitative estimates of the efficiency gains—broadly understood—that are possible with the use of the new public finance tools presented in table 1 are described here in more detail.[29]

Since tools are generic and applicable to a wide range of situations, the efficiency gains are estimated in the context of concrete applications to specific policy tasks. Neither the size nor the scope (beneficiary range) of the gains is an inherent characteristic of the tool. Who gains and how much depends on its particular application.

The efficiency gains estimated here focus on the cost savings from achieving policy objectives more cheaply than is possible with conventional policy approaches. The following illustrations, presented in descending order of net present value gains, show that as few as six tools applied to six different issues could generate about $7 trillion in net present value gains. The annual gains from the six tools could be as high as $360 billion.[30]

- *Guarantees.* Guarantees provided by bilateral or multilateral aid agencies to reduce the risks to investors in developing countries can lower the cost of capital, as shown by the difference in interest spreads between U.S. Treasury bonds and long-term lending for infrastructure projects in selected developing countries with and without guarantees. Assuming annual private sector investment flows into developing country infrastructure of about $64 billion (based on the annual average for 1990–2003; Izaguirre 2004, p. 3) and a 170 basis point reduction in spread (based on the average of the actual reductions observed in a set of developing countries; Wormser and Babar 2001), the annual savings from guarantees to finance infrastructure in developing countries could reach $1.1 billion, or $22 billion in net present value.
- *Securitization of future flow receivables.* The amount of securitizable future flow receivables in hard currency available to developing countries is estimated to be at least $77 billion a year (Ratha 2002, p. 3). If these receivables were securitized (as, for example, discussed in the chapter by Conceição, Rajan, and Shah, in the book), developing countries' borrowing cost would be about 200 basis points below that of an unsecured debt float (Kektar and Ratha 2001, p. 3). This implies yearly savings of about $1.5 billion, or $31 billion in net present value.
- *Advanced purchase commitments.* Advanced purchase commitments are a tool developed to encourage, among other things, pro-poor research and development, including the creation and diffusion of vaccines for neglected diseases. An estimated commitment of $3 billion (in net present value) would be required to encourage pharmaceutical companies to invest in a new vaccine—like a vaccine for malaria—that benefits primarily the poor

(Kremer and Glennerster 2004, p. 89). An advanced purchase commitment of this type would bring forward the availability of a malaria vaccine by 10 years (Kremer and Glennerster 2004, p. 95). The vaccine would reduce the costs of the related annual disease burden by about half (Kremer 2001, pp. 50–51). The average annual net benefit of reducing the malaria burden by half in Sub-Saharan Africa would be about \$3–\$10 billion a year (Mills and Shillcutt 2004, 2005). Thus, taking the median, the vaccine would create gains of at least \$6 billion a year, and bringing the vaccine's availability forward by 10 years would represent a net present value gain of \$50 billion. Deducting the \$3 billion needed to pay for the commitment leads to a gain in net present value terms of \$47 billion, or \$1.4 billion a year on an annualized basis.

- *GDP-indexed bonds.* GDP-indexed bonds link payments on sovereign debt to the issuing country's rate of economic growth. They act as automatic stabilizers of government resources, reducing the need for drastic public spending cuts when growth is slow and restraining new government spending when growth is rapid. Their advantage over unindexed bonds is that they limit the range of variation of the debt to GDP ratio. Although GDP-indexed bonds cannot compensate for unsustainable macro policies, they can help reduce the occurrence of debt defaults and financial crises in developing countries by stabilizing debt ratios. Econometric simulations suggest that an increase in the debt to GDP ratio of 10 percent is linked to a 20 percent increase in the probability of a crisis occurring (as indicated by Borensztein and Mauro 2004, pp. 168–69, based on empirical estimates by Detragiache and Spilimbergo 2001). Assuming that GDP-indexed bonds lower this probability by one-fifth and considering that the output costs of financial crises amounted to about \$150 billion a year (based on a study of eight countries during 1995–2002 by Griffith-Jones and Gottschalk 2004, p. 5), growth-indexed bonds could yield annual cost savings of at least \$30 billion, or \$600 billion in net present value.
- *Macro markets.* Macro markets would enable the trading of securities linked to aggregated—"macro"—incomes like the GDP of a single country or a group of countries, or components of the national GDP, such as the income of particular occupational groups. Macro markets would allow public and private actors to "insure" against volatility in such income streams by buying securities that offset adverse swings. Simulations of such trading involving the Group of Seven industrial countries suggest that such trading could generate huge benefits. After subtracting the cost of paying for the securities, the annual net gain is estimated to reach \$145.1 billion, or \$2,902 billion in net present value (Athanasoulis and Shiller 2001, p. 1046).
- *International pollution permit trading.* Reduction of greenhouse gas emissions is a widely shared concern of the international community. There are several policy options for meeting emission targets such as those set forth in the Kyoto Protocol.[31] A frequently discussed set of alternatives is international permit trading and no international permit trading. Trading would be more efficient than if each country were to meet the targets

through national-level measures alone. Countries where reductions are more costly could, for instance, buy permits from countries where reductions are less costly. In fact, through international permit trading the industrial countries (which, together with the transition economies, are required to reduce emissions under the Kyoto Protocol) could reduce their annual compliance cost by about $182 billion, or $3,640 billion in net present value (McKibben and Wilcoxen 1999, pp. 23–25).

NOTES

1. A vast literature has emerged on this topic. See, among others, Burgess and Stern (1993); Cnossen and Sinn (2003); Keen and Simone (2004); Schulze and Ursprung (1999); Slemrod (2004); Swank and Steinmo (2002); Tanzi (1994); and Zee (1996).

2. These measures can represent net savings by comparison with direct spending when they do not require the creation or expansion of government bureaucracies, as direct spending typically does.

3. The most desirable and feasible policy mix will vary across country groups. Tanzi suggests that developing countries still have room to increase public spending. Governments in industrial countries may have to scale back some programs and encourage people to assume more private responsibility for reducing their exposure to such risks as ill-health or temporary (business-cycle-related) unemployment.

4. As Caballero (2003, p. 4) puts it: "to do so, [countries] need access to hedging and insurance instruments to guard against the disastrous events caused by volatile capital flows. For now, [developing] economies are self-insuring through costly accumulation of large international reserves and stabilization funds. Most individuals would be underinsured if they had to leave a million dollars aside for a potential automobile collision and the liabilities that would follow, rather than buying insurance against such event; countries are no different. Underinsurance is what greatly amplifies these countries' recessions."

5. Bondholders would benefit as well. As Borensztein and Mauro (2004, p. 197) argue, "if low GDP growth renders a country's debt position unsustainable, the country will likely default. It is surely better for international investors to receive lower debt repayments through indexation that is agreed upon in a contract from the outset, rather than face uncertain recovery values through a chaotic default process." GDP-indexed bonds are receiving growing political attention (see, for example, IMF 2004; United Nations 2005; U.S. Council of Economic Advisers 2004). Other types of indexation might also be used. For example, countries that rely heavily on commodity exports are vulnerable to price volatility in commodity markets. A sudden drop in commodity prices could jeopardize a country's ability to meet its sovereign debt service obligations in hard currency—without any underlying change in domestic policy or other economic prospects. In these situations, bonds could be indexed to the price level of the key commodity (or basket of commodities). See, for example, Caballero (2003) and Atta-Mensah (2004).

6. By some estimates developing countries annually lose about $50 billion because of tax havens (Oxfam Great Britain 2000, p. 2). The U.S. Government Accountability Office estimates that the tax shelter services obtained by 61 companies during 1998–2003 resulted in tax revenue loss to the U.S. government of $3.4 billion (U.S. GAO 2005, p. 6). On possible future trends in tax avoidance and evasion, see Tanzi (2001).

7. Most bilateral tax treaties are drafted along the lines of the OECD model tax convention of 1997 (revised in 2003; OECD 2003a; www.oecd.org/dataoecd/52/34/1914467.pdf) and the United Nations Model Double Taxation Convention between Developed and Developing Countries (UN 2001, 2003b). For a discussion, see UNCTAD (2000).

8. For more on the partnerships identified and analyzed, see the section on global public-private partnerships at www.thenewpublicfinance.org.

9. The UK government has pledged $1.8 billion over 15 years and the pilot is expected to raise an additional $4 billion over 10 years (UK DFID 2005).

10. Powerful nations may monopolize the international political dialogue and distort policy outcomes. Countries may try to free ride instead of contributing to the management of global externalities or providing inputs to global public goods (Sandler 2004). Information asymmetries also lead intergovernmental cooperation fail.

11. Various studies (Ferroni and Mody 2002; Kaul and Le Goulven 2003; Raffer 1999, 2004; Reisen, Soto, and Weithöner 2004; World Bank 2001) have shown that financing for international activities related to the provision of global public goods was often simply taken from the existing official development assistance envelope in industrial countries.

12. The persistent failure to provide information on the financing required to achieve internationally agreed goals is, at least in some instances, slowly being overcome. Major breakthroughs were achieved by the Commission on Macroeconomics and Health (CMH 2001) on control of communicable disease and subsequently by the UN Millennium Project (2005) on detailed estimates of the costs of achieving global goals. The UN Millennium Project (2005, p. 57) estimates that meeting the Millennium Development Goals would require annual increases in official development assistance of $70 billion in 2006, rising to $130 billion in 2015. It estimates that meeting the goals is likely to generate huge benefits, including lifting more than 500 million people out of poverty, saving millions of lives, giving millions of children an opportunity to attend school, reversing environmental degradation, and averting conflict, among other benefits (UN Millennium Project 2005, p. 60).

13. See, for example, Lomborg (2004), which also includes references to numerous other studies.

14. For example, Barrett (2004), as reported in Conceição and Mendoza (in the book), shows the results of studies that indicate that most of the benefits of smallpox eradication are accruing to developing countries ($35 billion out of global net benefits of $47 billion), while polio eradication, according to one study, is likely to gener-

ate \$72 billion in net benefits to industrial countries, with developing countries suffering a net loss of \$11 billion.

15. Other schemes include the EU Emission Trading Scheme (EC 2005a), the UK Emission Trading Scheme (UK DEFRA 2001), and the New South Wales, Australia, trading scheme (New South Wales Government 2004).

16. On the issue of international commodity agreements, see, for example, Gilbert (1996).

17. See www.worldbank.org/poverty.

18. It is important to recognize that sometimes incentive structures are not easy to change, as debates on Special Drawing Right allocations show (see, for example, Mussa, Boughton, and Isard 1996).

19. For more detail on the activities of the Multilateral Investment Guarantee Agency, see www.miga.org, and the International Finance Corporation, see www.ifc.org.

20. Figure 5 could be refined further, for example, by indicating the evolution in the intensity of use with which the various types of grant assistance would be employed, as Radelet differentiates. In addition, one could reflect the continuum from peacekeeping support and humanitarian assistance to development aid. All these different types of aid are in figure 5 collapsed into the single tool "grants."

21. The costs to developing countries resulting from the multilateral trade regime as currently provided are estimated to be about \$150 billion (see Hertel 2004, as reported in Conceição and Mendoza in the book). And tariffs on agricultural imports in OECD countries cost the world more than \$91 billion and developing countries about \$12.5 billion a year (Tokarick 2005, p. 590).

22. For a related analysis of the balance between centralization and competition see Esty and Geradin (2001).

23. It should, of course, be kept in mind that country conditions and issues vary, and the question of which financing arrangement is best for which purpose can only be decided case by case. Wilensky (2002) discusses the diversity in approaches and pace of implementation of policies across countries, even when the policies address similar goals.

24. Domestic financial markets are an important ingredient of development (Levine 2004).

25. For more on the difficulties line ministries face as well as on what some countries have already done to improve this situation, see a series of country case studies available at www.thenewpublicfinance.org.

26. Kaul's chapter on global public-private partnerships provides some initial suggestions for developing such assessment criteria and methodologies; see also the reasons for participating in the UN Global Compact (www.unglobalcompact.org).

27. See, for example, Buira (2003) and Bradford and Linn (2004).

28. See again figure 3 in this chapter, and for more detail, the chapter by Conceição.

29. Estimates of the benefits associated with the enhanced provision of global public goods reported in Conceição and Mendoza describe courses of corrective action that do not necessarily explore the most efficient tool for the purpose. Thus, a further refinement of that exercise could consider first the determination of what is the most efficient tool— that is, the approach that would lead to the enhanced provision of the good at the least cost—before comparing the net benefits to be derived from investing in alternative policy objectives. However, one of the tools considered here—international pollution permit trading—is the tool underlying the calculation of the net benefits of enhancing the provision of climate stability in Conceição and Mendoza—and, therefore, the benefits reported in that chapter include the efficiency gains of using this tool as opposed to the "no trading"option.

30. For details on the calculations see Mendoza, Merlen, and Conceição (2005), available at www.thenewpublicfinance.org. The totals are approximate and provided for illustrative purposes only, since the calculations for each application use different methods and do not use the same base year.

31. See http://unfccc.int/essential_background/kyoto_protocol/items/2830.php.

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Glossary

Allocative efficiency: The use of resources where they promise the highest relative returns, given existing technology and preferences.

Asymmetric information: A situation in which one or more parties to a transaction have better information than the other party or parties, as when the seller of a used car has more information about its quality than the buyer does.

Bond: An interest-bearing certificate issued by a government or corporation, promising to repay a sum of money (the principal) plus interest at a specified date or dates in the future.

Capital markets: Financial markets for *equity securities* and for *debt securities* with a maturity greater than one year.

Club good: An intermediate case between a *public good* and a *private good.* With a club good exclusion is feasible, but the optimal size of the club is generally larger than one individual.

Debt security: Security such as a *bond* representing borrowed money with a fixed repayment amount, specific maturity or maturities, and usually a specific interest rate or an original purchase discount.

Derivative: Financial instrument whose value is based on another security. For example, an option is a derivative instrument because its value derives from an underlying stock, stock index, or *futures contract.*

Definitions are drawn from John Downes and Jordan Elliot Goodman, 1991, *Dictionary of Finance and Investment Terms,* 3rd ed., New York: Barron's Educational Series; Frank J. Fabozzi, Franco Modigliani, Frank J. Jones, and Michael G. Ferri, 2002, *Foundations of Financial Markets and Institutions,* 3rd ed., New York: Prentice Hall; Inge Kaul, Pedro Conceição, Katell Le Goulven, and Ronald U. Mendoza, eds., 2003, *Providing Global Public Goods: Responding to Global Challenges,* New York: Oxford University Press; David W. Pearce, ed., 1992, *The MIT Dictionary of Modern Economics,* 4th ed., Cambridge, Mass: MIT Press. Paul A. Samuelson and William D. Nordhaus, 1989, *Economics,* 13th ed., New York: McGraw-Hill; Stephen W. Stein and Yves Miedzianogora, 1993, "International Project Finance—New Frontiers," *Project and Trade Finance* 128 (December): 36–41; Joseph E. Stiglitz and Carl E. Walsh, 2002, *Economics,* 3rd ed., New York: W.W.Norton.

Dynamic efficiency: The efficiency of an economy that appropriately balances short-run concerns (*static efficiency*) with long-run concerns (focusing on encouraging research and development).

Economies of scale: Reductions in the average cost of a product, resulting from an expanded level of output.

Economies of scope: The situation that exists when it is less expensive to produce two products together than to produce each one separately.

Equity security: Ownership interest possessed by shareholders in a corporation. Also known as a stock.

Exchange: Physical or electronic location where market participants who are members of the exchange trade stocks or other securities that are listed for trading on the exchange.

Externality: A phenomenon that arises when an individual or firm takes an action but does not bear all the costs (negative externality) or receive all the benefits (positive externality).

Final public good: *Public goods* (similar to *private goods*) can be differentiated by the stages of their production process. Final public goods are those desired for consumption, such as clean air, efficient markets, and peace and security. Producing final public goods often requires inputs of many different private goods, public goods, or both. Public goods that contribute to the production of a final public good are called intermediate public goods.

Financial intermediation: Placement of money with a financial intermediary like a broker or bank, which invests it in bonds, stocks, mortgages, or other loans, money market securities, or government obligations so as to achieve a targeted return.

Free rider: An actor such as an individual or a firm that enjoys the benefits of a public good without paying for it. Because of the difficulty of excluding anyone from using a *public* (nonexclusive) *good*, beneficiaries of the good have an incentive to avoid paying for it—that is, to be free-riders.

Futures contract: A standardized exchange-traded, legal agreement between a buyer and a seller in which the buyer agrees to take delivery of something at a specified price at the end of a designated period of time and the seller agrees to make delivery.

Global public good: A *public good* with benefits or costs that are strongly universal across countries, people, and generations.

Grant: Financing provided as a one-way transfer rather than an exchange by some agency or individual to other agencies or individuals.

Hedging: Strategy used to offset investment risk. A perfect hedge is one eliminating the possibility of future gain or loss.

Insurance: An instrument that enables the exchange of the risk of a large loss for the certainty of a small loss. The purchase of insurance, by payment of an insurance premium, spreads the risk associated with any specified contingency over a large number of individuals.

Intermediate public good: See *final public good.*

Market failure: Markets may fail to attain an efficient outcome under conditions such as lack of competition and existence of externalities, public goods, or information asymmetries.

Moral hazard: Arises under conditions of asymmetric information, when those with superior information alter their behavior in a way that benefits them while imposing costs on those with inferior information. Common examples of moral hazard involve insurance—those who purchase insurance could have a reduced incentive to avoid what they are insuring against.

Option: A contract in which the writer of the option grants the buyer the right, but not the obligation, to exercise some feature of the contract, usually to purchase from or to sell to the writer the contracted item, at a specified price within a specified period of time (or at a specified date).

Pareto efficient: A resource allocation is said to be Pareto efficient (or optimal) if there is no rearrangement that can make anyone better off without making someone else worse off.

Perfect information: The possession by market participants in a competitive economy of complete knowledge and foresight with regard to the array of present and future prices as well as the location of goods and services. Any divergence from such circumstances can be regarded as a state of imperfect information and is commonly cited as a source of market imperfection.

Principal-agent problem: Difficulties that can arise when the managers of an organization (for example, a firm or government), who are acting as agents for the organization's owners (for example, shareholders or constituencies) or principals, follow their own interests at the owners' expense.

Prisoner's dilemma: A situation in which the noncooperative pursuit of self-interest by two (or more) parties makes them both worse off.

Private good: Good with rival and exclusive benefits and/or costs.

Production efficiency: The condition in which more of some goods cannot be produced without producing less of other goods—or the production of goods at least cost.

Project finance: The financing of a stand-alone project in which the lenders of the debt finance for the project receive repayment solely or primarily from the revenue stream generated by the project.

Public good: Good with nonrival and/or nonexclusive benefits and/or costs. If a good possesses both these properties, it is a pure public good. If it exhibits only one of the properties, it is an impure public good. A good's benefits or costs are nonrival if one actor's use of the good does not reduce the benefits accruing to, or the costs to be borne by, others; and they are nonexclusive if no one can be or is being excluded from enjoying or having to bear them.

Regional public good: A *public good* whose benefits or costs span some or all countries within a geographic region.

Rent seeking: Behavior that seeks to obtain benefits by manipulating the economic environment, especially through government decisions or regulation.

Reinsurer: A financial intermediary that accepts insurance risks from a variety of primary insurers.

Securitization: The pooling of various types of debt (like mortgages or car loans) or other future flow receivables (like export earnings and workers' remittances in foreign currency or the future income to be generated by an infrastructure project such as a toll road) to back an issuance of securities.

Social benefit: The benefit to society resulting from an activity or good, as distinct from the private benefit to an individual actor or owner.

Social cost: The opportunity cost to society as a whole rather than just to one firm or individual. One of the major reasons that social costs differ from observed private costs is the existence of *externalities.*

Static efficiency: The efficiency of the economy with given technology.

Transnational public goods: An umbrella term covering both regional and global public goods.

Transaction costs: The extra costs (beyond the price of the purchase) of conducting a transaction, whether those costs are money, time, or inconvenience.

X-efficiency: See *production efficiency.*

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