

Shifting Patterns of Economic Growth and Rethinking Development

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Abstract

This paper provides an historical overview of both the evolution of the economic performance of the developing world and the evolution of economic thought on development policy. The 20th century was broadly characterized by divergence between high-income countries and the developing world, with only a limited number (less than 10 percent of the economies in the world) managing to progress out of lower or middle-income status to high-income status. The last decade witnessed a sharp reversal from a pattern of divergence to convergence—particularly for a set of large middle-income countries. The latter phenomenon was also driven by increasing economic ties among developing countries,

and on the intellectual scale, increased knowledge generation and sharing among the developing countries. Re-thinking development policy implies confronting these realities: 20th century economic divergence, the experience of the handful of success stories, and the recent rise of the multi-polar growth world. The paper provides descriptive data and a literature survey to document these trends. The paper also provides a brief survey of the role of multilateral institutions—in particular, the World Bank—in this changing context and offers suggestions on how they can adapt their strategies to improve development outcomes.

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Shifting Patterns of Economic Growth and Rethinking Development

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I. Introduction

The industrial revolution marked a dramatic turning point in the economic progress of nations. Technological innovation created new tools that created the potential for a dramatic increase in productivity and living standards. During the nineteenth century, a number of technological leaders and early adapters leapt ahead of the rest of the world, while others lagged behind.

One might have expected that the twentieth century would have been a period in which technology spread across the world—allowing countries to catch up with advanced economies. This might have been achieved through trade and capital flows based upon continued progress in transportation and communication technology. In fact, the predominant neo-classical paradigm in economic thinking suggested that this would be the case.

Instead, the twentieth century was an unfortunate period of continued and accelerated divergence in living standards. In part, this may have been due to an interruption in trade and capital flows during the World Wars and the inter-war Great Depression that marked the first half of the twentieth century. Protectionism also persisted in many countries following the Second World War. It was only with the Uruguay Round of negotiations in the 1980s, leading to the eventual establishment of the WTO in 1995, that a clear institutionalized path towards trade opening was established. Meanwhile, technological progress in communications and transport – but especially communications—facilitated the acceleration of global trade and capital flows in the last quarter of the twentieth century.

On the other hand, there was a small group of exceptional cases of “catch-up.” In addition, since the turn of the century, there has been reinvigorated growth in the developing world, especially in a number of large developing countries, such as Brazil, China, India, Indonesia, and the Russian Federation. In some cases—most notably, China and India—the high growth period extends back some twenty or thirty years. In addition, there are numerous other countries that are taking advantage of growing trade and financial links – both with developed and developing countries—to accelerate economic growth. In brief, the global economy has entered a period of multi-polar growth with large developing countries leading the way as the new and most dynamic growth poles.

This historical record provides a challenge for economists to fully understand the success of the rising economic powers and re-think the traditional views on economic development. Three major questions emerge: (i) Why was there so much divergence during the twentieth century? (ii) Why has the pattern changed recently and can it be sustained? And (iii) What is the role of development institutions in facilitating sustained convergence? This paper is organized around these questions. The next section provides a history of 20th century divergence. We then provide an anatomy of the rise of the multi-polar growth world. This is followed by a critique of the history of development thinking and the need for a democratic approach to economic enquiry for development. We conclude the paper with a brief historical review the role of the multilateral development institutions – with a focus on the World Bank—and how this role is evolving in response to the changes in the global economy.

II. The Challenge of Economic Development: Historical Antecedents and 20th Century Divergence

Before the industrial revolution, there was little growth in the world economy and the income gap between countries was extremely small. For example, even in 1820, the between-country income differences represented less than 15 percent of income equality across people in the world, whereas the between-country share rose to well over half of global inequality by 1950³, and the richest country's per capita income was only less than four times higher than the poorest (Maddison 2011). The industrial revolution led to the Great Divergence: world growth was driven by a few Western industrialized countries before WWII, and similarly after WWII--with the exception of Japan, which joined the group of advanced industrialized nations.

Maddison (1982) divides the last 1500 years into four economic epochs: agrarianism, advancing agrarianism, merchant capitalism, and capitalism. The capitalism period started at the time of the industrial revolution. The new technology created the potential for new techniques of production that required organizational structures based on capitalist economic relations. It also represented the start of a period of unprecedented growth for the world economy (Table 1).

Table 1: Growth rates in four economic epochs, according to Maddison (1982)

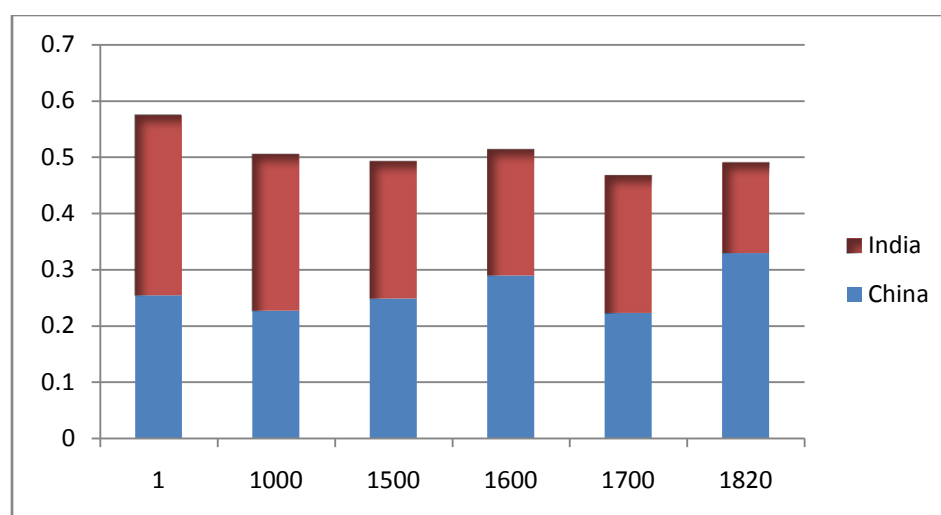
	Population	GDP per head	GDP
Agrarianism, 500-1500	0.1	0.0	0.1
Advancing agrarianism, 1500-1700	0.2	0.2	0.4
Merchant capitalism, 1700-1820	0.4	0.2	0.6
Capitalism, 1820-1980	0.9	1.6	2.5

Source: Maddison (1982)

Prior to the industrial revolution, the global economic landscape was dramatically different. Economies were largely based on agriculture and scientific progress was largely divorced from technological innovation in production (Lin 1995). Agricultural productivity was also similar across nations, and as a result, the largest poles of economic production were in fact the largest population centers. China and India together contributed about half of world GDP during the 17th and 18th centuries (Figure 1).

³ See Bourguignon and Morrisson (2002) for a calculation of global inequality since the start of the industrial revolution and a decomposition between within country and between country inequality. The figures referred to here are from Theil Index and Mean Logarithmic Difference measures. The between country share is larger for the "standard deviation of logarithm" method; however, the same trend is followed: a lower share of between-country differences that then grows dramatically in the twentieth century. See Table 2 of Bourguignon and Morrisson for more details.

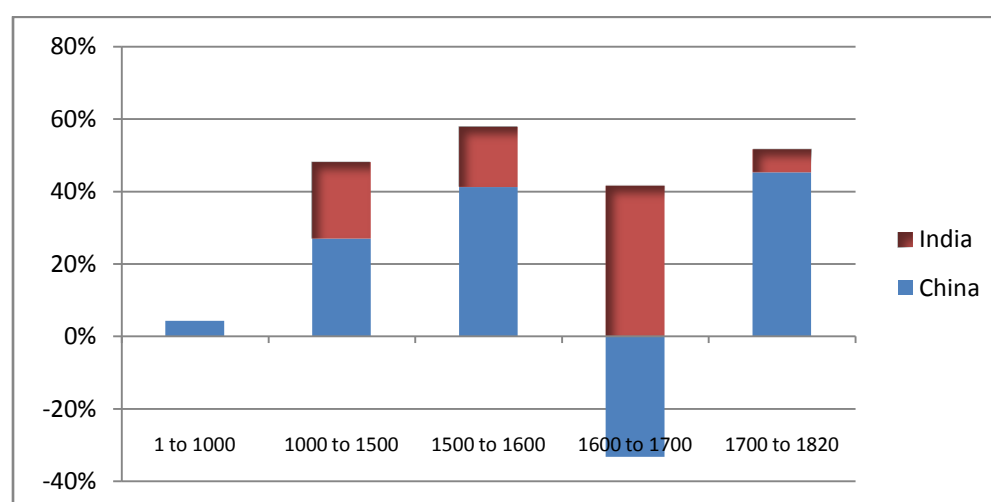
Figure 1: China and India Shares of World GDP, Pre-Industrial Revolution (ratio)



Source: Author's presentation based on data from Maddison.

Growth was also largely determined by these large population economies as well. During the first millennium, their growth lagged the rest of the world; however, in the following centuries, the two countries contributed to roughly half of world GDP growth. The composition of that contribution changed as China and India alternated in terms of stronger or weaker growth periods leading up to the industrial revolution (Figure 2).

Figure 2: Contribution to global growth of China and India, Pre-Industrial Revolution (%)



Source: Author's calculations based on data from Maddison.

It should be noted that the calculation of the contribution to growth over these centuries is somewhat misleading, given that annual growth rates were minimal, as displayed in Table 1.

China and India dominated merely based on the size of their populations, and economic production was largely driven by the need to produce enough food for the masses to survive and for the small elite to preserve their higher standards of living.

The Industrial Revolution and the Great Divergence

All of this changed with the industrial revolution. Scientific progress began to be applied to the means of production as machines were developed that both increased productivity in firms, but also dramatically reduced transportation costs. This created the possibility for the countries that developed those technologies, or those that adapted the technologies first, to grow much faster than less technologically advanced countries.

The world growth rates achieved post-1820 also stand out clearly against the growth rates from the previous three centuries of the Renaissance, Reformation and Enlightenment, respectively. Whereas per-capita GDP growth worldwide was negligible in 1500-1820, it was about one-and-a-half percent per annum following 1820.

There appear to be four interconnected sources of this growth (Fardoust, 2006):

- The Industrial Revolution and improved transportation and communication technologies;
- Trade liberalization and the intellectual doctrine of trade, as articulated by the likes of Adam Smith and David Ricardo;
- The peacefulness and stability (relative to earlier times) in Europe, where the likes of Metternich, Bismarck and Castlereagh maintained the Concert of Europe and Britain assured a balance of power in its *Pax Britannica*; and
- An increase in 'equity' in European institutions beginning in the late seventeenth century and continuing through the early twentieth century.

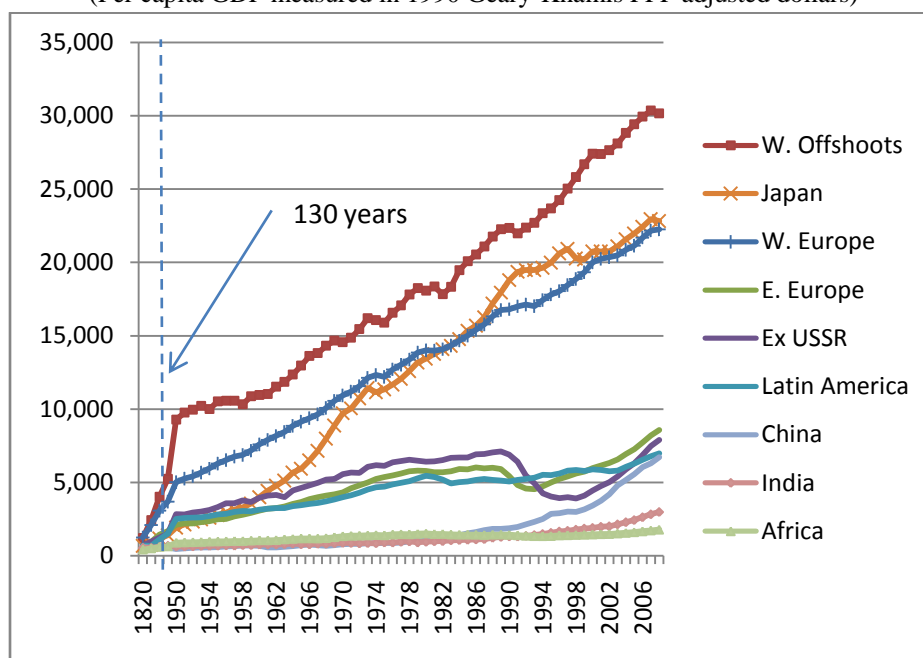
In the case of Britain, the Industrial Revolution generally refers to the period "that witnessed the application of mechanically powered machinery in the textile industries, the introduction of James Watt's steam engine, and the 'triumph' of the factory system of production" (Cameron, 1997, page 166). It was the outcome of the idea born during the Middle Ages and developed thereafter that science should be applied to industry and the practical affairs of humankind. As Azariadis and Stachurski (2005) point out, "While the scientific achievements of the ancient Mediterranean civilizations and China were remarkable, in general there was little attempt to apply science to the economic problems of the peasants. Scientists and practical people had only limited interaction." Lin (1995) argues that the transition from innovation based on the experiences of artisan/farmers in the pre-industrial revolution period to innovation based on controlled experiments guided by science after the industrial revolution was the key factor. Societal incentives in pre-modern China did not favor the move toward the human capital accumulation needed for the new system of innovation.

The result of this process was that (at least prior to the year 2000) the global economy was dominated by the few industrialized economies that existed in the world, and most of these few economies had become industrialized either as leaders or earlier followers of the nineteenth century industrial revolution. Historical data (Figure 3) dramatically reveal the divergent pattern of growth across country groupings. In the late nineteenth century, the Western European countries and their colonial "offshoots" began to experience an historic take-off in incomes per

capita. This was later matched by Japan in the middle of the twentieth century. The world economy was driven by several large Western European countries (Germany, France, Italy, the United Kingdom) and Anglophone “offshoots” (Australia, New Zealand, the United States, and Canada), plus Japan. Many other countries, including the former Soviet Union, were able to rise to middle-income status and experience levels of average economic welfare that far surpassed prior centuries; however, these standards of living still lagged badly behind the leading countries. In brief, the global economy was dominated by the so-called “G7.”

Figure 3: Development since the Industrial Revolution

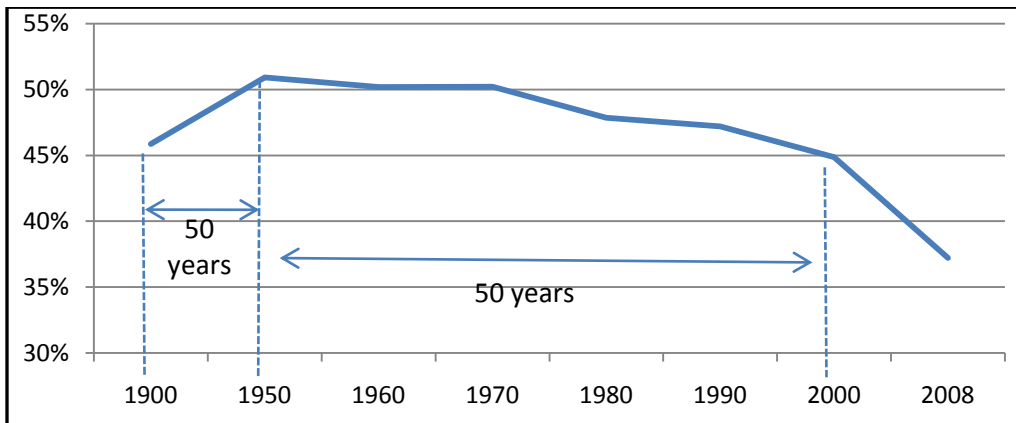
(Per capita GDP measured in 1990 Geary-Khamis PPP adjusted dollars)



Source: Maddison database

One can see the significance of these few large economies both in terms of their shares of global economic output and in terms of their contribution to economic growth. During the twentieth century, the G7 maintained a large and fairly stable share of world gross domestic product (Figure 4) that started and ended the century at about 45 percent. There was a slight rise to 51 percent during the first half the century that was reversed during the second half of the century.

Figure 4: Shifting G7 Share of Global GDP (%)



Source: Data from Maddison (constant 1990 Geary-Khamis Dollars)

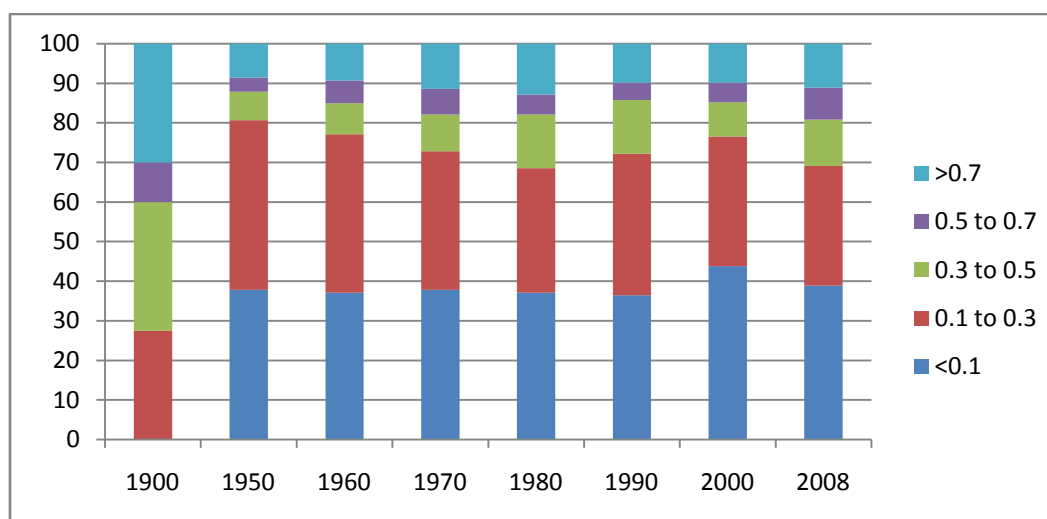
Low and Middle Income Country Growth “Traps”

In principle, one would expect, and certainly hope, that the poorer countries in the world can catch up with the richer countries in the world. Unfortunately, few countries have experienced “convergence” on a sustained basis. In fact, one famous paper that discusses the performance during the twentieth century is entitled: “Divergence, Big Time”.⁴

One approach to measuring relative progress is to look at per capita GDP relative to the United States, which has been the symbol of advanced industrialized countries after WWII. Figure 5 shows that the shares of countries in each ratio range has been fairly stable, with some growth in the percentage of countries in the upper MIC range (say, roughly 0.3-0.7), but really not much expansion of the share of countries that are at 0.7 of the US level of per capita GDP. At the bottom end, the share at 0.1 or less of US levels remains stuck near 40 percent. Persistently, over 80 percent of the countries in the world have GDP per capita levels that are half or less than half of the level in the United States.

⁴ Pritchett (1997).

Figures 5: Distribution of Countries by (Relative) Income Classification, 1900-2008, %



Source: Authors' calculations based on Maddison data.

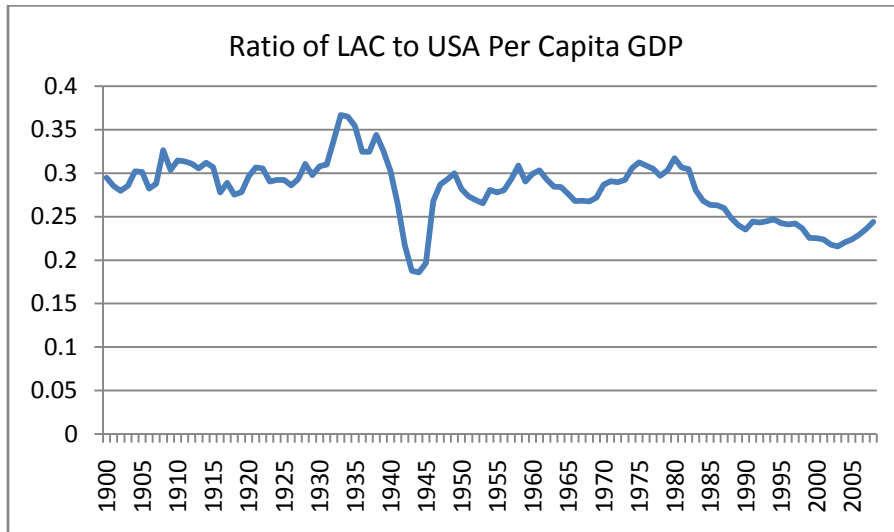
There is also some “churning” where countries not only converge up the ladder, but also diverge down the ladder. This is the case of some former colonies in Africa: many have gone from being lower MICs at independence to LICs in 1980. Since then, some have climbed back up to MIC status. There are also countries at the HIC end of the distribution that have fallen back to MIC status, by this measure.⁵

Many middle-income countries face the risk of falling into a middle income trap. Even some previously high growth Asian economies, like Malaysia and Thailand,⁶ experienced a substantial deceleration of growth following the Asian financial crisis. The Latin America and Caribbean region, however, probably provides the classic example of MICs failing to progress to high income country status. Figure 6 reveals the persistent lack of convergence of the Latin America region with living standards in the United States. Periods of mild catch-up were followed by periods of declining relative incomes. More recently, most of the economies of Latin America have stabilized and there has been a strong upturn in growth, led by the largest economy of the region—Brazil—as will be discussed in more detail in the next section. It remains to be seen whether the recent improved growth performance in Brazil and several other Latin American economies can be sustained into the future.

⁵ For recent decades, the World Bank's open database provides a spreadsheet with the changes in country categories. Heckelman et al (2011) analyze empirically the determinants of countries' “graduation” above the notional threshold for receiving World Bank lending.

⁶ Post crisis GDP per capita growth rates were roughly half the level of pre-crisis growth rates. Malaysia's average growth of 6.4 percent from 1988-1997 fell to 3 percent from 1999-2010, and Thailand's average of 7.2 percent over 1988-1997 fell to 3.4 percent for 1999-2010. (GDP per capita growth rates are from *World Development Indicators*.) On the other hand, this would still imply convergence—albeit at a slower pace—given HIC per capita growth rates of around 2 percent.

Figure 6: Latin American Economic Performance Over the Last Century



Source: Author's calculations based on data from Maddison.

The net result is that, during the 20th century, very few countries managed to progress from low income status to middle income status and then to high income status. Part of this history was explained in the previous sections, and hopefully, the recent rise of a number of large MICs marks the beginning of a better century for developing country convergence. That said, the table below summarizes how only a handful of developing countries have succeeded in reaching high levels of prosperity, and many of them are in Western Europe. The few developing economy success stories – with the exception of a few small oil rich countries⁷--are generally located in East Asia and achieved rapid industrialization by following comparative advantage export dynamism, helped by the facilitating role of the state.⁸

⁷ This is the case for Equatorial Guinea, Trinidad and Tobago and Oman.

⁸ See Lin, 2012c.

Table 2: Rare Cases of Catch-Up**(Economies with a greater than .10 increase in relative GDP per capita with respect to the United States)**

	1950	1980	2008	Change 1950-2008
Hong Kong SAR,				
China	0.23	0.57	1.02	0.78
Singapore	0.23	0.49	0.90	0.67
Equatorial Guinea	0.06	0.08	0.71	0.65
Taiwan, China	0.10	0.28	0.67	0.58
S. Korea	0.09	0.22	0.63	0.54
Ireland	0.36	0.46	0.89	0.53
Japan	0.20	0.72	0.73	0.53
Spain	0.23	0.50	0.63	0.40
Austria	0.39	0.74	0.77	0.39
Norway	0.57	0.81	0.91	0.35
Finland	0.44	0.70	0.78	0.34
Greece	0.20	0.48	0.52	0.32
T. & Tobago	0.38	0.67	0.68	0.30
Israel	0.29	0.59	0.58	0.28
Italy	0.37	0.71	0.64	0.27
Germany	0.41	0.76	0.67	0.26
Puerto Rico	0.22	0.44	0.48	0.26
Portugal	0.22	0.43	0.46	0.24
Mauritius	0.26	0.24	0.47	0.21
Oman	0.07	0.22	0.27	0.20
Thailand	0.09	0.14	0.28	0.20
Belgium	0.57	0.78	0.76	0.19
France	0.54	0.79	0.71	0.17
China	0.05	0.06	0.22	0.17
Malaysia	0.16	0.20	0.33	0.17
Netherlands	0.63	0.79	0.79	0.16
Botswana	0.04	0.09	0.15	0.12
Bulgaria	0.17	0.33	0.29	0.11

Memo/

Former Soviet Union/E. European countries with data only since 1990

	1990	2008	Change
Estonia	0.47	0.64	0.17
Slovenia	0.47	0.58	0.11
Armenia	0.26	0.37	0.11

Source: Authors' calculations based on Maddison data.

To make matters worse, more than a dozen countries suffered a greater than 0.10 decline in relative GDP per capita over the same period. Table 3 displays the list. Many of these countries are middle-income countries that failed to keep pace with the 2 percent GDP per capita growth of the United States over this period. In addition, several oil producing countries failed to diversify their economic base and, as a result, have experienced large declines in their relative income per capita.

Table 3: Divergence “leaders”

(Countries suffering a .10 or greater decrease in relative GDP per capita with respect to the United States)

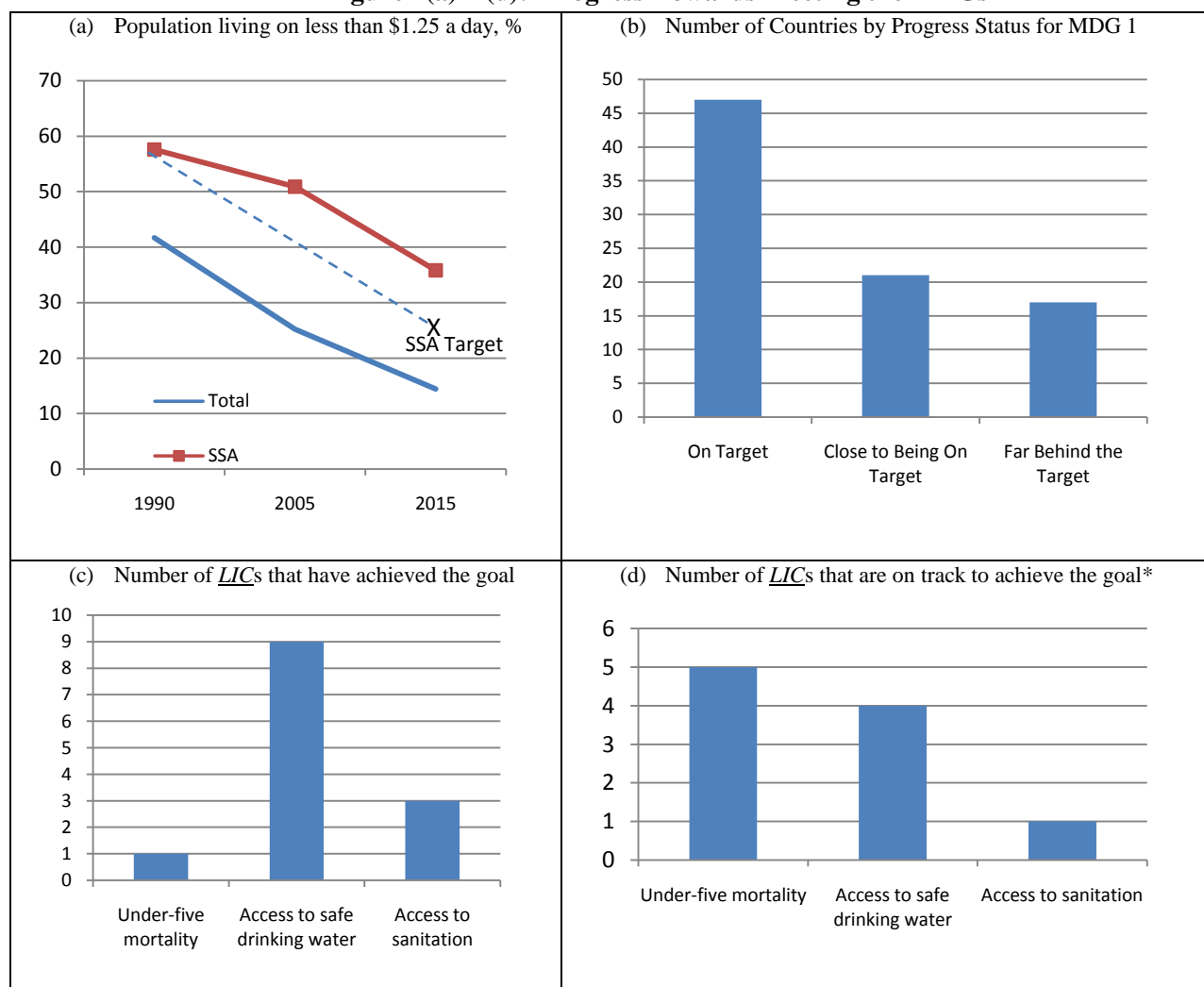
	1950	1980	2008	Change 1950- 2008
Bolivia	0.20	0.14	0.09	-0.11
Iraq	0.14	0.34	0.03	-0.11
Lebanon	0.25	0.19	0.14	-0.11
South Africa	0.27	0.24	0.15	-0.11
Nicaragua	0.17	0.12	0.05	-0.12
Djibouti	0.16	0.09	0.04	-0.12
Switzerland	0.95	1.01	0.81	-0.14
Argentina	0.52	0.44	0.35	-0.17
Uruguay	0.49	0.35	0.32	-0.17
Gabon	0.33	0.36	0.12	-0.20
N. Zealand	0.88	0.66	0.60	-0.29
Venezuela	0.78	0.55	0.34	-0.44
UAE	1.65	1.49	0.50	-1.15
Kuwait	3.02	0.71	0.41	-2.61
Qatar	3.18	1.55	0.56	-2.62
<i>Memo/</i>				
<i>Saudi Arabia</i>	<i>0.23</i>	<i><u>0.71</u></i>	<i>0.27</i>	<i>0.04</i>
<i>Memo/</i>				
<i>Former Soviet Union/E. European countries with data only since 1990</i>				
	1990	2008	Change	
<i>Moldova</i>	<i>0.27</i>	<i>0.11</i>	<i>-0.15</i>	
<i>Georgia</i>	<i>0.33</i>	<i>0.19</i>	<i>-0.14</i>	
<i>Serbia/Montenegro/Kosovo</i>	<i>0.22</i>	<i>0.12</i>	<i>-0.10</i>	
<i>Ukraine</i>	<i>0.26</i>	<i>0.16</i>	<i>-0.10</i>	

Source: Authors' calculations based on Maddison data.

In addition, many low-income countries are still trapped in poverty, and they are failing to achieve the MDGs. While the global headcount poverty MDG (MDG 1) is likely to be achieved, many countries remain off-track—in particular, countries in Sub-Saharan Africa are not likely to meet the MDG for halving headcount poverty (Figure 7(a) and (b)). In addition,

many of the non-income MDGs are unlikely to be achieved by broad groups of countries; in fact, only a handful of low-income countries have met or are likely to meet the MDGs for under-five mortality, access to safe drinking water, and access to sanitation (Figure 7(c) and (d)). These countries need development policies that address the structural bottlenecks for successfully accelerating economic growth and moving toward achieving the MDGs.

Figure 7(a) – (d): Progress Towards Meeting the MDGs



Source: *Global Monitoring Report 2011*. Figures c) and (d) compiled based on countries listed in Table 1.1.

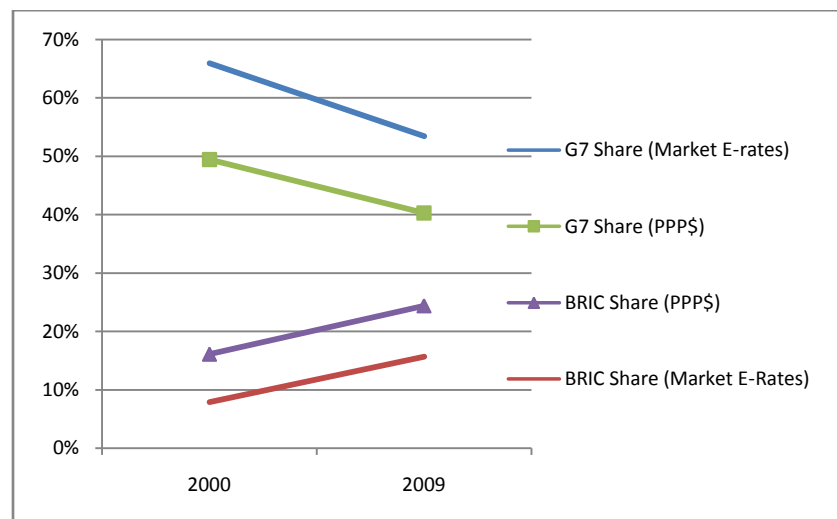
*The low-income countries “on track” are additional to the countries that have achieved the goal, so for example, the number of countries that have either achieved the under-five mortality goal OR are on track is 6 (1 has achieved and 5 are on track).

III. The Rapid Growth of a Few Large Economies and the Rise of the New Growth Poles

While there was progress in development during the twentieth century, the G7 countries still dominated the global economy in terms of size, contribution to economic growth and living standards. This dominance began to decline dramatically during the first decade of the twenty-first century—in particular, due to the fast growth of large dynamic emerging economies—the so-called “BRICs” (Brazil, Russia, India and China). As a result, the G7 share of global GDP declined rapidly from 45 to 37 percent in just 8 years (Figure 4). This is an unprecedented and historic shift. After a remarkable degree of G7 dominance for an entire century, one decade of extraordinary growth has caused a dramatic shift in the balance of economic power.

It should be noted that this data uses Maddison’s PPP adjusted figures, which increase the developing country’s share of GDP, as compared to GDP measured at market exchange rates. On the other hand, even using market exchange rates, there was a dramatic shift during the 2000s, as the changing shares were driven by real growth. Data on the BRICs are illustrative, as we see that, even using market exchange rates, the BRICs’ share nearly doubled in a decade (Figure 9). These recent developments are unlike the pre-industrial period of Asian dominance of the world economy (in particular China and India) when economic importance was driven by sheer population size in a context of stagnant global growth. In the recent decade, the rapid growth of the BRICs was driven by technological adaptation and integration into the modern global economy and in the context of an expanding global economy where countries need to “run” just to keep their existing relative ranking in income per capita.

Figure 8: G7 and BRIC Shares of World GNI, 2000-2009



Source: World Development Indicators.

In terms of their contribution to economic growth—the driving force behind these changing shares—we also see that large emerging market economies have now moved “up the

scale” in this dimension. In previous decades, only China was able to register among the top five contributors to global GDP growth. Over the last decade, not only did China top the list, but also fellow BRICs – Brazil and India—moved into the top five (Table 4). It is interesting to note that Korea—a relative newcomer to the club of “advanced” economies⁹--emerged from the Asian financial crisis of the 1990s to become one of the top six contributors to global GDP growth. The developing world as a whole contributed about half of the world’s global GDP growth in the last decade. A key question is whether this is an anomaly or whether the global economy is entering a sustained period of much faster growth among the developing countries – a “great convergence,” as Martin Wolf has called it¹⁰, or the start of “the next convergence,” as Nobel Laureate Michael Spence (2011) has called it. There are some signs that the underlying economic relations in trade and capital flows might support a sustained period of rapid growth in the developing world.

Table 4: Top Fifteen Contributors to Global Growth By Decade (%)¹¹

2000-2010		1990-2000		1980-1990	
China	23.4%	United States	36.1%	United States	30.5%
United States	20.4%	China	9.6%	Japan	24.0%
India	5.8%	Japan	6.6%	Germany	5.0%
Japan	4.5%	Germany	4.5%	United Kingdom	4.3%
Brazil	3.1%	United Kingdom	4.2%	China	4.2%
Korea, Rep.	3.1%	Korea, Rep.	3.0%	France	3.7%
United Kingdom	2.5%	France	3.0%	Italy	3.2%
Germany	2.0%	India	2.4%	Korea, Rep.	2.7%
France	1.8%	Canada	2.3%	Canada	2.1%
Russian Federation	1.8%	Mexico	2.1%	India	1.8%
Argentina	1.7%	Italy	2.0%	Spain	1.8%
Canada	1.7%	Brazil	1.8%	Australia	1.3%
Australia	1.7%	Spain	1.8%	Turkey	1.2%
Spain	1.5%	Australia	1.5%	Brazil	1.1%
Turkey	1.4%	Netherlands	1.3%	Mexico	1.1%

⁹ In this paper, developing countries refers to all the low and middle income countries (either lower middle or upper middle), according to World Bank definitions.

¹⁰ “In the grip of a great convergence,” Financial Times Op-ed, January 4, 2011.

¹¹ Calculation is based on the change in constant dollar GDP (at market exchange rates) of the particular country as a share of the change in constant dollar GDP of the world.

1970-1980		1960-1970	
United States	27.5%	United States	27.3%
Japan	18.3%	Japan	22.9%
Germany	6.0%	Germany	7.2%
France	5.1%	France	5.5%
Brazil	4.7%	Italy	4.8%
Italy	4.5%	United Kingdom	3.9%
Mexico	3.2%	Spain	2.6%
United Kingdom	3.0%	Canada	2.4%
Canada	2.6%	Mexico	1.9%
Saudi Arabia	2.1%	Brazil	1.9%
Spain	1.9%	Netherlands	1.5%
China	1.6%	Australia	1.4%
Korea, Rep.	1.3%	Switzerland	1.3%
Netherlands	1.2%	Argentina	1.1%
Australia	1.1%	Sweden	1.1%

*Not included: Russian Federation nor FSU nor ECA former Communist states, for 1980- 1990 period.

Source: World Development Indicators, IMF database (for selected countries for 1960 data).

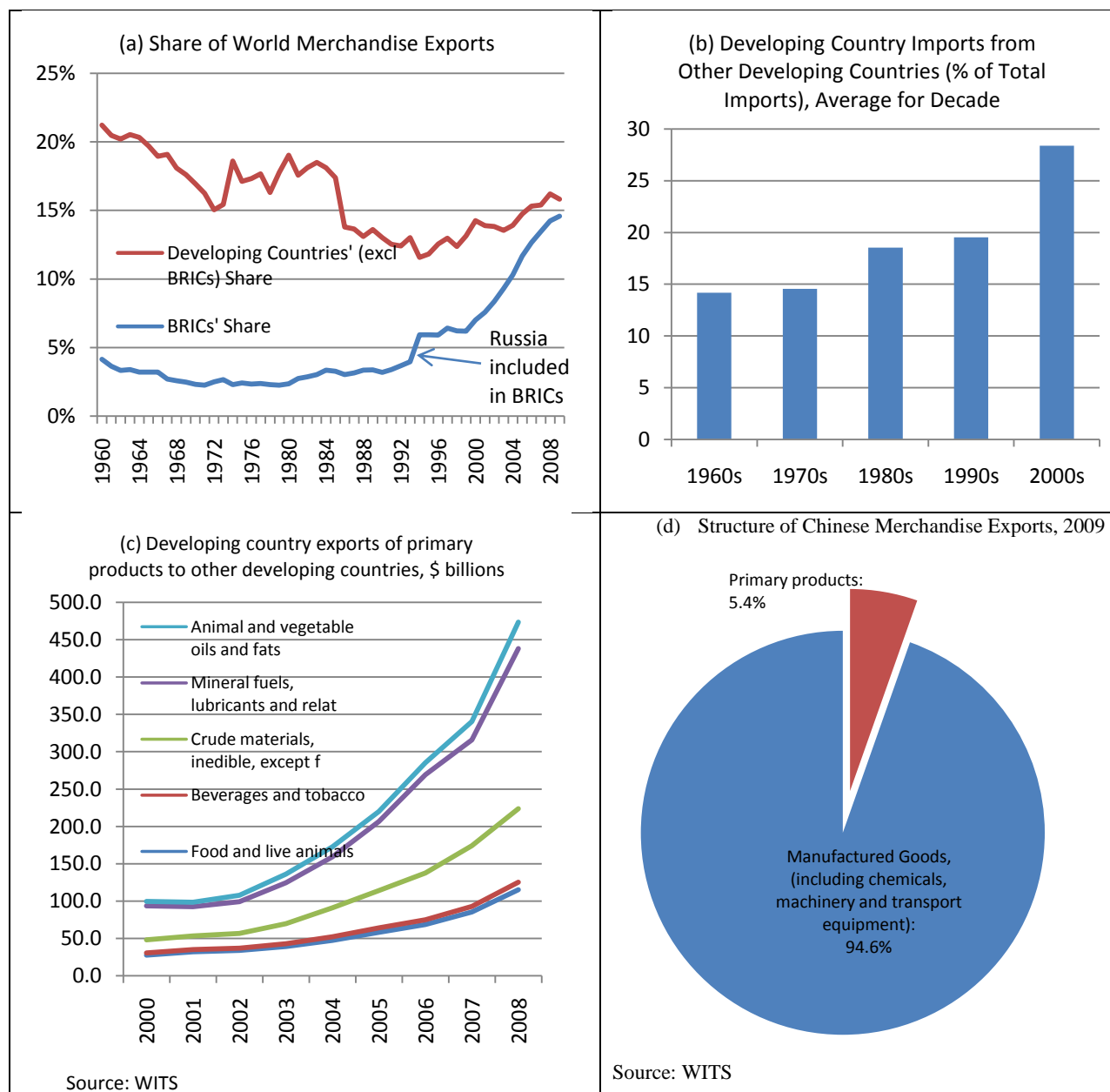
Calculations based on change in country's GDP in constant US dollars as a share of the change in world GDP in constant US dollars, by decade.

The BRICs and other emerging economies also have increased their share of trade, capital flows and innovation. A growing trend within these dimensions is “south-south” globalization as economic interactions between emerging markets have increased at an even faster pace than they have between high-income countries and developing countries. As growth poles emerge in the developing world, one way that the more rapid growth could be sustained is through increased “south-south” globalization. Part of this phenomenon over the last decade may have been due to one-off effects, and the fact that the process started from a very low base. On the other hand, the growing integration of supply chains across emerging markets and the potential for intra-regional “south-south” trade could be a driving force behind the “great convergence” into the future.

To understand the patterns of south-south globalization, one can start by examining the evolution of the large fast-growing BRICs. In the trade dimension, after decades of stagnation in the developing country share of world exports, this share began to increase sharply at the turn of the century, and it now stands at about 30 percent. We see, however, that much of this recent evolution was driven by the increasing share from BRIC countries (Figure 9a). The BRIC share more than doubled from 2000 to 2009. A large part of the story has to do with increasing trade between developing countries – a trend that actually dates back a couple of decades (Figure 9b)—as south-south bilateral and regional trade agreements proliferated and as supply chains integrated across the developing world. The share of developing country imports that originate in other developing countries is now nearly double the share of the 1960s. The old global division of labor characterized by developing countries (the “south”) exporting primary products to the high income countries (the “north”) to produce manufacturing goods has become much

more complex, with increasing south-south trade in primary products (Figure 9c). Some key developing economies (e.g., China, Figure 9d) are now specializing in the export of manufactures. All these phenomena are related: the same Chinese manufactures embody a combination of primary imports from developing countries, as well as intermediate inputs from emerging Asia, in addition to Japan; Taiwan, China; and Korea. This is a natural consequence of trade integration both within the developing world and between developing and high-income countries.

Figures 9(a)-(d): Trade and the multi-polar growth world

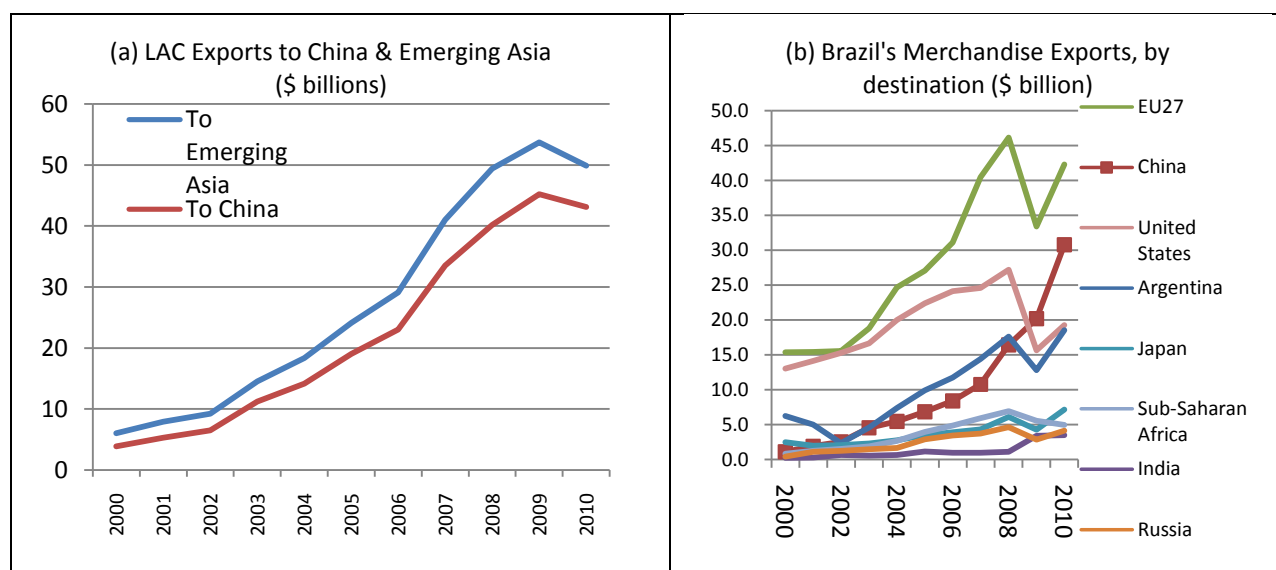


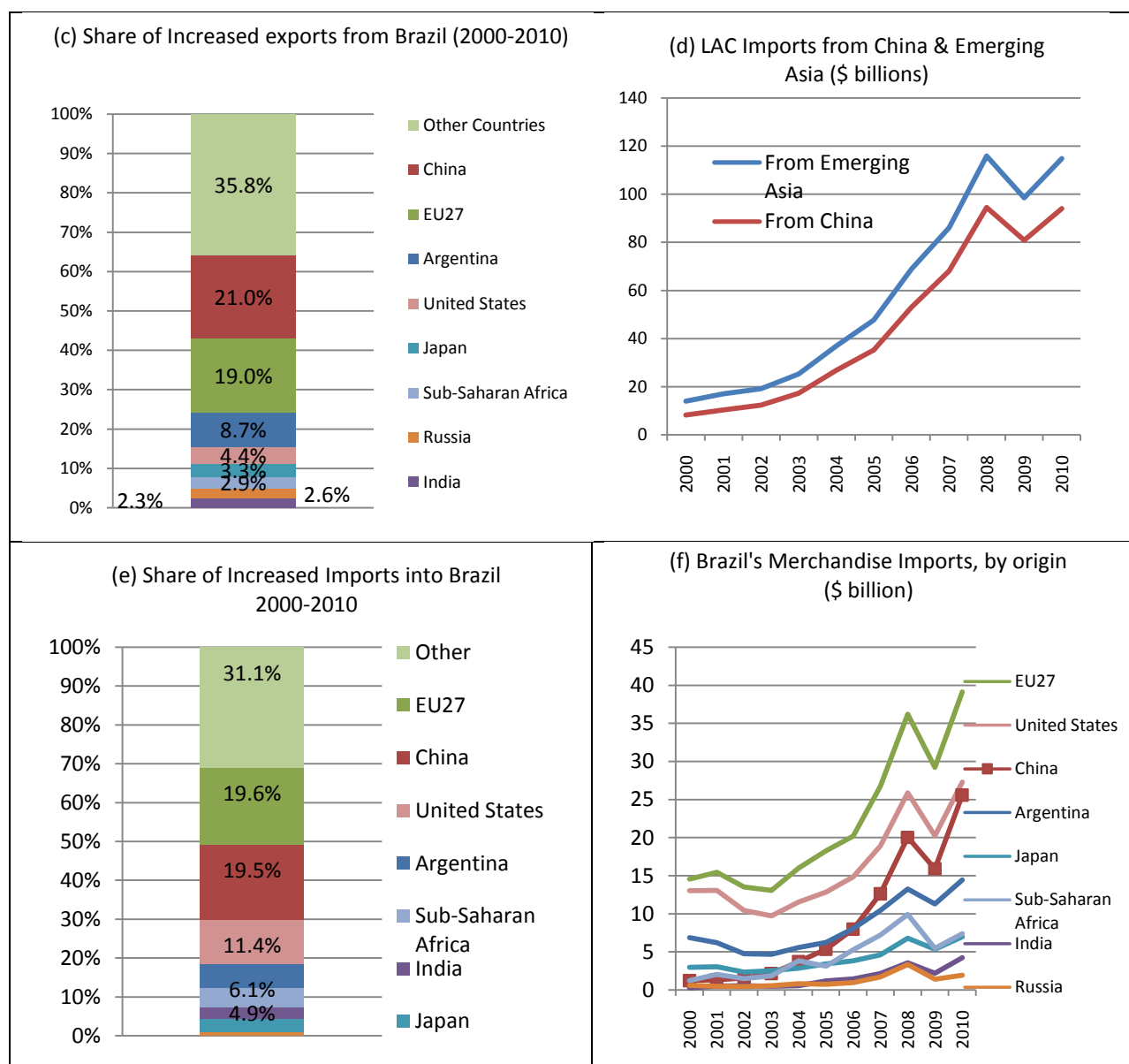
Source: World Development Indicators (except (c) and (d)).

Drilling down in more detail into evolving patterns of trade, one can see that most of the export growth in dynamic emerging markets is not primarily driven by increasing exports to the traditional economic powers. Instead increasing integration across emerging markets is the driving factor. For example, developing countries in Latin America and the Caribbean (LAC) have rapidly increased their exports to developing countries in East Asia – most notably China (Figure 10a). LAC imports from emerging Asia, and especially China, have increased even faster (Figure 10d). To some extent, there may be some re-importing of primary exports that have then been processed into manufactures in Asia. This is a phenomenon that is discussed in more detail below.

Focusing on Brazil – the largest economy in Latin America—one can see rapid export growth to a wide variety of destinations over the last decade (Figure 10b). Most of that growth was not driven by traditional growth poles like Europe, the United States and Japan. These countries (EU27, US, Japan) absorbed only about a quarter of the increase in Brazil's exports during the first decade of the century. Europe still had an important contribution (nearly 20 percent); however, China's contribution was larger (Figure 10c). Growth in exports to the United States contributed a mere 4.4 percent to total export growth, and exports to a vast array of countries around the world comprised over a third of the increase in exports. On the side of imports, we see a similar pattern.

Figures 10(a)-(f): Changing Trade Patterns in Developing Countries—LAC and Brazil Focus



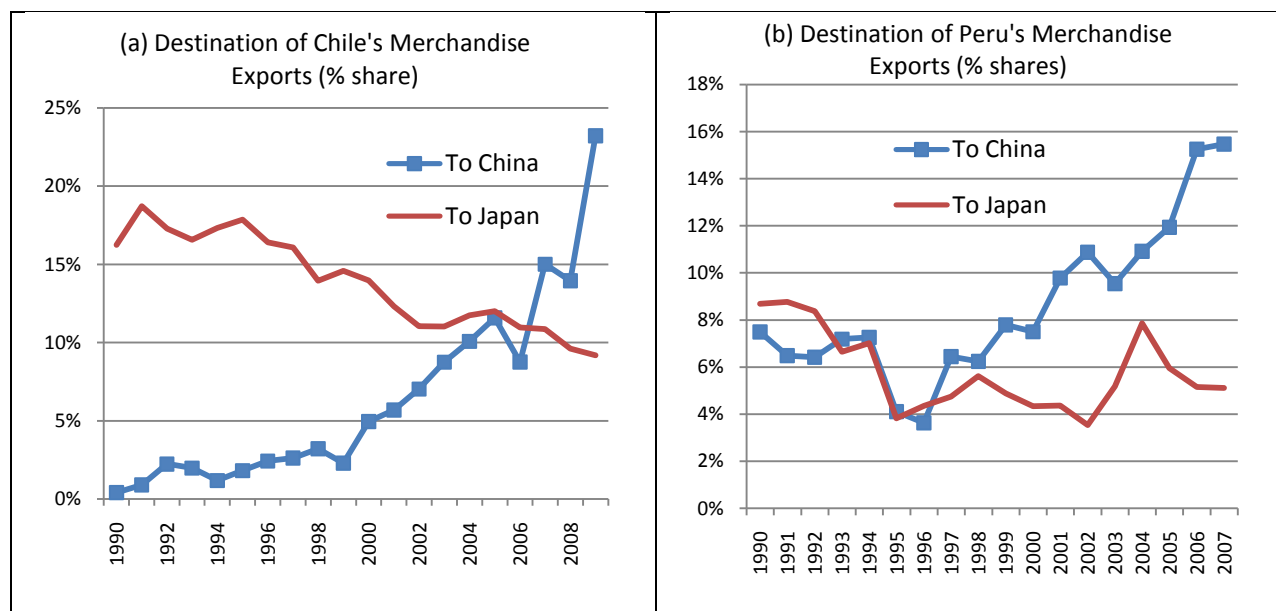


Source: Author's calculations based on WITS database.

One can see another dimension to the trend by focusing on particular geographic trade corridors. For example, if one focuses on the Pacific coast of Latin America, one can see that the “Pacific Rim” has changed its pattern of trade as well over the last two decades. It is too early to tell on the basis of the last decade, but there may well be a new “emerging Pacific Rim” characterized by rapidly increasing trade relations between developing countries on both sides of the Pacific Ocean. While it is true that regional trade agreements (NAFTA, CAFTA) have strengthened North-South trade with the United States in Mexico and Central America, in South America, China has become a major destination for Pacific Coast economies. Two illustrative examples are Chile and Peru. In the case of Chile, note how China has rapidly overtaken Japan’s role as the major Asian export destination over the last decade (Figure 11(a)). Nearly a quarter of Chile’s merchandise exports go to China. This is all the more remarkable since, at the start of the 1990s, this figure was nearly zero, and it remained below 5 percent until the start of the

2000s. In the case of Peru, a rapidly rising share of Peru's exports goes to China (Figures 11(b)); the share has more than doubled since the 1990s.

Figures 11(a) and (b): Chile and Peru in the “Emerging Pacific Rim”



Source: Author's calculations based on WITS database

Another dimension of the increasing degree of trade integration is increasing specialization across tasks.¹² Understanding trade patterns based on the origin of final products can be misleading, given that the final product generally incorporates value-added that has been imported from a variety of destinations. Measuring the value added or domestic content of exports is fraught with difficulties; however, a variety of new techniques have been developed and new efforts have been made to improve data collection that could deepen our understanding of patterns of trade specialization based on tasks.¹³ Much of this literature has focused on China and a few particular high income or emerging market economies. With increasing trade integration among developing countries, this will be an important area of research in the future. It will also be an important area for policy discussions as policy makers attempt not only to understand but also influence their country's comparative advantage for tasks in complex supply chains. Clearly, skill levels have a lot to do with where countries position themselves in these supply chains, and policies can contribute by strengthening public education systems, and also through incentives for private sector training and skills development.

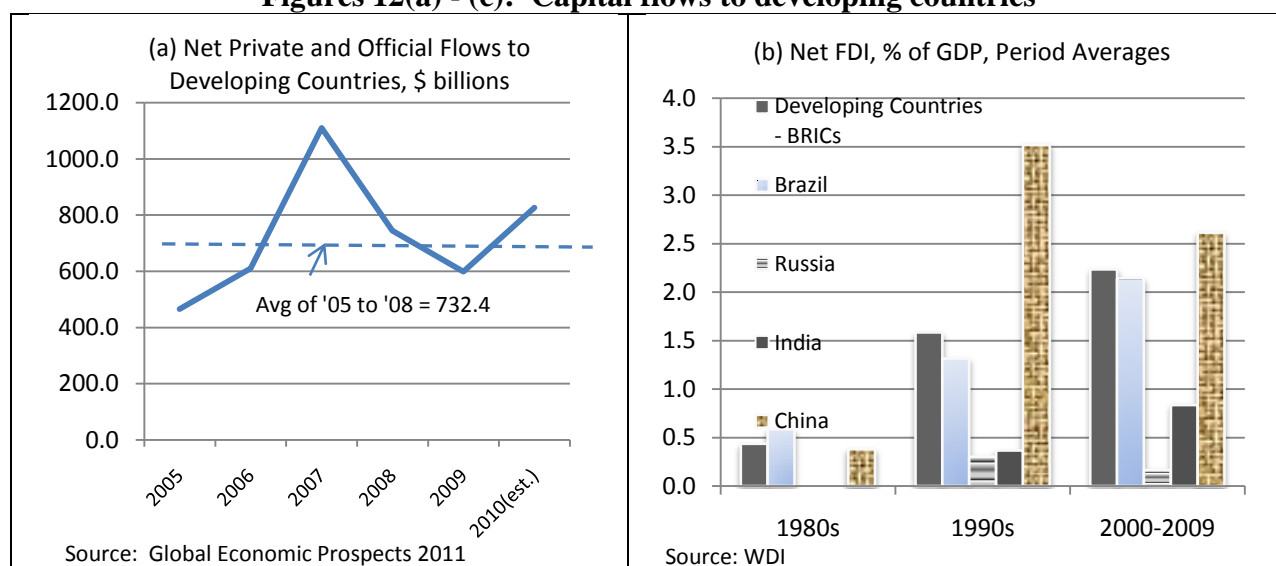
¹² See Mattoo, Wang and Wei (2011) for an overview of the topic, and Grossman (2011) for an overview of the theoretical and empirical implications.

¹³ A recent World Bank workshop provided a state of the art in this area: papers available at <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/TRADE/0,,contentMDK:22894003~menuPK:2644066~pagePK:64020865~piPK:51164185~theSitePK:239071,00.html>. The workshop was entitled “The Fragmentation of Global Production and Trade in Value-Added—Developing New Measures of Cross Border Trade.”

Capital flows have been an important factor in the changing multi-polar landscape. Developing countries were receiving record levels of FDI and other capital flows prior to the global financial crisis. Naturally, there was a decline in these flows following the boom; however, flows have continued to be in line with the average of the 3 to 4 years preceding the crisis (Figures 12(a) and 12(b)). In addition, starting since the mid-1990s there has been a general shift up in annual FDI flows as a share of developing countries' GDPs (Figure 12(c)). There is also a rise in south-south investment flows, even though the largest flows remain among the high-income countries. Recently published data from the IMF are difficult to analyze systematically due to many missing data points; however, there are specific cases where the data reveal the surprisingly large influence of south-south flows. For example, Hong Kong SAR, China is the tenth largest source of outward direct investment positions¹⁴ globally, and South Africa's direct investment position in China (mainland) is slightly larger than that of traditional economic power France.¹⁵

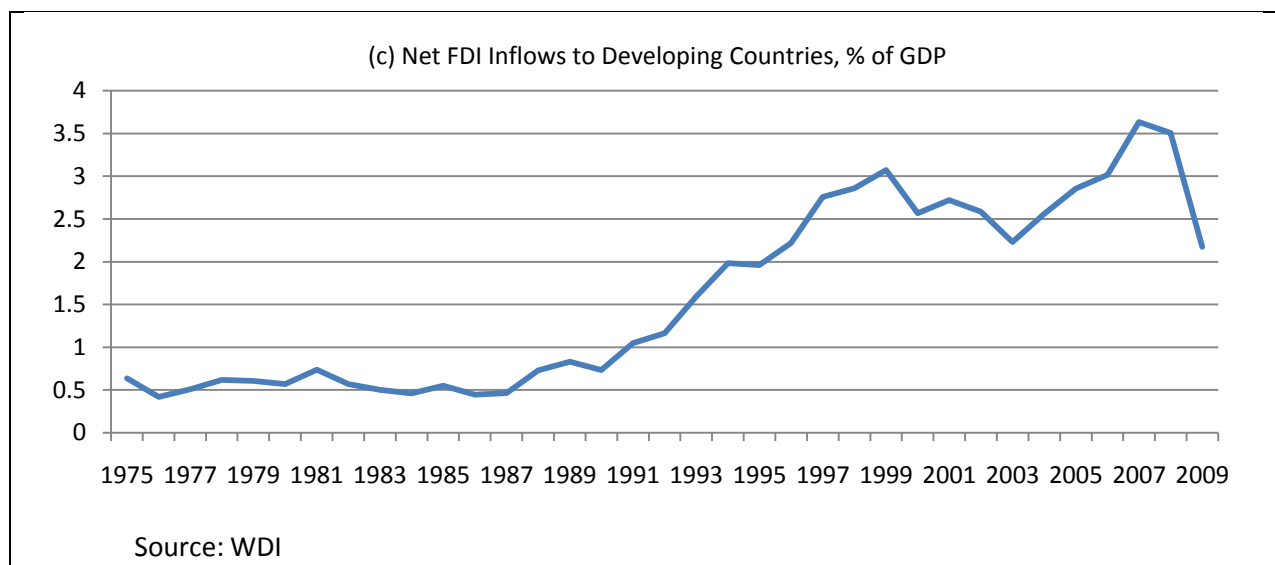
Another dimension of capital flows is those that are accounted for "below the line" in the balance of payments: official reserve accumulation. As Central Banks in many large emerging market economies have accumulated international reserves, these countries' Central Banks have financed government deficits in high income countries – most notably the United States. Over 70 percent of foreign holdings of United States Treasury securities are held by official institutions (Central Banks and related sovereign funds). China is the nation with the largest holdings of US Treasury securities, with a total of over \$1.1 trillion at the end of May 2011.

Figures 12(a) - (c): Capital flows to developing countries



¹⁴ Data from IMF's Coordinated Direct Investment Survey (CDIS), Table 5-o.

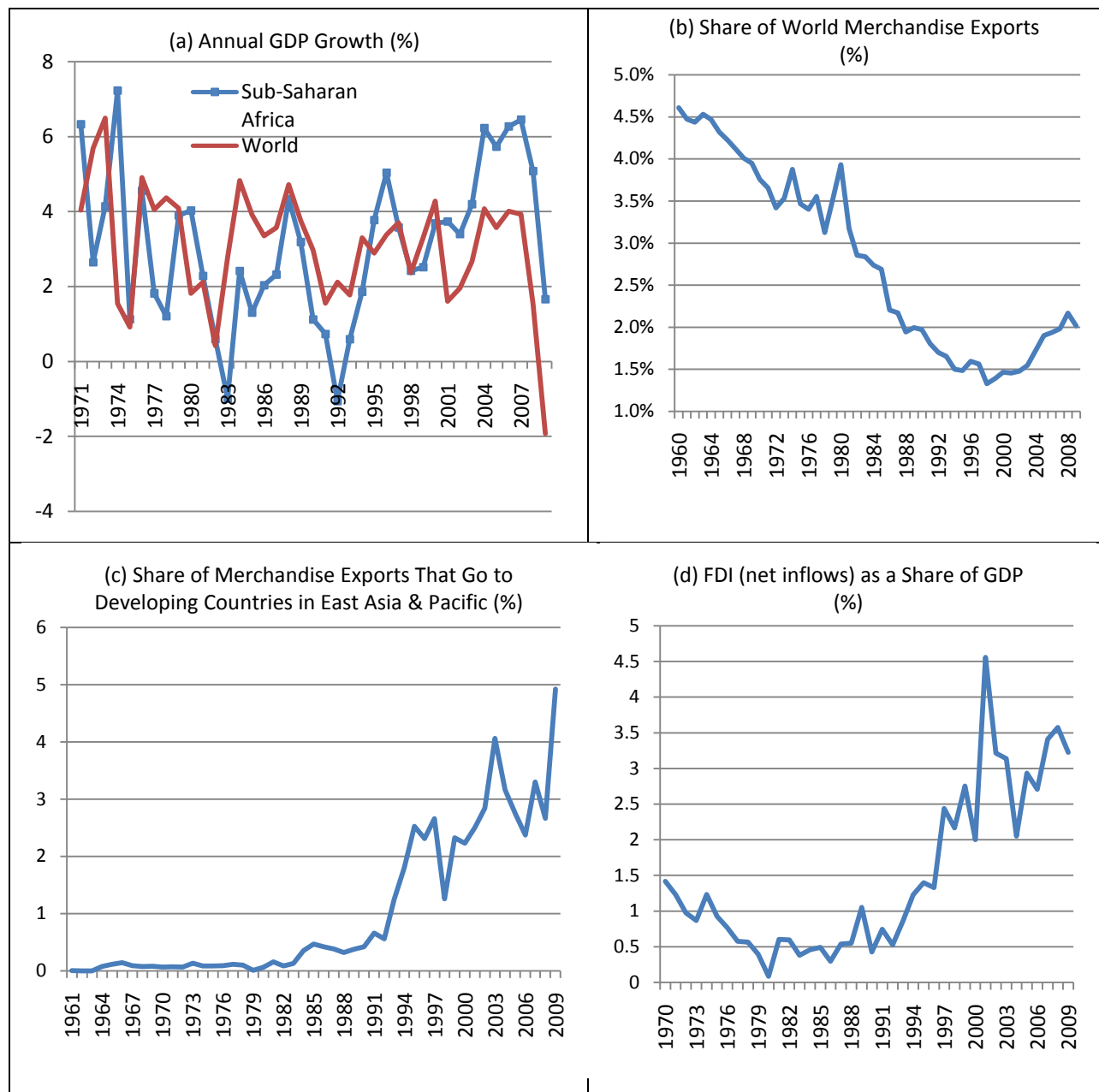
¹⁵ See IMF, CDIS, Table 6.1o. The direct investment position of South Africa is \$13.7 billion, while it is \$11.6 billion for France.



While large emerging markets grab the headlines of multi-polar growth, smaller and poorer economies have also experienced important changes in their position in the global economy. For example, in terms of accelerating growth and expanding trade and capital flows, the Sub-Saharan Africa region has also participated in the recent multi-polar growth decade. GDP growth in the region as a whole has accelerated sharply. There were 11 countries in the region--among 29 countries in the world--that averaged economic growth of 6.5 percent or more prior to the global financial crisis.¹⁶ Overall, the region's aggregate GDP has grown faster than the world economy, its export share of total world exports has increased, its share of exports going to fast growing emerging Asia destinations has increased, and FDI has been higher than most developing countries (as a share of GDP) (Figures 13(a)-(d)). As the earlier figures on Brazil showed (Figure 10(b)), Sub-Saharan Africa has increased its trade links with that country. In brief, Sub-Saharan Africa has become a beneficiary and contributor to the new multi-polar global economy – even if on a smaller scale than other developing regions.

¹⁶ This is based on a simple average GDP growth rate over the 2000-2008 period using data from the World Development Indicators.

Figures 13(a)-(d): Sub-Saharan Africa in the New Multi-Polar Growth World

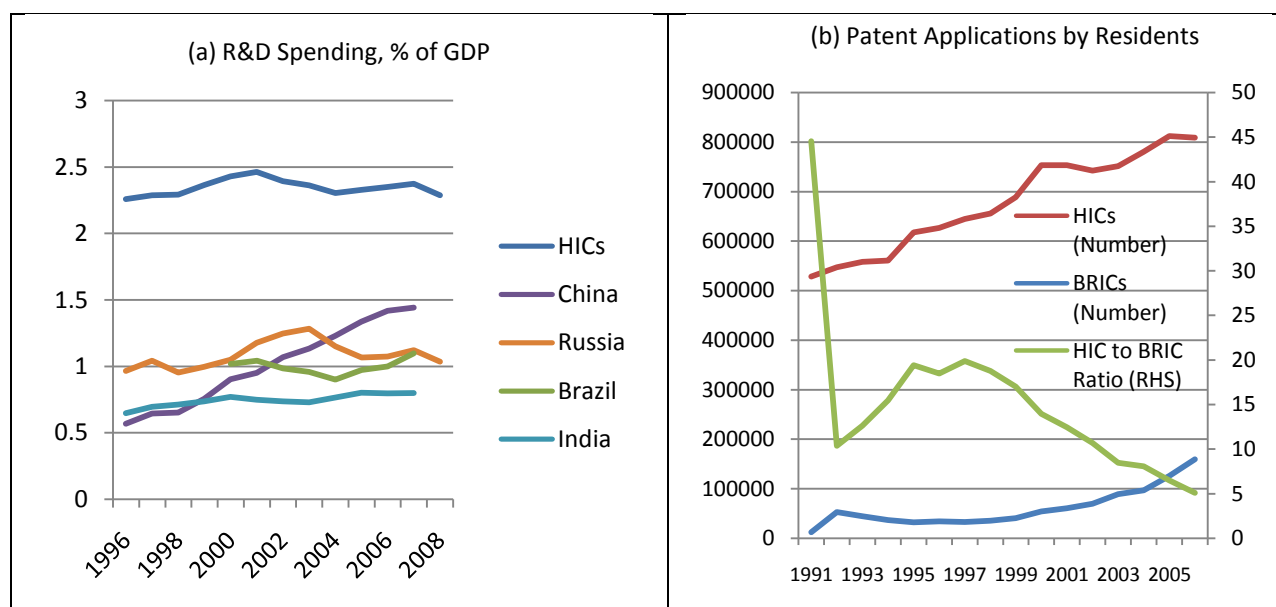


Source: World Development Indicators

Technology is also part of the story. From both theory and practice, we expect developing countries to lag the high income countries in technology, since the latter are at the technological frontier in most products that they produce. That said, one would expect the more dynamic middle-income countries to begin to move up the technological ladder as they move up the per capita income ladder. In addition, there are sectors in middle income countries that are reaching (or have already reached) the technological frontier – for example, Brazil’s deepwater oil drilling capacity. As a result, one would expect these countries to begin to invest more in research and development and begin to produce more homegrown technological innovation.

While the data may not be the most reliable, the Figures 14 (a) and (b) show that there has been some catch-up in total R&D spending and in the number of patent applications in the new BRIC growth poles. Particularly noteworthy is that China has more than doubled its total R&D spending as a share of GDP. While patent applications lag the high income countries, the ratio has fallen substantially from over 40 HIC patent applications for every BRIC resident application to only about 5 HIC applications for every BRIC application.

Figures 14(a) and (b): R&D and patent applications



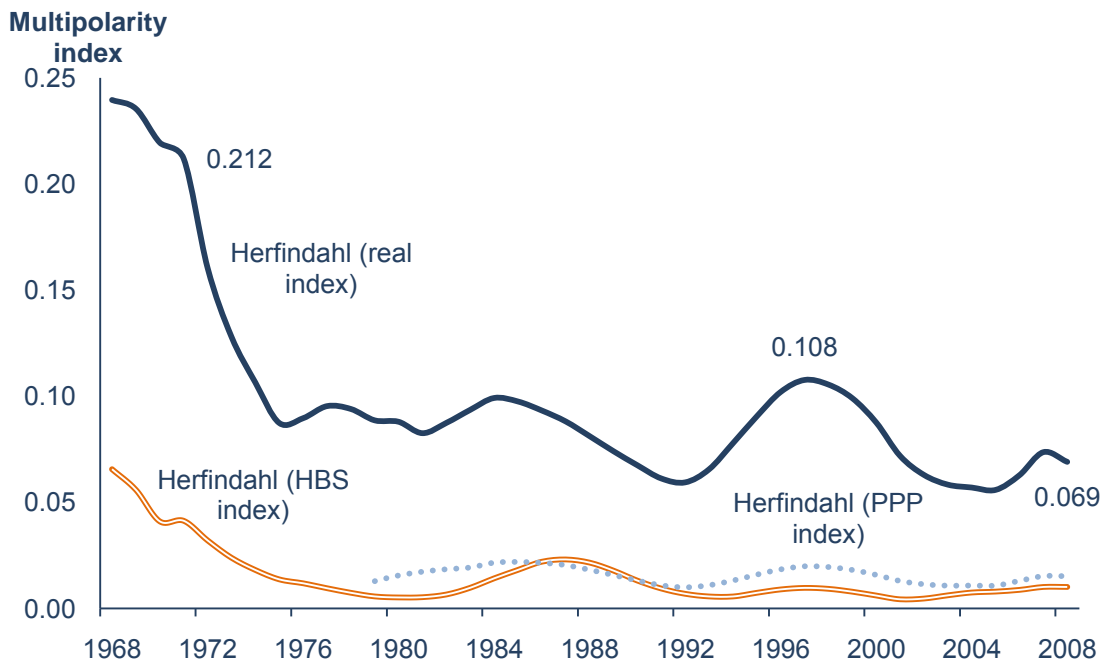
Source: World Development Indicators

The World Bank has developed a multidimensional measure of multi-polarity that starts with a country's contribution to economic growth and is then adjusted to take into consideration the country's spillover effects via trade, finance and technology linkages. The multidimensional polarity index places six developing countries among the top fifteen in the world over the period 2004-2008.¹⁷ The index also documents the changing role of the old growth poles of Europe, the United States and Japan that dominated most of the last century. Over the last decade, these countries have ceded space to emerging market growth poles. This is driven by increasing "polarity" of emerging market economies (World Bank, 2011). Figure 15 presents the declining concentration of global growth, as represented in Herfindahl-Hirschmann indices.¹⁸ In examining the prospects for sustained growth in the new emerging growth poles, the World Bank report focuses on the roles of technological adoption and innovation on the supply side, as well as a shift toward greater domestic consumption on the demand side. The report suggests that adequate transitions on both fronts are feasible. Forecasts show that in the 2020s, the BRIC countries will be among the top 10 growth poles, joined by newcomer Indonesia.

¹⁷ See *Global Development Horizons 2011-Multipolarity: the New Global Economy*, World Bank, 2011.

¹⁸ For more details on the methodology used for this measure, see Adams-Kane and Lim (2011).

Figure 15: Evolution of multi-polarity, alternative indices, 1968-2008



Source: reproduced from World Bank, *Global Development Horizons*, 2011, Figure 1.4.

Note: These are Herfindahl concentration indexes of multi-polar growth measures that incorporate both GDP growth and connectedness via trade, financial flows and technology. The real index uses data based in real 2000 US dollars, the HBS adjusts exchange rates for Harrod-Balassa-Samuelson effects, and the PPP index adjusts exchange rates based on purchasing power parity. The Concentration is based on the share of the top 15 economies in the world economy, computed over five year moving averages.

Remarkably, even in the area of development assistance, more advanced developing countries are becoming somewhat important donors. Some upper middle income countries have joined the OECD and now report their overseas development assistance (ODA) to the Development Assistance Committee (DAC) of the OECD. There are also some non-OECD members that voluntarily report their data to the DAC. Finally, the OECD has conducted a study to estimate the ODA of the BRICS (including South Africa as the capital “S”).¹⁹ The table below uses this data and includes only those “emerging donors” that are classified as middle income countries under the World Bank country classification.²⁰ The total of an estimated \$4.3 to \$5.5 billion per year is a substantial amount – even if only about 3.5 to 4.5 percent of total net ODA from DAC member countries. One might speculate that the motivation for some of these aid flows is the recognition of the importance of multi-polarity: there are increasing economic links between middle income countries and low income countries. As a result, it may be in the

¹⁹ See OECD, 2010, for the data.

²⁰ For example, Poland is now considered a high income country by the World Bank classification. Its net ODA in 2008 was \$372.4 million. Similarly, the Czech Republic is now considered a high income country, and its net ODA was \$249.2 million in 2008. So, these two recently “graduated” former MICs contributed nearly a half billion dollars in net ODA in 2008.

self-interest of middle income countries to assist poorer countries in their quest for economic development.

Table 5: Emerging MIC Donors, Net ODA, \$ millions

	Lower Estimate	Upper Estimate	Year
Brazil	437	437	2008
China	1,800	3,000	2007
India	610	610	2008/2009
Russia	200	200	2008
South Africa	109	109	2008/2009
Latvia		22*	2008
Lithuania		48*	2008
Romania		123*	2008
Turkey		780*	2008
Thailand		179*	2008
Total	4,308	5,508	

Source: OECD, 2010.

*Reported directly to the DAC, so not based on lower/upper estimate range.

In summary, we see how the pattern of global economic progress has been transformed in recent years in many dimensions. The old growth poles of earlier decades that comprised two-thirds of global GDP²¹ have ceded space to emerging market economies. The old patterns of trade and finance with primary goods flowing “north” and financial flows heading “south” has been replaced by much more complex patterns of trade and finance across countries. Even in the technological realm, new emerging markets are moving toward the frontier of innovation. This increasing flow of goods, capital and ideas within the developing world needs to continue in order for the convergence of the new millennium to be sustained in the coming decades. Demographic factors, fiscal problems and other “hangover” elements from the Great Recession are likely to keep growth subdued in the high income countries and perhaps below the growth rates of the last century. Thus, the need for new growth poles to strengthen economic linkages among themselves becomes even more important as a source of future growth.

The international governance of the multi-polar global economy is also gradually changing: the G20 is becoming the main platform for multilateral economic policy coordination, replacing the G7 after the global financial crisis erupted in 2008. The Bretton Woods institutions have made progress in changing voting shares on their respective Boards of Directors to

²¹ At Market exchange rates. The figure would be about 50 percent using PPP exchange rates.

rebalance representation. However, more will need to be done to improve the governance structure so as to maximize the benefits from the new multi-polar growth world.

The rise of the new emerging market growth poles is extremely welcome; however, it would be a mistake to fall into complacent triumphalism. The remaining challenges facing the new growth poles, specifically, and the developing countries, generally, are substantial. A common aspiration of the developing countries is to reduce poverty, to successfully transition to modern industrialized economy status, and to catch-up to developed countries' income levels. Achieving these aspirations is far from guaranteed. As noted in the previous section, very few countries have succeeded in progressing from low-income status to middle-income status and on to high-income status.

This discussion leads to the new challenges facing the new middle-income growth poles themselves. In some cases—for example, China—growing income inequality poses a challenge for policy makers to adjust the economic structure in a way that spreads the benefits of growth more broadly—with a special eye to lagging incomes in rural areas. Also, the environmental consequences of rapid growth in the new growth poles pose a risk for the sustainability of current growth patterns. Environmental problems have multiplied in all the BRIC countries. In addition, as income levels rise, so do wages, generally speaking. In a globalized economy, this implies that the new growth poles will need to continuously upgrade their industrial structures to either find new product niches or improve productivity in existing product lines. All of these challenges create the scope for improved national development policies to overcome these challenges and secure continued development progress.

Finally, a new feature of the economic landscape that poses risks for the developing world is the adverse external economic environment—more specifically, the likelihood of persistently slow or stagnating growth in the high income countries. As new data have become available, forecasters have been continuously downgrading growth forecasts in the high income countries for this year and the coming years.

IV. Rethinking Economic Development

The stylized facts elaborated in the preceding section require a response from the economics community to provide policy guidance. Why was there so little convergence in the twentieth century? What was special about the few countries that “escaped” middle income status? What is behind the rise of the multi-polar growth and the BRICS? Can it be sustained? Can their success be replicated in the laggard countries?

The challenges faced by countries vary substantially across levels of development. Unfortunately, development economics has not always provided useful policy guidance in the past, and it may be unable to do so in the future as well. As we will see below, often broad policy prescriptions were formulated to cure the problems of developing countries as a group, and often these prescriptions used the rich countries as a reference point. Waves of economic thought either focused on isolating developing countries from the perceived inequity in the global economic system or on blindly imitating and opening economies to the developed world.

These one-size-fits-all policy prescriptions failed to examine sufficiently the structural bottlenecks, as well as the structural advantages that an individual economy might offer, given its existing endowment and current status of its institutions. There was often only limited recognition of how economies require different policies at different stages of development, as we will explore in more detail below. As a result, many mistaken policy prescriptions were offered.

Part of this checkered past may be due to a correlation between economic prominence and influence in the market place for economic ideas. To some extent, there may be a natural tendency in human nature to try to imitate success. The dominance of the few industrial powers that emerged from the industrial revolution was based on their advanced manufacturing industries. Many developing countries' economies, however, were still based on natural resource intensive sectors for export revenue, and these were seen as "backward" rather than advanced sectors. Therefore, after WWII, not only the socialist camp (which was influenced by Marxism and the Soviet Union's Stalinist model) but also "western" developing thinking (represented by the "structuralist" school) advised the developing countries to use the state's power to overcome market constraints by directly mobilizing resources to **develop the advanced countries' industries**. The results of this approach were disappointing.

A major motivation for the structuralist school of thought was the so-called Prebisch-Singer hypothesis.²² Starting with the empirical observation of a long-term decline in commodity prices relative to industrial goods, the hypothesis suggested that the global trading system was essentially "rigged" against developing countries in favor the advanced countries. Productivity gains in the traditional agricultural sector would result in price declines for those commodities which would translate to gains for advanced country consumers. Meanwhile, productivity gains in industry would accrue increased profit for entrepreneurs.

More generally, structuralism rejected the notion that the invisible hand of the free market could guide the process of development. There was a rejection of classical and neoclassical views that factor accumulation would occur naturally, and that resources would shift naturally to their highest return activities, responding to market prices with frictionless movement across sectors. The term "structuralism" itself comes from the notion that structural rigidities are present in most economies, and in particular in countries at low levels of development. It argues that these rigidities inhibit the structural transformation necessary for economic growth and development. (See Table 6 for a description of this chronology.) These rigidities would also cause distortions in factor prices, creating unclear signals about a country's comparative advantage.²³ As noted in Chenery (1975), "A common theme...is the failure of the equilibrating mechanisms of the price system to produce steady growth or a desirable

²² The seminal papers are Prebisch (1950) and Singer (1950). For a more recent survey of the issues, see Bruton (1998). There are also recent studies of the empirical observation of declining relative primary commodity prices, as in Harvey et al (2010).

²³ Chenery (1961) phrased it as a difference between trade theory and "modern" (at that time) growth theory, where the latter had "at least four basic assumptions about underdeveloped economies" that differ from the assumptions of the former. The four cited were: "... (1) factor prices do not necessarily reflect opportunity costs with any accuracy; (2) the quantity and quality of factors of production may change substantially over time, in part as a result of the production process itself; (3) economies of scale relative to the size of existing markets are important in a number of sectors of production; and (4) complementarity among commodities is dominant in both production and consumer demand."

distribution of income.” There was already the empirical observation that industrialization was at the core of progress in advanced economies; however, structuralists believed that structural rigidities in developing countries would prevent this process of industrialization, and “self-sustained” growth could not become a reality without more interventionist government policies.

Table 6: Brief Chronology of Development Economics Thinking^{24 25}

Years	Main ideas /Key words	Representatives /masterpiece
1776-	<i>The Wealth of Nations</i> Invisible hand, market liberalism.	Adam Smith (1723-1790)
1848-	Problems of Political Economy, Liberty of individual action in economic and political spheres, concept of “utilitarianism”, economic growth as a function of factor accumulation.	John Stuart Mill (1848)
1940s-1960s	Theory of “the Big push”, balanced growth, planning, investment programming, strong role of the government for industrialization; and international aid theory. (This was driven by newly independent developing countries. The UN pointed to the goal of colonial emancipation.) “Structuralist” approach, Stages of development –the takeoff; the two-gap model, emphasizing savings and investment, sectoral disaggregation; international aid policy stressed country leadership Unbalanced growth, “favouring industries with strong backward and forward linkages”, suspicious of planning, sequential growth, “we cannot achieve all objectives at once” “Convert import to import substitutes”. Dependency argument, “Capitalism and underdevelopment in Latin America”, the center-periphery concept, “the decline in terms of trade against the export of primary commodities was secular and led to the transfer of income from resource-intensive developing countries to capital-intensive developed countries” “the way ... was to develop domestic manufacturing industries through a process known as import substitution” (Lin 2011).	Paul N. Rosenstein-Rodan, who headed the World Bank research department in 1947 Arthur Lewis (1954), Chang (1949), Myrdal (1957), Walt W. Rostow (1960), Simon Kuznets (1930, 1966), Hollis Chenery (1970) Albert O. Hirschman (1958) Frank (1967), Cardoso and Faletto (1967), Prébisch (1950), Singer (1950), Samir (1976)
1970s	The shift from physical capital to human capital, from capital intensive to appropriate less cap-intensive technologies, from employment in large cities to SMEs,	Jan Tinbergen (1958, 64), Gary Becker (1964), T. W. Schultz (1968, 1971).
1980s	End of the heyday of development economics, and a shift to market liberalism, structural adjustment, reaction to failures of structuralism, new focus on removal of government distortions, leading towards Washington Consensus. Also, revival of institutional economics.	Krueger (1974) North (1981, 1990)
1990s	Endogenous growth theory develops deeper understanding of role of technology, however, there is inadequate attention to catch-up theory – differences in innovation for developing countries.	Romer (1990), Aghion and Howitt (1992), Aghion and Tirole (1994), Jones (1995), Acemoglu (2003)
2000s-Present	Multiple approaches: Reaction to failures of Washington Consensus randomized experiments, enterprise surveys and investment climate analysis, firm level econometrics and productivity, Revival of interest in structural transformation; Growth diagnostics, New Structural Economics	Hausmann, Rodrik and Velasco (2005), Banerjee and Duflo (2011), Lin (2012c)

Source: Compiled based on *Pioneers in Development*, a World Bank publication, 1984, and Lin (2011c).

²⁴ The intention here is not to give a full review of development thinking. For a fuller review, see Lin (2011c).

²⁵ The authors thank Yan Wang of the World Bank for the compilation of a preliminary draft of this table.

In the structuralist view, price distortions and rigidities were so large in the existing market-based allocation that planning and other direct interventions could provide a superior resource allocation. Planning tools could be employed to help guide decisions, and policy instruments could include: subsidies for factor inputs, price controls on factor prices, directed investment schemes, and trade protection to promote import substitution as part of an industrialization strategy. The latter was justified on several fronts, including: (1) the empirical observation that advanced economies had all undergone a process of industrialization; and (2) that the international trading system was biased in favor of the industrial goods' exporters and against primary product exporters. Developing countries needed to copy, to some extent, the industrial structure of the high income countries.

In providing both protection and investment incentives for these new industries, little attention was paid to whether the sectors that developed were compatible with the developing country's comparative advantage, since (as noted above) it was assumed that factor markets were in disequilibrium and that factor prices were distorted. Since the latter part of the industrial revolution and into the twentieth century, the advanced economies had accumulated substantial amounts of capital. In addition, new goods were developed – for example, the automobile—that involved increasingly high capital intensity for production. As “structuralism” emerged, many of the advanced industries that developing countries wanted to imitate were highly capital intensive. Meanwhile, the developing countries' endowments were characterized by high levels of labor – particularly unskilled labor—and in some cases, abundance of natural resources – land, minerals and oil. As a result there would be a violation of countries' comparative advantage in imitating advanced countries' industries. In addition, there was a challenge in financing the large capital investments for capital intensive industries, and a number of developing countries eventually relied on foreign capital in this regard.

As noted above, if factor prices were distorted, then subsidies or direct price manipulation could be justified, according to many adherents of the structuralist framework. For example, in capital markets, interest rates were often held artificially low, which in theory should have helped finance capital intensive industries; however, the policy often led to the phenomenon of “financial repression”²⁶ which simply lowered saving mobilization and stunted financial sector development. In many countries, trade restrictions on imports were accompanied by real exchange rate overvaluation. This overvaluation along with trade distortions often led to a degree of “taxation” of the traditional agricultural sector.²⁷

Many industries in developing countries did not manage to take off despite the many government efforts to support them. Since these sectors did not follow the countries' comparative advantage, continued support from government was necessary for their survival.

²⁶ See Fry (1980 and 1997) for a discussion of financial repression and later financial liberalization. Antunes et al (2007) use a CGE to simulate the effects of financial repression. Roubini and Sala-i-Martin (1995) develop a growth model that to trace both the growth and inflationary effects of financial repression over time. Demirgüç-Kunt and Detragiache (1998) provide a cautionary tale on the institutional requirements for successful liberalization. Demirgüç-Kunt and Levine (2001) provide a set of studies on the link between financial structure and growth. Lin and Lin et al (2009) provide a theory of optimal financial structure as a function of a country's stage of development.

²⁷ Krueger, Schiff and Valdes (1992) developed a methodology to quantify the degree of taxation and applied it to a variety of developing countries in a five volume compendium.

On their own, they simply could not compete in the global economy. In addition, in the 1970s, many developing countries used increased access to foreign borrowing as a means of financing the expensive distortions and investment required for the import substitution industrialization model.

The failures of the structuralist approach led to the “neoliberal” Washington Consensus.²⁸ The original ten areas of the Washington Consensus were: (i) fiscal discipline, (ii) reordering public expenditure priorities; (iii) tax reform (broad base with moderate rates); (iv) liberalizing interest rates; (v) competitive (not overvalued) exchange rates; (vi) trade liberalization; (vii) liberalization of inward foreign direct investment; (viii) privatization; (ix) deregulation; and (x) property rights (for the informal sector). In many ways, the Washington Consensus was a reaction to the complex web of distortions that had to be created to try to support competitive advantage defying import substitution. In fact, each of the ten items on the list responded to a particular distortion perceived to exist – particularly in Latin American countries.²⁹ For example, there was the perception that debt-financed overinvestment in low productivity activities had created fiscal sustainability problems and wasteful public expenditure patterns. There was the perception that complex tax breaks had led to an inefficient tax system with low revenue mobilization. There was the perception that interest rate caps lead to financial repression and low levels of financial intermediation, and that protectionism led to overvalued exchange rates. The Consensus critiqued public enterprises that had become inefficient and created a high cost for public services (as well as a fiscal drain). The Consensus also noted that restrictions on FDI had limited the potential for investment, and that a lack of property rights had locked out many poor people from access to formal markets.

The Washington Consensus was also a direct denial of the pervasive export pessimism that permeated the import substitution industrialization strategy. The focus was on liberalizing markets and balancing budgets – given that the end of the import substitution era coincided with sovereign debt defaults in a variety of developing countries. In the international development institutions, it became associated with structural adjustment lending where these institutions provided financial support conditional on market-oriented reforms.

In end, the Washington Consensus advised the developing countries to **adopt the “idealized” advanced countries’ institutions**—namely, free markets--without paying attention to the following facts. First of all, the various distortions in the developing countries might have been endogenous to the structuralist development strategy itself; and secondly, appropriate institutions may differ depending on the level of development in a particular country.³⁰ Meanwhile, the Washington Consensus reforms implied establishing a strong system of property

²⁸ See Williamson (2004, 1990).

²⁹ The original formulation was inspired by a meeting of high level Latin American policy makers in Washington.

³⁰ In some ways, the situation is similar to the transition economies, where big bang reforms often ended up being counter-productive. Transition countries that followed more gradualist, dual track reform strategies—like China, Vietnam, Laos, Cambodia, and Slovenia in the 1990s and Mauritius in the 1970s—managed to often sharp contractions in the early stage of transition and achieved a remarkable success (Lin 2009). The first track is to liberalize entry to sectors which are consistent with the country’s comparative advantages and were repressed in the past, while maintaining a second track that allows some distorted sectors to remain intact—at least during the initial phases of transition. The Washington Consensus approach ignored these endogenous structures and the need for a more gradualist approach to unwinding the structuralist distortions.

rights, opening the economy to trade, privatizing state-owned enterprises and establishing broadly free markets through deregulation. In brief, the focus shifted from trying to copy industries to trying to copy the idealized market institutions of the high-income countries.³¹ The results of the policies presented as alternatives to the failed old structuralism were at best controversial (see Easterly 2001, 2005; and World Bank 2005). The Washington Consensus quickly came to be perceived as “a set of neoliberal policies that have been imposed on hapless countries by the Washington-based international financial institutions and have led them to crisis and misery” (Williamson 2002).

Later, development thinking would incorporate other trends from the broader economics profession, and in particular, growth theory. A focus on human capital dates back to the 1970s (see Table 6); however, new growth theory highlighted the role of “endogenous” innovation that leads to sustained economic growth in the most advanced economies, as well as opportunities for technological catch-up in developing countries. In recent decades, the emphasis has also been placed on country specificity as policy makers moved away from generalized policy prescriptions. New techniques were developed – such as randomized control trials and other forms of impact evaluation—in order to understand better what works at the micro level of service delivery and policy reform. As part of a more pragmatic approach, some economists spent more time trying to understand the structure of domestic economies and domestic institutions in order to deepen their understanding of why some countries succeeded, while others failed.

The countries that successfully accelerated their growth and closed the gap with developed countries did not follow the approaches proposed by the dominant development thinking of that time. Japan and the East Asian “tigers” followed export-oriented growth strategies instead of the old structuralist import substitution model that was popular during the 1950s and 1960s. The strategy led to much faster export growth. For example, since 1960, Latin American and Caribbean exports grew at an average of 5.4 percent per year, while they grew by 17.8, 10.5 and 8.6 percent in Korea, Thailand and Malaysia, respectively. China’s export growth has averaged about 13 percent since 1979.³²

Similarly, China, Vietnam and Mauritius followed the dual-track approach for gradually moving toward a more market-based economy—sometimes referred to as an ‘Asian approach’ (Rana and Hamid, 1995; Chang and Noland, 1995).³³ This contrasts with the sharp economic contractions experienced in Eastern European countries following the “shock therapy” approach that had become popular in the economics profession in the early 1990s.³⁴

China is a prime example. Instead of wholesale privatization of state-owned enterprises, the government continued its ownership of many enterprises and gave them preferential access to subsidized credit. Figure 16 below displays the gradual, but substantial, transition in firm ownership in China. Simultaneously, in many sectors, the government also allowed private

³¹ In fact, not all those policies recommended by the Washington Consensus were rigorously followed in the high-income countries. In the 1990s during the heydays of the Washington Consensus, many policy advisors for the high-income countries advised the developing countries to “do as what we say but not as we do.”

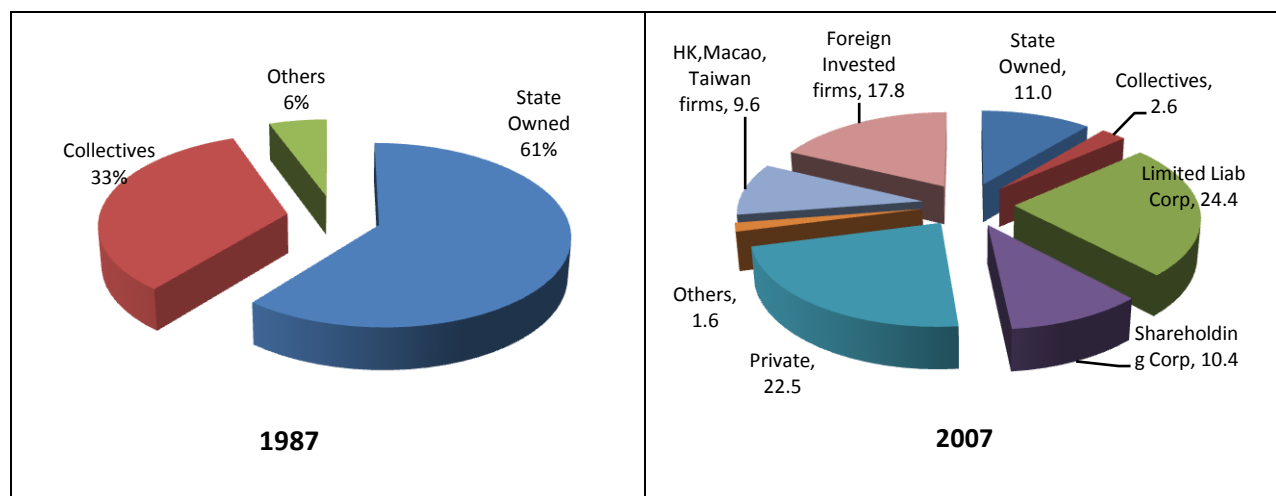
³² Data are from *World Development Indicators*, simple average growth rates.

³³ See Lin (2009).

³⁴ See, for example, Sachs (1993).

enterprises—including joint ventures—to enter into competition (Perkins, 1998). This approach was once asserted to be the worst possible transition strategy—one that would invite rent seeking and corruption and result in unavoidable economic collapse (Sachs et al., 2000). However, instead of collapsing, China has been the most dynamic economy in the world over the past three decades. Gradually, the Chinese economy has moved close to becoming a fully fledged market economy (Naughton, 1995) while simultaneously achieving the Pareto improving result of “reform without losers” (Lau et al., 2000; Lin et al., 1996).

Figure 16: Transformation of Ownership Structure: Industrial Value Added in China, 1987 and 2007, by % share of value-added



Source: Wang, 2011.

The transitional strategy in Vietnam and Mauritius was similar to that employed in China. Many state-owned enterprises in Vietnam were not privatized and still enjoyed priority access to subsidized bank credit (Sun, 1997). Through this cautious and gradual approach, China and Vietnam have been able to replace their traditional Soviet-type systems and gradually develop market systems. Prior to the 1970s, Mauritius had become stuck in a comparative advantage defying (CAD) strategy, along the lines of the structuralist import-substitution approach described above. Since then, Mauritius has established a dual track approach to reforms. It set up export-processing zones to encourage exports while maintaining import restrictions to protect non-viable enterprises in domestic import-competing sectors. This reform strategy resulted in Mauritian GDP growth of 5.9 per cent per annum between 1973 and 1999—an exceptional success story in Africa (Rodrik, 1999; Subramanian and Roy, 2003).

What the Washington Consensus ignored, however, was that in countries that adopted a CAD strategy, there existed a multitude of non-viable enterprises that had emerged over the years. Without government protection and subsidies, those enterprises were unable to survive in an open and competitive market. Had there been only a limited number of such non-viable enterprises, the output value and employment of those enterprises would have been small, and “shock therapy” to eliminate all government interventions at once could have been applied successfully. With the abolition of government protection and subsidies, these non-viable enterprises could become bankrupt, but this effect would be overcome by the previously suppressed labor-intensive industries that would thrive following reforms. The newly created

employment opportunities in these industries, under these circumstances, can surpass the losses from the bankruptcy of non-viable firms. In theory, the economy can grow dynamically soon after implementing the shock therapy, with at most a small initial loss of output and employment—another hypothetical version of “reform without tears.”

On the other hand, if the number of non-viable firms is too large, the output value and employment of those firms will make up too large a share of the national economy and shock therapy may be self-defeating. Economic chaos may ensue due to large-scale bankruptcies and dramatic increases in unemployment. The resulting chaos can force the hand of government into sustaining the non-viable enterprises—often resorting to ever increasing protection and subsidies for these firms—either explicitly or implicitly—and often in a more disguised way. In some cases, even if the firms are privatized, soft-budget constraint problems will continue. The subsidies to the non-viable firms post-privatization could even increase due to the private owners’ even greater incentives to lobby for subsidies and protection (Lin and Li, 2008). In effect, this is what happened in Russia and many other countries in Eastern Europe and the former Soviet Union (Brada, 1996; Frydman et al., 1996; Lavigne, 1995; Pleskovic, 1994; Stark, 1996; Sun, 1997; World Bank, 2002). In the end, the economy can find itself in the unfortunate situation of shock without therapy (Kolodko, 2000).

In brief, the experience of a number of countries that have pursued gradualist reform strategies shows that this approach is often far superior to shock therapy. The removal of distortions is needed – whether transitioning from a predominantly government-owned system of production or from a comparative-advantage defying, but government supported, system of private enterprise. The pragmatic, two-track approach avoided some of the pitfalls of the shock-therapy that was often prescribed following the downfall of the Soviet Union.³⁵

In addition, successful transition requires the creation of new industries. The distortion removal agenda of the Washington Consensus neglected to include any positive policies to facilitate the entry of firms into these new sectors. A successful development strategy that will facilitate the structural change for successful transition can be based upon the principles outlined in the New Structural Economics (NSE) and its policy implementation via the Growth Identification and Facilitation Framework.³⁶ The NSE highlights that a country’s economic structure is endogenous to its endowment structure; however, the government needs to play a facilitating role and this role needs to be structured according to clearly defined principles.

First, for an economy to be competitive in both the domestic and international market, it should follow its comparative advantage, as determined by its endowment structure. In the early stages of development, sectors in which the economy has comparative advantage will be labor or resource intensive. Examples include light manufacturing, smallholder agriculture, fishing and mining. Only a few activities like mining are likely to be capital intensive in this early stage. In the later stages of development, the competitive sector will become increasingly capital intensive, as capital accumulates, thus changing the country’s endowment structure. In the industrial upgrading toward more capital intensive production, infrastructure needs to be improved simultaneously to reduce the firms’ transaction costs, and there is a clear role for government to play in this regard.

³⁵ This discussion of the two track reforms draws on Lin (2009).

³⁶ See Justin Yifu Lin (2012c).

Secondly, if a country follows the above principle, its factor endowment upgrading will be fast (due to large profits from the competitiveness of the economy and a high return to investment), and its industrial structure should be upgraded accordingly. The upgrading involves information creation (for example, in which new industries to invest), coordination needs--improvement in “hard” (e.g., transport) and “soft” (institutional) infrastructure--and externalities (“first movers” to followers). All of these aspects involve coordination, externalities or public (semi-public) goods that the market will not automatically resolve on its own. The government needs to play facilitating role to help the private sector overcome these issues in order to achieve dynamic growth.

A practical approach for the government to operationalize the NSE is laid out in the six steps of the Growth Identification and Facilitation Framework.³⁷ In summary, the six steps are: (i) identify the list of tradable goods and services that have been produced for about 20 years in dynamically growing countries with similar endowment structures and a per capita income that is about 100 percent higher than their own; (ii) among the industries in that list, the government may give priority to those in which some domestic private firms have already entered spontaneously, and try to identify the obstacles that are preventing these firms from upgrading the quality of their products or the barriers that limit entry to those industries by other private firms; (iii) some of those industries in the list may be completely new to domestic firms, and the government could adopt specific measures to encourage firms in the higher-income countries identified in the first step to invest in these industries; (iv) governments should pay close attention to successful self-discoveries by private enterprises and provide support to scale up those industries; (v) in developing countries with poor infrastructure and an unfriendly business environment, the government can invest in industrial parks or export processing zones and make the necessary improvements to attract domestic private firms and/or foreign firms that may be willing to invest in the targeted industries; and (vi) the government may also provide limited incentives to domestic pioneer firms or foreign investors that work within the list of industries identified in step 1 in order to compensate for the non-rival, public knowledge created by their investments.

The Need to Democratize Development Economics

Why is now the time to democratize development economics? Continuous technological innovation and structural change is inherent in modern economic growth in both developed and developing countries; however, the policy challenges for achieving growth differ between developed and developing countries. The difference is derived from the fact industries in the developed countries are generally on the global technological frontier, while industries in developing countries are within the global frontier. The former requires indigenous innovation in technology to push the frontier outward. For the developing countries, the challenge is to develop their economies according to their comparative advantages (as discussed in the previous section), and to tap into the latecomer advantage of adopting already existing technology. There are different policy challenges for indigenous innovation versus efficient adoption---as a result the policy framework should not be identical. Middle-income countries generally possess industries that represent a mix of frontier technology and less advanced technology.³⁸

³⁷ Ibid.

³⁸ See Fu and Gong (2011) for evidence that indigenous R&D activities by indigenous firms have had an important impact on Chinese firm-level productivity in the early 2000s.

The economic theories that originate in developed countries attempt to explain and promote the growth in the developed countries; as such, they may not be relevant to developing countries because of the differences in the challenges and opportunities discussed above. Meanwhile, successful developing countries have generated many useful lessons for how to achieve dynamic growth. Their experiences will be more relevant for other developing countries than the experiences of the developed countries because of the similarity of their opportunities and challenges.

Most economic theories are produced by economists in developed countries with the intention to explain economic phenomena in developed countries or by economists who use developed countries as reference to explain phenomena in developing countries (such as structuralism and the Washington Consensus). As noted in Lin (2012b), many economic and social constraints to development differ across countries and/or across time.³⁹

The validity of a theory hinges on the conformity of the theory's explicit and implicit conditions for its causality to work. As noted in Lin (2012b), economic theory must have a coherent internal logic, but also be subject to the test of consistency with empirical data.⁴⁰

Most developing countries that followed the dominant development theories to design development policies failed to achieve the goal of narrowing the income gap with developed countries. Most of those that achieved the catching up did not follow the dominant development theories. These basic stylized facts, in and of themselves, should be ample rationale for rethinking economic development on a more democratic basis—one that builds on developing countries' own ideas and experience. China, with its remarkable economic success of recent decades is a case in point. Lin (2012b) argues that Chinese economists have a natural comparative advantage in understanding China's own unique development experience.⁴¹

³⁹ "Any economic theory is an abstraction based on an economist's perception of the causal relationship behind the phenomenon in the real world. Any economic theory is an attempt to explain how a decision maker finds the best choice under certain constraints and the result of the choice in the theoretic model is the concerned social, economic phenomenon. Because in the same society at different times or in different societies at the same time, many economic and social constraints will change or differ, there is no one-size-fits-all best choice or theory. To simply introduce theories based on developed countries into developing countries and make policies based on those theories will lead to unintended or catastrophic consequences." Lin, 2012b .

⁴⁰ "...a theory also needs to possess two "consistencies" to be scientific. First, while a theory is a logical system of causal relationship among certain variables, its internal logic must be coherent. Namely, the cause that is designated by the theory must lead by way of a certain logic mechanism to result in an effect for which is the theory is designed to explain. Only when the logic a theory passes the test of internal consistency can the theory illustrate the causal relationship among the variables included in the theory. Second, a theory is not simply a logic game. Rather, it is meant to explain a phenomenon. Therefore, its logical inference must conform to the phenomenon in question. Put another way, there must be a consistency between the inference of a theory and the real world phenomenon that the theory intended to explain. A theory must possess these two qualifications." Lin, (2012b).

⁴¹ More specifically: "With the rise of China's status in the world, the international significance of China's political, economic, and social phenomena is growing. Especially, during China's reform and opening process, there have appeared many phenomena, with which the existing theories have never dealt and failed to provide satisfactory explanations. Economists working in China enjoy a natural comparative advantage in studying these new phenomena and breaking their studies to new theoretical grounds. Therefore, to achieve the goal of internationalizing their research findings, economists working in China should not 'ignore what is within reach and seek after the unreachable.' Rather, their entry point of research should be the indigenous problems in China."

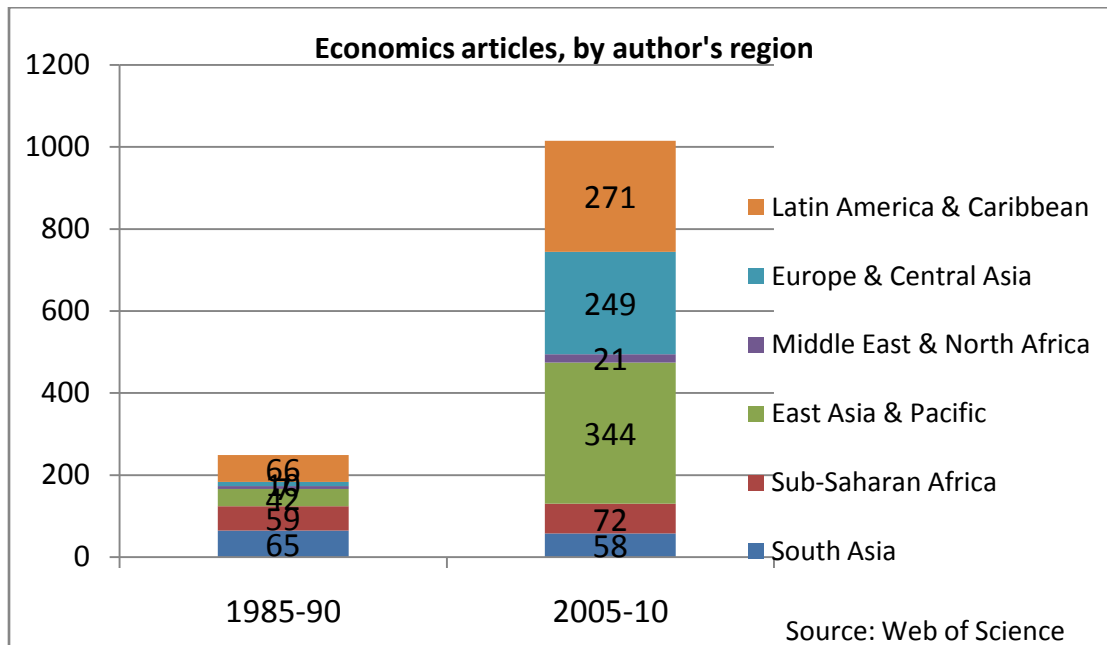
The theories and experiences that are generated from developing countries will be more relevant for other developing countries, due to the similarity in their opportunities and constraints. There are many areas where policy innovation has come from the developing world itself. In terms of macroeconomic stabilization, Chile has developed a cyclically adjusted fiscal rule that is a global model—for rich and poor countries alike. Africa could learn from Brazil’s successful models for expanding agricultural production in regions with similar climatic and soil conditions. Innovative social policies in Brazil and Mexico –conditional cash transfers—have been adapted and adopted in numerous other developing countries and even rich countries (e.g., local programs in New York City). Experiments with export processing zones in Mauritius and other countries have helped us understand how best to design these interventions. East Asian economies, including Japan, Korea, China, Singapore, Indonesia and others, provide many useful experiences of developing from backward agrarian economies to modern industrialized economies through the state’s facilitation in a market-based mechanism. The research and publications from economists working in developing countries have, and will continue to, greatly enrich development economics.

The increase in the trade, financial flow, and the research capacity in developing countries will contribute to exchange of “south-south” experiences. With the rising of the multi-polar world, the research capacity in the developing world has improved. It can be expected that more research and theories will be produced by economists in developing countries with the intention to explain the phenomena in developing countries. This research will enrich development economics and make development economics more relevant and effective as policy framework for developing countries.

The figure below provides data on the growth of economics articles by authors from developing countries, by region of origin. This figure shows a sharp growth in quantity; however, the growth is concentrated in only three regions of the developing world.

“...Economists in the advanced countries in general focus their subjects of research on issues in their societies. Consciously or unconsciously, they take the existing institutions, technology, and resources in their societies as given conditions in their research. That is, the starting point of their research is a society with frontier technologies and relatively stable social institutions. In the process of internationalizing economic research in China, it is necessary to understand the accomplishment in economics in the advanced countries. But in their attempt to analyze and understand economic phenomena emerged in China’s reform and opening-up process, economists should avoid applying the existing theories mechanically without considering China’s specific condition. Only through a “creative reconstruction” thinking process, making sure that omitted variables in an existing theory are in fact negligible and variables included in the theory are also important in China’s context, can the theory be certain to have relevant implications to China’s economic practices.” (Lin, 2012b)

Figure 17: Increase in economics research by developing country authors



Source: Reproduced from Adam Wagstaff's contribution to the *Let's Talk Development* blog of the World Bank. Posted January 14, 2011 under the title "The (gradual) democratization of development economics."

As a result, the thinking that may have direct relevance for developing countries' development is likely to come increasingly from the developing countries themselves. As such, a key phrase that would dominate the agenda is to "democratize development economics."⁴² As World Bank President Robert Zoellick has stated:

"With the end of the outdated concept of a Third World, the First World must open itself to competition in ideas and experience.

The flow of knowledge is no longer North to South, West to East, rich to poor.

Rising economies bring new approaches and solutions. We see that as India advises Africa on dairy farming; as China learns from Africa about effective community-driven development approaches in Ghana and Nigeria; as the United States learns from China about high-speed railways;

*This is no longer about the Washington Consensus. One cannot have a consensus about political economy from one city applying to all. This is about experience regarding what is working ---- in New Delhi, in São Paulo, in Beijing, in Cairo, and Accra. Out of experience may come consensus. But only if it is firmly grounded -- and broadly owned."*⁴³

⁴² See World Bank President Robert Zoellick's speech, "Democratizing Development Economics," delivered at Georgetown University on September 29, 2010.

⁴³ Ibid.

V. The Future Role of Multilateral Development Institutions and, in Particular, the World Bank

The World Bank – or at least its branch known as the International Bank for Reconstruction and Development (IBRD) -- was conceived at the Bretton Woods Conference of 1944. In reality, it was somewhat of an afterthought to the conference. The main focus was on the International Monetary Fund. This was so much the case that the invitation to the forty-four participating countries stated that the meeting was “for the purpose of formulating definite proposals for an International Monetary Fund, and *possibly* a Bank for Reconstruction and Development.”⁴⁴ One attendee at Bretton Woods would later state “...if one measured the time spent during those fourteen days of work at the Bretton Woods Conference, the Bank probably did not take more than a day and a half.”⁴⁵

Initially, the IBRD focused on the “R” of reconstruction. The first loan (\$250 million) was to France for its post-World War II reconstruction in the spring of 1947. Loans to the Netherlands, Luxembourg and Denmark followed.⁴⁶ By the end of 1948, nearly \$500 million had been committed for reconstruction purposes.⁴⁷ The “D” of IBRD was not completely ignored: loan applications were “accepted” from Chile, Mexico and Iran.⁴⁸ At the same time, the US and European governments were realizing that the scale of resources required for reconstruction were much larger than the amount that could be supplied by the young IBRD. In June 1947, a famous speech by US Secretary of State George Marshall made this point, and soon preparations began for the design of the “Marshall Plan.” In April 1948, the US Congress passed the Economic Cooperation Act that budgeted an initial \$5 billion (about \$45 billion in today’s dollars) for reconstruction assistance for Europe.⁴⁹

As early as the 1950s, the Bank became involved in technical assistance (TA) and policy advice. Much of the TA would occur as part of project preparation and supervision, when infrastructure engineers and economists would first evaluate project design and later be involved in implementation review prior to disbursement. At the 1956 Annual Meetings, Eugene Black declared that the Bank “has evolved into a development agency which uses its financial resources as but one means of helping its members.”⁵⁰ In addition, dating back to the 1950s, teams worked directly on country policy analysis—so much so, that an internal reorganization in 1952 was intended to coordinate country-based project approval with policy analysis.⁵¹

Hollis Chenery became the first Chief Economist of the World Bank in 1972. A more ambitious Bank under Robert McNamara began to expand its lending substantially. Chenery’s research prior to joining the Bank focused on empirical patterns of growth and industrialization across countries. In the more theoretical realm, he developed the two-gap model that

⁴⁴ As cited in Kapur, Lewis and Webb (1997), page 58.

⁴⁵ Ibid, page 59.

⁴⁶ Ibid, page 71.

⁴⁷ Ibid, page 71.

⁴⁸ Ibid, page 71. The evaluation of these applications took time and they were not all approved.

⁴⁹ Ibid, page 73.

⁵⁰ Ibid, page 88.

⁵¹ Ibid, page 11.

emphasized scarce foreign exchange as a constraining factor for economic development.⁵² This model provided a rationale for the “ramp up” in lending by the Bank. He also worked on redistribution issues,⁵³ and direct interventions for poverty alleviation began to have a more central role of the World Bank’s strategy for development under McNamara.⁵⁴

Chenery’s successor, Anne Krueger, came to the Bank as the debt crisis in Latin America had begun.⁵⁵ Krueger’s philosophical belief in more orthodox adherence to the principles of neo-classical economics would inform the Bank’s new instrument: “Structural Adjustment Loans.” Much of the conditionality of these loans focused on dismantling policy distortions that had arisen during prior structuralist interventions.⁵⁶ In 1981, an “academic market-oriented development economist,”⁵⁷ Elliot Berg, was hired by the Bank to lead a team to study the poor economic performance of the relatively young African countries. He too pointed the finger at distortionary policies that needed to be removed.

There was also the view—based on the Bank’s experience in lending—that a more policy-based approach to lending was needed to promote development. In the late 1970s, senior Bank management was increasingly concerned about how lending programs were often delayed due to macroeconomic policies that were inappropriate.⁵⁸ In many cases, project finance simply was not enough to promote development objectives.

Clearly this new orientation was also a reaction to the failures of many of the interventionist policies of the structuralist import substitution model. The new lending instrument to support reforms required a new interpretation of the Bank’s own operational policies. The Articles of Agreement of the Bank begins Article 1 with the first purpose: “(i) To assist in the reconstruction and development of territories of members by facilitating the *investment of capital for productive purposes...*” (emphasis added). In addition, Article III, Section 4, item (vii) states: “Loans made or guaranteed by the Bank shall, except in special circumstances, be for the purpose of specific projects of reconstruction or development.” How could the Bank then finance on the basis of policy reforms? Philosophically, there was little argument at the time that policy actions were important for development. To bridge the gap with the specific language of the Articles of Agreement, structural adjustment loans were initially disbursed against a time slice of government expenditures. It was only in 1996 that the interpretation of the Articles was broadened so that loans could be simply disbursed on the basis

⁵² See Chenery and Strout (1966) and Chenery and Carter (1973).

⁵³ See Chenery et al (1974).

⁵⁴ Kapur, Lewis and Webb (1997), page 11.

⁵⁵ Kapur et al (1997) provide evidence of how changing attitudes about economic development affected even the choice of the Chief Economist. As McNamara and Chenery were seeking a replacement for Chenery before either departed, reportedly, “They favored Albert Fishlow, then of Yale University; and for a time, until a slashing attack on *Fishlow’s alleged interventionist propensities* appeared in a Wall Street Journal editorial, it looked as if President-elect Clausen would go along.” (Page 510, emphasis in italics added.) A selection committee subsequently chose Professor Krueger.

⁵⁶ Earlier work by Ms. Krueger included her seminal analysis of rent-seeking created by policy distortions (Krueger, 1974). Shortly before joining the Bank, she expressed her views on the positive direction of Structural Adjustment Lending (eventually published shortly after joining the Bank—Krueger, 1983).

⁵⁷ Kapur et al (1997), page 23.

⁵⁸ Ibid, page 506.

of compliance with policy reform objectives.⁵⁹ Meanwhile, adjustment lending rapidly increased from 7 percent of the volume of lending in 1980-82 to 26 percent in 1987-90.⁶⁰ In later decades, this modality of lending would surpass 50 percent of the volume of lending, depending upon recipient country demands.

In the 1990s and 2000s, country ownership and country specificity came to the forefront, as well as a renewed focus on governance and enhancing country level understanding of development. Sweeping policy formulas were largely swept aside. On the intellectual front, both within the Bank and beyond, institutional economics and historical analysis became more prominent with the awarding of the Nobel Prize to Douglas North and Robert Fogel in 1993. In the 2000s, there were efforts to improve country level analysis of both firm and household data to better understand the dynamics of productivity growth, including the “investment climate”⁶¹, as well as the determinants of poverty. The concept of “equity” or equality of opportunity extended traditional analysis of income inequality, via the 2006 World Development Report. Another trend in research is the use of quasi-experimental techniques to understand micro interventions for development. The Poverty Lab at MIT has been a leading proponent; however, researchers at the Bank and many universities have also contributed actively to this research area. In addition, country teams are currently using impact evaluation techniques to improve the quality of “results” measurement for World Bank supported projects. Currently, the Bank’s Chief Economist is proposing a “new structural” approach to rethinking development.⁶² A number of country teams in the World Bank are beginning to apply new structural approach to analyze policies for improving economic growth prospects.

Country specificity and country ownership entered into the operational units of the Bank at the country level. For example, “Country Assistance Strategies” became “Country Partnership Strategies.” “Best practice” for policy based lending focuses on the quality of the policy dialogue and the Bank’s inputs into the government’s development thinking. As a result, the name of “Structural Adjustment Loan” was changed to “Development Policy Loan (DPL).” Beyond the name change, gradually loans were simplified to the point where currently DPLs contain a list of policy actions that the government has already complied with and there is no future “conditionality” that could restrict disbursement of the funds.

Advisory, analytic and technical assistance activities are increasingly tailor-made to government specifications. For example, a traditional public expenditure review might have a focus on a particular area of public sector performance, at the government’s request, and the delivery of the advice might be built around both Bank staff analysis and/or academic seminars/conferences by leading experts and/or partnership with local think-tanks.

Meanwhile, other institutions were created to provide finance to development: both bilateral aid agencies and regional multilateral development banks. The Inter-American

⁵⁹ “Simplifying Disbursements Under Structural and Sectoral Adjustment Loans,” operational memorandum for OP 8.60 guiding policy based lending, February 1996.

⁶⁰ Ibid, page 520, table 10-1.

⁶¹ See Stern (2002).

⁶² See Lin, 2012.

Development Bank (IADB) was created in 1959, the Asian Development Bank (ADB) in 1966, the African Development Bank (AfDB) 1964, the Islamic Development Bank (IsDB) in 1973, the European Bank for Reconstruction and Development (EBRD) in 1991, and the European Investment Bank (EIB) in 1958. All of these multilateral institutions have an economics department that produces research and economic analysis, and they all have a Chief Economist or a Director of Economics to provide intellectual leadership. Many bilateral aid agencies have also enhanced their knowledge function: for example, both the US AID and the UK's DFID have Chief Economists.

In a multi-polar world, the World Bank Group's financing function remains important, but in the future, it is possible that it will be limited to a smaller number of low-income countries and a few global public goods. Thirty-six countries have graduated from IDA since its creation; however, eight of those graduates have slipped back into IDA status.⁶³ From the IBRD perspective, twenty-five countries have graduated since 1970; however, six later "de-graduated."⁶⁴

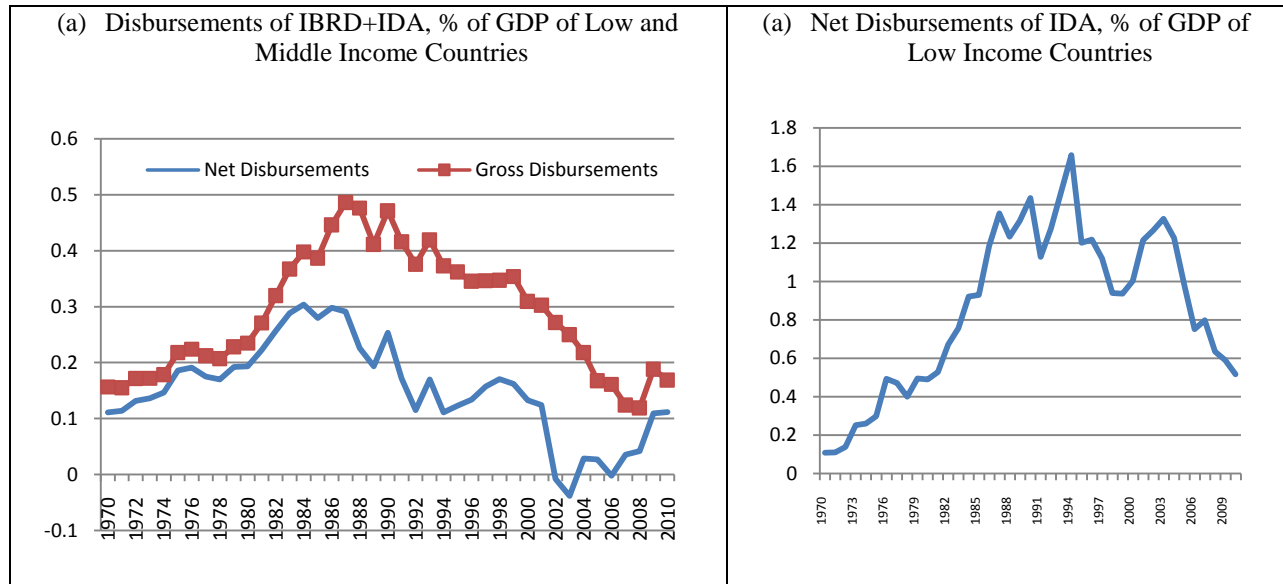
In fiscal year 2008 – prior to dramatic increase in crisis lending—*gross* disbursements for the entire World Bank Group (including IFC) were \$27.2 billion. This is a tiny amount compared to *net* capital flows to the developing countries that reached a record \$1.1 trillion in 2007 and reached over half a trillion dollars in 2010. In terms of net disbursements, in fact, the World Bank (IBRD+IDA) has been a small share of developing country GDP—never surpassing ½ of one percent of developing country GDP since the 1970s (Figure 18a). In typical years, net lending was on the order of ¼ of one percent of GDP. If one considers that investment to GDP ratios average about 25 percent of GDP, then typically IBRD-IDA might finance about 1 percent of developing country investment in a given year. IDA has represented a somewhat larger share of the subset of low-income country GDP (Figure 18b); however, the share still has remained below 2 percent – even during the peak years.

⁶³ See data at

<http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/IDA/0,,contentMDK:20054573~pagePK:83988~piPK:84004~theSitePK:73154,00.html>.

⁶⁴ See Heckelman et al (2011) for more information and for an empirical analysis of the determinants of country graduation.

Figures 18(a)-(b): Net Lending by World Bank Since 1970



Source: Authors' calculations based on data from the World Development Indicators.

Already, many loans to middle-income countries are sought after for an embodied knowledge function: why else would China continue to seek project finance from IBRD? It is highly likely that the main function of the WBG will increasingly shift to knowledge—whether that knowledge is produced as a stand-alone service, or bundled within the project preparation and supervision activities of a loan. This is also occurring to some extent in the regional development banks.

The Bank and other multilaterals have a long history of knowledge services bundled into lending activities. The concept of a project design involves Bank staff assessment of the technical and economic viability of the project. For example, Bank staff engineers examine the technical specifications and project economists assess the economic impact – in conjunction with government staff. The first developing country loan proposed to the World Bank underwent substantial revisions following the staff's evaluation.⁶⁵

The impact of project evaluation and project supervision is inherently difficult to measure. A recent study uses a database of World Bank financed projects to disentangle the impact of the country policy and institutional environment from project specific factors affecting the success of these projects.⁶⁶ The authors find that country-level "macro" measures of the quality of policies and institutions are very strongly correlated with project outcomes, confirming a common result from past research on aid effectiveness. At the project level, they find that the success of individual development projects varies much more within countries than it does between countries. Data were collated to identify the project-level "micro" correlates of project outcomes, and the authors conclude that project size, as well as supervision efforts significantly

⁶⁵ See Kapur, Lewis and Webb (1997), page 82. There were also some controversial issues surrounding arrears clearance to lenders prior to project approval.

⁶⁶ See Denizer et al (2011).

correlated with project outcomes. Curiously, they also find that measures of World Bank project task manager quality matter significantly for the ultimate outcome of projects.

Knowledge products of a variety of forms have long been part of the Bank's "arsenal" for promoting economic development; country-based economic analysis dates back to the 1950s. Some of these analyses have been conducted on broad economic issues (e.g., Country Economic Memorandum), as well as sectoral issues (e.g., Water Resource Management in Country X). Bank-wide sector strategies are also produced, as are regional "flagship" reports on selected topics.

Research reports are also produced as a means of consolidating existing global knowledge on a selected topic. Policy Research Reports and the World Development Report are two examples—the former produced from time-to-time, and the latter on an annual cycle. Last, but certainly not least, the Bank is a central figure in the collection/collation/processing/documentation and presentation of data on developing countries. The publicly available World Development Indicators are the primary vehicle in this realm, but there are other databases – including those compiled by researchers--that are available to the public as well.

The Research function⁶⁷ at the Bank itself has been led by the research department under the direction of the Chief Economist and leadership of the Research Department Director. Both in the past and in the present, these leaders have been leading thinkers in development economics. In addition, the Bank's researchers themselves have strong publication records.⁶⁸ That said, it would probably be an overstatement to say that the Bank has been the guiding force in development thinking. Instead, there has been a symbiotic relationship between the Bank's research department and the research community outside the Bank.

Measuring the impact of these activities on development is notoriously difficult. The Independent Evaluation Group (IEG) of the World Bank attempted an evaluation of country level studies – Economic and Sector Work (ESW) – and TA.⁶⁹ One key technique was to use opinion surveys of Bank counterparts in client countries. The report found: "The majority of ESW and TA met their objectives at least to an average extent during fiscal 2000–06. Between 65 and 80 percent of users of ESW and TA in client countries and between 74 and 87 percent of users within the Bank gave ratings of average and above when asked to what extent these products met their stated objectives. But there were substantial differences in ratings across countries and tasks, some of the reasons for which are as follows. First, the technical quality of ESW and TA influenced their effectiveness. Second, close collaboration with clients, from task initiation through the formulation of recommendations, was important for ESW and TA to be effective, whether clients actually produced part of the task or not. Third, sustained follow-up after the completion of the tasks, rather than just dissemination, was important for effectiveness. Fourth, whether clients requested the tasks or not did not matter for their effectiveness, although tasks not requested by clients needed to be tailored to client needs and interests to be effective. Fifth, there is some evidence that ESW and TA were less effective in countries where

⁶⁷ For a history of World Bank research see Dethier (2009).

⁶⁸ See Ravallion and Wagstaff (2010). More details are provided below.

⁶⁹ Internal Evaluations Group (World Bank), 2008.

government capacity was lower. Finally, an additional finding of the evaluation is that clients in middle-income countries (MICs) prefer non-lending to lending services, and clients in all countries prefer TA to ESW.” (IEG, 2008)

Furthermore, the World Bank has conducted research on its own research—that is, the publication record of the World Bank and its use by scholars. Ravallion and Wagstaff (2010) use bibliometric data to analyze the World Bank publications. They find that the sheer volume of publications on development surpasses any other academic institution. In terms of indicators of quality and relevance, the Bank’s scholarly publications are on a level with, or superior to, the top universities. One somewhat negative finding, though, was that there is a fair share of publications that receive no citations.

The above discussion refers to scholarly use of the Bank’s publications, but what about Bank staff themselves: do they use the Bank’s research? Ravallion (2011) analyzes data from a recent survey of World Bank staff to find that the results are mixed. Most Bank senior staff value the Bank’s research and know it well. On the other hand, a substantial minority find the research difficult to access. Others find little value in the research for their daily work. Poverty, human development and economic policy oriented staff seem to value and use the research more than staff in the more “lending-intensive” sectors of agriculture, rural development, energy and mining, and transport and urban development.⁷⁰

The Bank’s own Independent Evaluation Group (IEG) implicitly admitted that the measurement of development effectiveness of knowledge activities is weak when it put this topic on the agenda of their “evaluation week” at the World Bank offices in the fall of 2011. At the center of the discussion was the first Knowledge Report produced by the Bank.⁷¹ The Knowledge Report lays out a new knowledge strategy for the Bank and establishes a general results monitoring framework moving forward. It centers on three initiatives: (1) establish more detailed results monitoring indicators; (2) establish a comprehensive knowledge management framework with clear objectives; and (3) promote “open” knowledge through publicly accessible data, research tools, free electronic publishing and knowledge platforms that partner with outside institutions (including other multilateral development banks). Part of this process is the annual production of these knowledge reports to track inputs (budget), outputs and results (to the extent feasible).

The first Knowledge Report commemorates the fifteenth anniversary of the “Knowledge Bank”: in 1996, World Bank President James Wolfensohn proposed this concept during the IMF-World Bank Annual Meetings.⁷² His initial proposal focused on improving networking and pooling of information on experience across countries to consolidate the lessons from experience and improving the sharing of information by the World Bank on its knowledge products. Part of the inspiration was the basic recognition of the small size of the Bank’s overall portfolio: the

⁷⁰ There are a number of initiatives to track the use of Bank analytic work. For a review of work on human development issues, see Adam Wagstaff’s blog at: <http://blogs.worldbank.org/developmenttalk/are-the-knowledge-bank-s-assets-actually-being-used-the-case-of-the-world-bank-s-human-development-s>

⁷¹ See World Bank (2011).

⁷² See Cohen and La Porte (2004). Also see the speech of President Wolfensohn at the Annual Meetings of the IMF and World Bank in 1996 where he proposed a “new knowledge partnership.”

sum of IDA and IBRD portfolios was less than one percent of developing world GDP. In order to leverage the development impact of the Bank's lending, one had to use knowledge to achieve a higher development impact. In addition, in 1996, information technology was relatively new (as it may seem hard to believe today). Mr. Wolfensohn envisioned the potential of forthcoming improvements in information technology as a tool for the Bank: "We have been in the business of researching and disseminating the lessons of development for a long time. But the revolution in information technology increases the potential value of these efforts by vastly extending their reach. To capture this potential, we need to invest in the necessary systems, in Washington and worldwide, that will enhance our ability to gather development information and experience, and share it with our clients."

Around the same time, the World Bank began to question some of the traditional approaches to development. The Bank began its reflection with the watershed report, *East Asian Miracle*. This was an initial attempt to rethink the overall strategies for development. It was the first of the series of "Policy Research Reports." While identifying common elements that were broadly "market friendly" across East Asian economies, the report highlighted the country specificity the growth dynamics in the region, and it also highlighted how specific well targeted government intervention facilitated private sector led growth. The report also highlighted the role of education. The Bank later published *Rethinking the East Asian Miracle*,⁷³ in light of another decade of experience and the impact of East Asian Crisis. The later publication also highlighted the role of governance and institutions.

More recently, the World Bank organized a working group – the Growth Commission—that brought together both policy makers and academicians in an attempt to distill the lessons from successful growth episodes of the last century. Thirteen cases were examined and the final report identified five stylized facts that are consistent with all these cases: (i) openness; (ii) macroeconomic stability; (iii) a high rate of saving and investment; (iv) a market mechanism for resource allocation; and (v) a capable, committed and credible government strategy. Those thirteen cases were all developing countries – at least at the time they started their higher growth paths. The experience of these (then) developing countries is vitally useful for understanding how other developing countries can follow in that path.

As noted above, there has been progress, but there is a long road ahead in implementing the knowledge bank. The Knowledge Report emphasizes the three initiatives described above; however, the research findings cited above implies that there is still much to be done to bring knowledge to the forefront of the Bank's operations at the country level.

Based on the discussion above of the lessons that can be learned from developing country successes, the World Bank Group's knowledge role should not be limited to the transfer of knowledge from the north to the south. It should expand (and is expanding) to include but from the north to south, south to south, and south to north. As noted in the previous section, the multi-polar growth world not only represents shifting economic centers, but also a shifting knowledge base to the new growth poles. The World Bank Group—with its membership that spans (almost) all developing countries—is particularly well placed among the international organizations for promoting the multi-polar exchange of knowledge.

⁷³ Stiglitz and Yusuf (editors), 2001.

One example is collaborative work by the World Bank and Brazil's Applied Economics Research Institute (IPEA) that documents the growing role of Brazil's collaboration with Sub-Saharan Africa's development efforts (World Bank and IPEA, 2011). The report documents that countries in Sub-Saharan Africa have requested cooperation from Brazil in five key areas: tropical agriculture, tropical medicine, vocational training (to support the industrial sector), energy, and social protection. In tropical agriculture, the Brazilian Agriculture Research Corporation (EMBRAPA)—with the Brazilian Cooperation Agency (ABC) and several other Brazilian research institutions—has worked with African partners in implementing model projects in agriculture that aim to replicate successes in the Brazilian savannah region (with similar climatic and agronomic features to parts of Africa). Examples include the Cotton Four Project (Benin, Burkina Faso, Chad, and Mali), a project on agricultural innovation in Mozambique, and the Rice-Culture Development Project in Senegal. As of 2011, Brazil has 53 bilateral agreements on health signed with 22 African countries. Brazil's approach to HIV/AIDS treatment and other prevalent diseases, including malaria and sickle cell anemia, is highly regarded by African peers. The Osvaldo Cruz Foundation (FIOCRUZ) is partnering with the government of Mozambique to build a pharmaceutical plant to produce generic drugs to treat HIV/AIDS and other diseases. In vocational training, the Brazilian National Service for Industrial Apprenticeship (SENAI) has built vocational centers in Cape Verde, Guinea-Bissau, Mozambique, and São Tomé and Príncipe, and has recently established partnerships with Angola, Congo, and South Africa to address vocational training for promoting industrialization and supporting youth-employment policies. Sustainable energy is another area in which Brazilian expertise has gained the attention of several African nations. One example is BIOCOM, a joint venture between the Brazilian firm Odebrecht, the Angolan state company Sonangol, and the Angolan firm Demer. An investment of US\$400 million aims at using sugarcane to produce sugar, ethanol, and power. In social protection, the Brazilian experience with *Bolsa Familia* is now being adapted and replicated in other developing countries, including Angola, Kenya, and Senegal. These are just some examples of south-south bilateral programs that will be a part of the mosaic of bilateral and multilateral development cooperation in the future.

To perform its knowledge function well, the World Bank Group needs to adapt to the changing multi-polar world, and this is starting to happen. There have been reforms to the governance structure of the Bank, and this has helped improve the representation by the developing world. In addition, the Bank can continue to diversify the pool of staff, identifying those with knowledge and experience in the developing countries, rather than just the developed countries. Staff members are the carriers of knowledge, experience and vision.

Another necessary condition for performing the knowledge function well is that the World Bank Group should be itself a center of excellence in development knowledge generation, and play a leadership role in advancing new development thinking. The World Bank has a unique comparative advantage in accessing the issues and operational experiences in its 187 member countries. The in-house capacity to generate knowledge gives the Bank credibility in the global knowledge exchange as a direct contributor rather than just a collector and disseminator. For the Bank to perform this function well, it is imperative for the Bank economists to have an open-minded, ideological free, no preconceived theory mindset so as to fully appreciate the subtlety of developing countries' constraints and experiences (Lin 2012b).

The multilateral development banks also have a comparative advantage in data access—providing a public good function of collecting national data and presenting them with consistent definitions and standards across countries. Open data is a vital tool to democratize access to the information that forms the building block for economic research. The World Bank, and other multilateral development agencies, can work to facilitate knowledge generation in the south through open data, open tools and other such initiatives.

Finally, the World Bank Group and other multilateral development agencies can use their convening power to bring together researchers and policy makers from the developing world to exchange ideas and experiences. This convening power is one important tool in promoting “south-south” learning among countries of the developing world.

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