

Page, John

Working Paper

Aid, structural change and the private sector in Africa

WIDER Working Paper, No. 2012/21

Provided in Cooperation with:

United Nations University (UNU), World Institute for Development Economics Research (WIDER)

Suggested Citation: Page, John (2012) : Aid, structural change and the private sector in Africa, WIDER Working Paper, No. 2012/21, ISBN 978-92-9230-484-3, The United Nations University World Institute for Development Economics Research (UNU-WIDER), Helsinki

This Version is available at:

<https://hdl.handle.net/10419/80929>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



UNITED NATIONS
UNIVERSITY

UNU-WIDER

World Institute for Development
Economics Research

Working Paper No. 2012/21

Aid, Structural Change and the Private Sector in Africa

John Page*

February 2012

Abstract

This paper argues that official development assistance (foreign aid) is partly responsible for the lack of structural change in Africa. Africa's development partners have devoted too few resources and too little attention to two critical constraints to private investment, infrastructure and skills, focusing instead on easily understood, but potentially low impact regulatory reforms. A new aid strategy, one that catalyses private investment in high value added sectors, is needed. Support for strategic interventions to push non-traditional exports, support industrial agglomerations, build firm capabilities, and strengthen regional integration should anchor a new donor agenda to create good jobs and sustain growth.

Keywords: aid, structural change, private sector, industry, exports

JEL classifications: O14, O19, O25, O40

Copyright © UNU-WIDER 2012

* The Brookings Institution, Washington, DC, email: jmpagejr@gmail.com

This working paper has been prepared within the UNU-WIDER project 'Foreign Aid: Research and Communication (ReCom)', directed by Tony Addison and Finn Tarp.

UNU-WIDER gratefully acknowledges specific programme contributions from the governments of Denmark (Ministry of Foreign Affairs, Danida) and Sweden (Swedish International Development Cooperation Agency—Sida) for the Research and Communication (ReCom) programme. UNU-WIDER also acknowledges core financial support to UNU-WIDER's work programme from the governments of Finland (Ministry for Foreign Affairs), the United Kingdom (Department for International Development), and the governments of Denmark and Sweden.

ISSN 1798-7237

ISBN 978-92-9230-484-3

Acknowledgements

I am grateful to Zenia Lewis for research assistance. I would also like to thank Margret McMillan and her IFPRI colleague Ignio Verduzco Gallo for sharing their unpublished data on Africa used in McMillan and Rodrik (2011).

Acronyms

Given at the end of the document.

The World Institute for Development Economics Research (WIDER) was established by the United Nations University (UNU) as its first research and training centre and started work in Helsinki, Finland in 1985. The Institute undertakes applied research and policy analysis on structural changes affecting the developing and transitional economies, provides a forum for the advocacy of policies leading to robust, equitable and environmentally sustainable growth, and promotes capacity strengthening and training in the field of economic and social policy making. Work is carried out by staff researchers and visiting scholars in Helsinki and through networks of collaborating scholars and institutions around the world.

www.wider.unu.edu

publications@wider.unu.edu

UNU World Institute for Development Economics Research (UNU-WIDER)
Katajanokanlaituri 6 B, 00160 Helsinki, Finland

Typescript prepared by Liisa Roponen at UNU-WIDER

The views expressed in this publication are those of the author(s). Publication does not imply endorsement by the Institute or the United Nations University, nor by the programme/project sponsors, of any of the views expressed.

1 Introduction

One of the foundations of development economics is the stylized fact that developing economies are characterized by large differences in output per worker across sectors. For such economies structural change—the shift of resources from low productivity to high productivity uses—is the key potential driver of economic growth (Lewis 1954; Kuznets 1955). Virtually all of the developing economies that have transformed themselves from low- to middle- and upper-income status have undergone profound changes in their economic structures (Chenery 1986).

Structural change matters crucially for Africa. There is little evidence that significant structural changes underpinned more rapid growth between 1995 and 2008 (Go and Page 2008; Arbache and Page 2009) the region's recovery from the global economic crisis of 2008-09—like its growth turnaround—was driven primarily by commodity prices and the recovery of domestic demand. Africa has failed to break into new global markets. Private investment remains low, and direct foreign investment is largely concentrated in mining and minerals. Africa needs more high value-added activities ranging from agro-processing to manufacturing to tradable services to create good jobs and sustain growth. The private sector must be the central actor in that structural transformation.

This paper argues that official development assistance (foreign aid) has partly been responsible for the lack of structural change in Africa. Nowhere in the developing world is foreign aid more important to development policy and development budgets than in Africa. Africa's development partners have devoted too few resources and too little attention to two critical constraints to structural change, infrastructure and skills, focusing instead on easily understood, but potentially low impact regulatory reforms. Changes to aid programmes, such as the Aid for Trade initiative, and new aid actors, such as China, offer the promise of new investments and policy priorities, but significant changes are still needed. A new strategy—one that catalyses private investment for structural change—must become the centrepiece of aid in Africa.

The next section of the paper presents the results of some recent research into the role of structural change in growth and poverty reduction in Africa. Its most striking finding: faster structural change can boost the region's chances of meeting the poverty reduction target of the Millennium Development Goals (MDGs). Section 3 documents the limited extent to which structural change has taken place in Africa over the past three decades. It focuses on the manufacturing sector, which for most countries is the driver of industrialization and finds that in contrast to the rest of the developing world Africa has deindustrialized.

Sections 4 and 5 examine the role of aid. Since the 1990s, donors in Africa have focused on the investment climate. This is a critical area for action, but investment climate reforms have yielded few results. Section 4 describes the past errors and future opportunities for donors in building a better investment climate. Section 5 moves beyond the investment climate and sets out a new strategic agenda for aid and structural change in Africa. It argues that donor support for strategic interventions to push non-traditional exports, support industrial agglomerations, build firm capabilities, and strengthen regional integration will be needed to achieve a meaningful change in

Africa's economic structure. Section 6 concludes that a new aid strategy for Africa—one that supports structural change—is needed.

2 Why structural change matters for Africa

Most African countries have developed national visions that target middle-income status by 2025. If history is any guide, these economies will undergo profound changes in their economic structures as they grow to middle-income levels.

2.1 Structural change and growth

One way to measure the extent of structural change that might be needed for the transition to middle-income status is to compare Africa's current economic structure with that of a 'benchmark' middle-income country.¹ Such a benchmark economy was constructed using the sectoral shares of value added and employment in a sample of countries at the time at which they crossed the World Bank defined middle-income (MIC) threshold.²

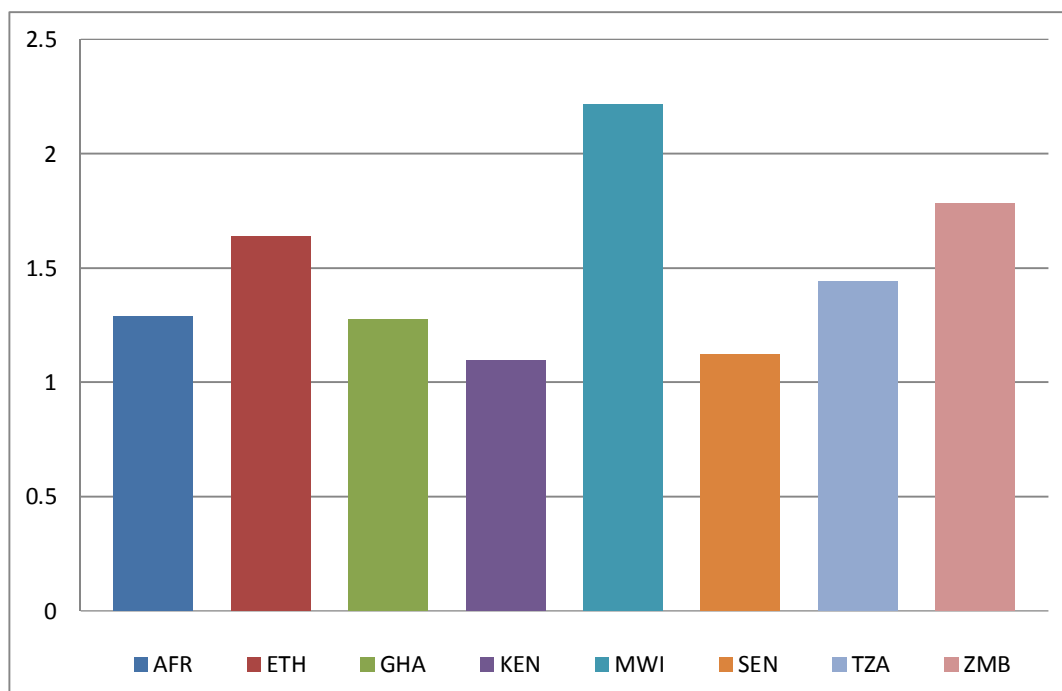
The structure of a 'typical' low-income African economy is far from the benchmark MIC (Table 1). The most striking difference is in manufacturing where the value added share and the labour share are about half of the benchmark value. It is also striking that the relative labour productivity of manufacturing is below that of the benchmark, suggesting that little productivity growth has taken place within the manufacturing sector in Africa. The high weight of public employment and the failure of employment statistics to include informal employment are the likely causes of the service sector's high relative labour productivity, while the high level of output per worker in industry net of manufacturing reflects the dominance of natural resources, even in countries not classified as resource rich.

The structural gap between the benchmark country and the typical African economy is a measure of the potential for income growth through structural change. Figure 1 summarizes the results of the following simple simulation. Assume that sectoral productivity levels in the sample of African countries remain unchanged, but that the inter-sectoral distribution of employment changes to match that of the benchmark. The potential productivity gains from such a reallocation are substantial. On average economy wide productivity for the low-income African countries in the sample would increase 1.3 times. Ethiopia's productivity would increase 1.6 times, Malawi's 2.2 times, and Zambia's 1.8 times. If the structure of the typical low income country were to shift to that of Africa's own middle income countries, output per worker would double (Page 2012). These numbers are indicative of the extent of dualism that marks the region's economies.

¹ See Page (2012) for a more detailed description of the methods used to construct the benchmark MIC.

² China (2000), India (2007), Indonesia (2004), Korea (1968), Malaysia (1968), Philippines (1976), and Thailand (1987).

Figure 1
Increases in economy-wide labour productivity



Source: Author's calculations extending McMillan and Rodrik (2011) database.

Table 1
Africa's structural deficient, 2005

	Value added share				Labour share				Relative productivity			
	AGR	IND	MFG	SER	AGR	IND	MFG	SER	AGR	IND	MFG	SER
Benchmark MIC	21.7	12.2	21.9	44.2	45.2	6.6	11.6	36.6	0.48	1.85	1.89	1.21
Africa:												
- Low income	27.8	11.8	11.1	49.3	63.1	5.1	6.6	25.2	0.44	2.31	1.68	1.96
- Middle income	4.8	10.9	17.1	67.2	8.6	11.9	16.8	62.7	0.56	0.92	1.02	1.07
- Resource-rich	17.8	29.6	8.3	21.1	45.4	4.8	6.5	43.4	0.39	6.17	1.28	0.49

Notes: Africa low-income sample includes: ETH, MWI, GHA, KEN, MAD, MOZ, SEN, TZA;

Africa middle-income sample includes: MUS, ZAF;

Africa resource-rich economies include: BOT, LES, NGA, NMB, ZAF.

Sources: Author's calculations based on McMillan and Rodrik (2011) database; World Bank WDI database, and Timmer and de Vries (2009) database.

Table 1
Decomposition of productivity growth, 1990-2005

	Labour productivity growth, %	Due to within sector productivity growth, %	Due to structural change, %
Asia	3.87	3.31	0.57
High income	1.46	1.54	-0.09
LAC	1.35	2.24	-0.88
Africa	0.86	2.13	-1.27

Source: Author's calculations extending McMillan and Rodrik (2011) database.

A recent paper by McMillan and Rodrik (2011) suggests, however, that the growth potential inherent in Africa's structural deficit is not being realized. Using a decomposition of labour productivity growth into within-sector and structural change across sectors components, McMillan and Rodrik show that large differences in patterns of structural change across countries and regions account for much of the differences in their growth. In particular, they demonstrate that since 1990 while Asian countries have had productivity-enhancing structural change, structural change in Africa has *reduced* overall productivity (Table 2). The movement of workers from higher productivity to lower productivity employment offsets productivity improvements within sectors, reducing the overall rate of productivity growth.

This pattern of 'perverse structural change', which has also taken place in Latin America, acts as a brake to more rapid economic growth. That in itself is disturbing. More disturbing is the possibility that it also handicaps Africa in the fight against poverty.

2.2 Structural change and poverty reduction

There is a large literature on the relationship between economic growth and poverty reduction. On balance it shows that across countries, over time, the poverty headcount—the proportion of the population falling below a specified poverty threshold—declines as per capita income rises. But, differences among countries (and regions) with respect to the rate at which poverty falls with income growth are substantial and difficult to explain (Fosu 2011). Asia has experienced spectacular growth and dramatic declines in poverty. In Latin America the relationship between growth and poverty reduction varies considerably over time and across countries. In Africa there is growing concern that the region's growth turn around since 1995 has not resulted in

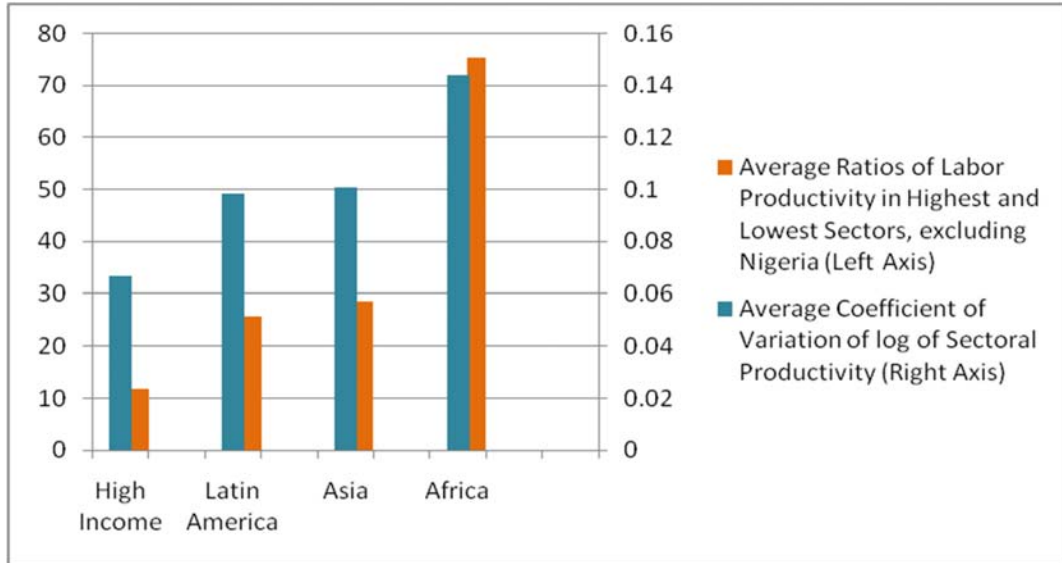
The very different patterns of structural change and poverty reduction in Asia, Latin America and Africa suggest that the structural sources of growth may partly determine growth-poverty outcomes.³ In Asia rising output per worker is composed of two strong, complementary components: within sectors productivity is rising, making it possible for firms to offer increases in wages in line with rising output per worker, and at the same time workers are moving from lower productivity to higher productivity employment. In Latin America and Africa in contrast while productivity within sectors has been rising, presumably due to technical progress and greater competition, labour has been moving from higher productivity to lower productivity employment.

If the differences in productivity per worker were small—as they typically are in high income countries—this perverse pattern of structural change might not matter much for wages and household incomes, but as Figure 2 demonstrates, the productivity differences among sectors, especially in Africa, are quite large. In economies where the low productivity sectors—including informality and unemployment—have wages (or

³ The proposition that structural change is linked to income distribution and growth is, of course, not new. It is at the centre of the dual economy model (Lewis 1954).

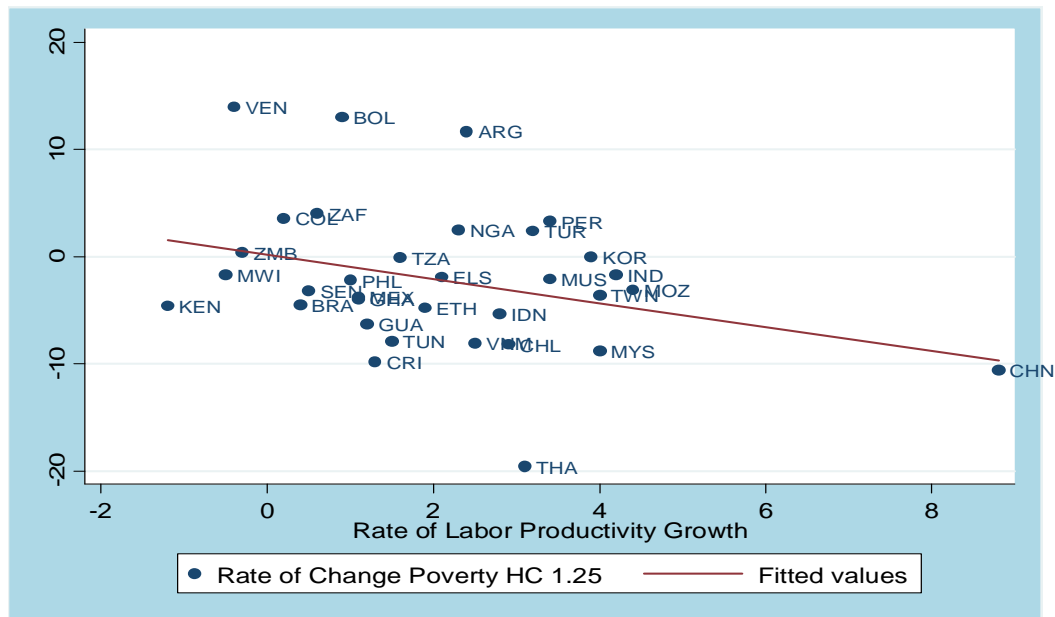
self-employed incomes) that are close to or below the poverty line, the movement of workers into lower productivity jobs will tend to increase poverty.⁴

Figure 2
Differences in labour productivity among sectors



Source: Author's calculations based on an extended McMillan and Rodrik database (2011).

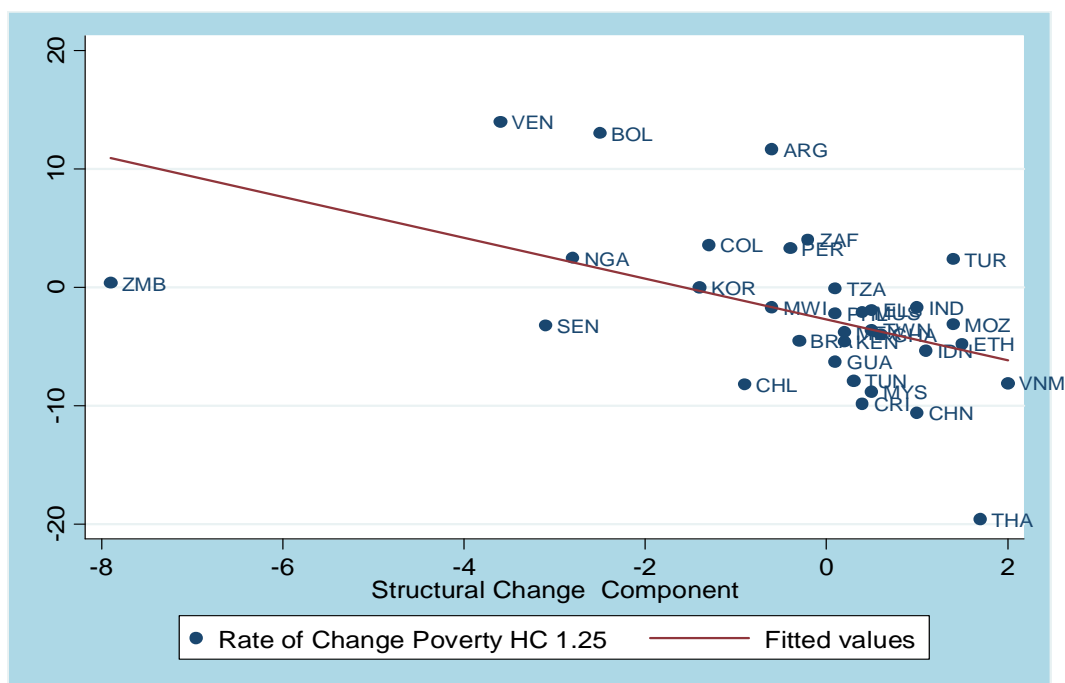
Figure 3
Rate of change of poverty headcount (US\$1.25) and labour productivity, 1990-2005



Source: Author's calculations based on an extended McMillan and Rodrik database (2011).

⁴ One could complicate this simple labour market story by introducing a ‘bumping’ process in which workers with higher capabilities who are displaced from the high productivity sectors of the economy displace incumbent workers in less productive sectors or reduce their income from self-employment.

Figure 4
Rate of change poverty headcount (US\$1.25) and structural change, 1990-2005



Source: Author's calculations based on an extended McMillan and Rodrik database (2011).

Data on productivity growth, structural change, and poverty are sparse, but they do permit some simple statistical tests of the forgoing proposition. The McMillan and Rodrik database on employment, output and productivity covers 29 developing countries. To this sample it was possible to add six developing economies—one in Asia, two in Central America, and three in Africa—from compatible national and international data sources. Poverty headcount data (US\$ 1.25 per day at PPP) are taken from the World Bank POVCAL database. Because not all of the countries in the productivity sample are represented in the POVCAL database a final sample of 33 countries was obtained. The countries are listed in Appendix Table A1.

These data provide some stylized facts concerning the relationship between structural change, and poverty reduction. Figures 3 and 4 present the scatter plots of the relationship between the rate of change of the poverty headcount between 1990 and 2005, and the rates of change of overall labour productivity and the structural change component of productivity. Tables 3 and 4 present the results of some exploratory regressions. In addition to the direct regression on the two variables of interest two additional specifications are used to provide a simple first test of the robustness of the direct relationship.⁵

The results, while only a first look at the data, show a strong, statistically significant, association between the rate of change in the poverty headcount and the structural

⁵ Because the poverty headcount at US\$1.25 vanishes at higher income levels, both the middle-income status of the country in 1990 (as a dummy variable) and income relative to the United States in 1990 were added to test for the stability of the relationship with rising income. Neither variable was significant and the coefficient estimates of interest were stable.

change component of productivity growth. Higher rates of structural change are associated with more rapid declines in poverty, and the reverse. The relationship between overall productivity growth and poverty reduction is less clear cut. The explanatory power of the direct regression is low and the estimated coefficient, while of predicted sign, is statistically significant only at the 0.10 level. This result is consistent with the ambiguous results of other attempts to find an association between per capita income growth and poverty reduction.

From the point of view of aid policy, the stylized fact that structural change is associated with poverty reduction should represent a wakeup call. The policy debate on how best to attain the first Millennium Development Goal (MDG) of halving global poverty by 2015 has tended to focus on the role of growth in reducing poverty and to a lesser extent on the mitigating influence of income distribution. Even the search for the magic bullet of 'pro-poor growth' has largely concentrated on measures to increase within sector productivity in agriculture. The idea that poverty reduction can be accelerated by moving workers from bad jobs to good jobs through more rapid structural change has been virtually ignored in the donor dialogue with African countries.

Table 2
Rate of change of poverty headcount (US\$1.25) and productivity growth, 1990-2005

Dependent variable: rate of change of poverty headcount (US\$1.25)			
	(1)	(2)	(3)
Constant	0.18 (0.11)	-0.16 (0.09)	-1.48 (0.68)
Productivity growth	-1.13* (1.88)	-1.16* (1.90)	-1.16* (1.95)
Middle income, 1990		1.04 (0.44)	
Income relative to US, 1990			12.26 (1.20)
Observations	33	33	33
R-squared	0.10	0.11	0.14

Notes: t-statistics in parenthesis. Significant at ***/** 10%/ 5% /1% level.
Source: See text.

Table 3
Rate of change of poverty headcount (US\$1.25) and structural change, 1990-2005

Dependent variable: rate of change of poverty headcount (US\$1.25)			
	(1)	(2)	(3)
Constant	2.70** (2.54)	-3.13** (2.25)	-4.20** (2.47)
Productivity growth	-1.72**** (3.12)	-1.75* (3.11)	-1.61*** (3.11)
Middle income, 1990		1.06 (0.49)	
Income relative to US, 1990			10.63 (1.13)
Observations	33	33	33
R-squared	0.24	0.24	0.27

Notes: t-statistics in parenthesis. Significant at ***/** 10%/ 5% /1% level.
Source: See text.

3 The private sector, industrialization, and structural change in Africa

In both theory and history, industry has been the sector that leads the process of structural change. Manufacturing is most often associated with industrialization both in economic statistics and in the popular imagination. In Africa average manufacturing labour productivity is 3.8 times greater than agricultural labour productivity (Page 2012). But falling transport and communications costs have created a class of high value added activities in agriculture and services that more closely resemble manufacturing than the sectors to which they are assigned in economic statistics.⁶ These industries without smokestacks broaden the possibilities for growth enhancing structural change.

3.1 Deindustrialization 1980-2010

Since the middle of the 1980s Africa has deindustrialized. Africa's share of global manufacturing production (excluding South Africa) fell from 0.4 per cent in 1980 to 0.3 per cent in 2005, and its share of world manufactured exports from 0.3 to 0.2 per cent (UNIDO 2009). The share of manufacturing in GDP is less than one half of the average for all developing countries, and in contrast with developing countries as a whole; it is *declining* (Figure 5). Per capita manufactured exports are less than 10 per cent of the developing-country average. Today, Bangladesh alone produces as much manufacturing output as the whole of low-income Africa.

Figure 5
The share of manufacturing in GDP has been declining



Note: Low-income countries only.

Source: World Bank WDI.

⁶ For a fuller discussion of this point see Page (2012).

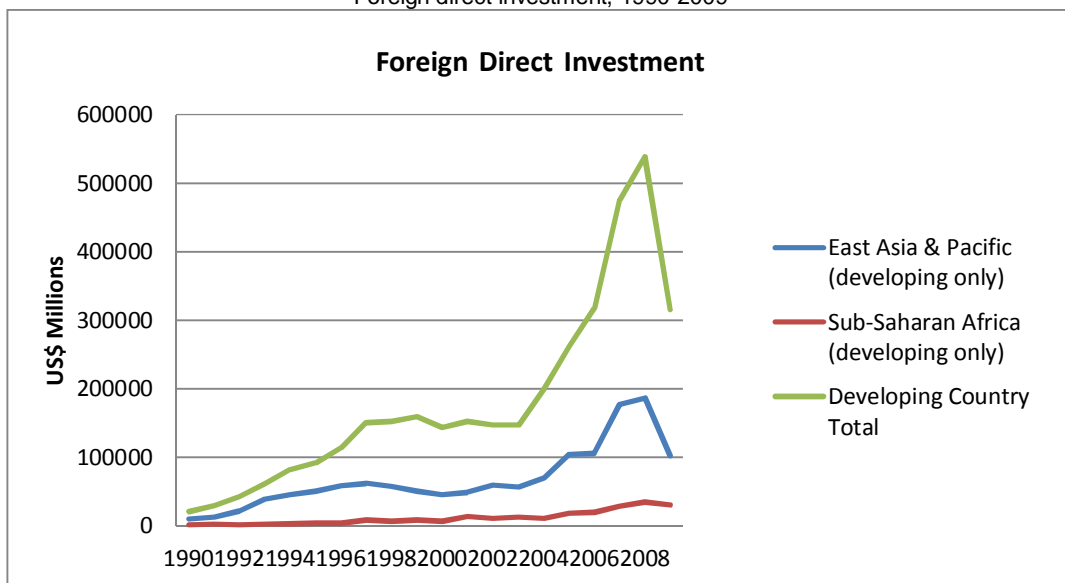
The decline in the relative size of African manufacturing was accompanied by a decline in the diversity and sophistication of Africa’s manufacturing sectors as well (Page 2012). These two important structural changes within the manufacturing sector have very likely reduced productivity and growth. Recent research finds that countries with more diversified production and export structures have higher incomes per capita (UNIDO 2009), and countries that produce and export more sophisticated products—those that are Figure 6 primarily manufactured by countries at higher income levels—tend to grow faster (Hausmann, Hwang and Rodrik 2007; UNIDO 2009).

3.2 Industrial development and the private sector

While industry has moved out of Africa over the past quarter of a century the global industrial economy has undergone major changes. Developing countries, mainly in Asia, have become the ‘world’s factory’. Between 2000 and 2008, manufacturing growth in industrialized economies was only about one per cent per year; in developing economies it was more than 7 per cent per annum. Manufactured exports from developing countries grew faster than the world average and faster than exports from the developed economies (UNIDO 2009).

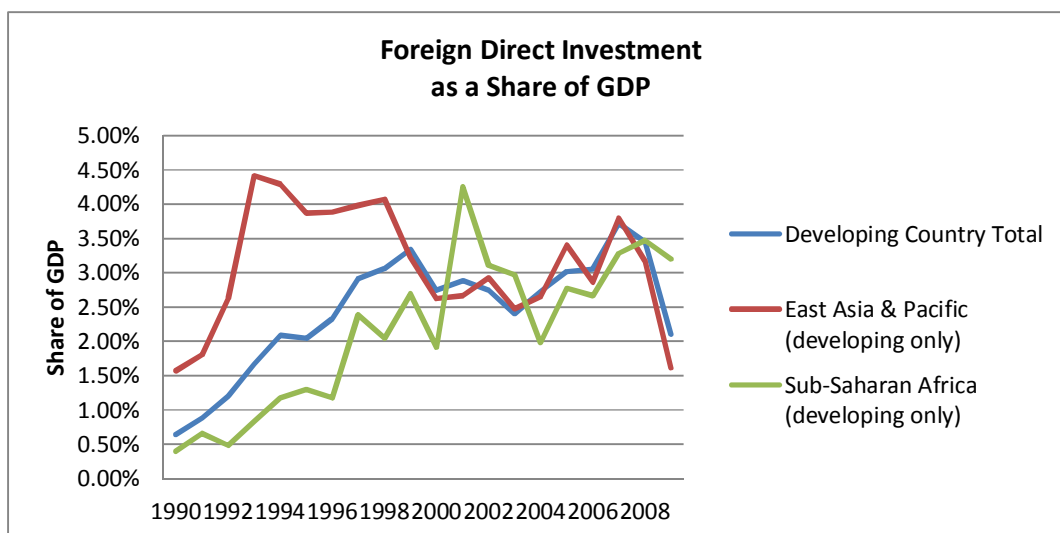
The industrial transformation of the global economy has been driven by private investment. Unsurprisingly, foreign direct investment flows are positively correlated with the level of income per head, and of course with the size of countries and markets. Since the 1990s foreign direct investment has moved disproportionately to Asia, where it has complemented high private domestic saving and investment (Figure 6). The vast majority of this foreign direct investment (FDI) has been in manufacturing and infrastructure, driving the structural transformation of Asia’s low-income economies (Jacquet and Kline 2005).

Figure 6
Foreign direct investment, 1990-2009



Source: Author’s illustration based on IMF (n.d.); World Bank (GDF).

Figure 7
Foreign direct investment as a share of GDP, 1990-2009



Source: Author's illustration based on IMF (n.d.); World Bank (GDF).

Africa has also experienced a modest increase in FDI, particularly since 2000. Indeed, the region has attracted about the same share of FDI in GDP as Asia and developing countries as a whole over the past ten years (Figure 7), but that investment has remained almost wholly in mining and minerals (World Bank 2010). Only about 3 per cent of global FDI has gone to infrastructure financing in Africa and an even smaller percentage to manufacturing.

Domestic private investment has remained quite stable in Africa since 1990 at about 11 per cent of GDP. This is well below the levels found in East Asia, especially during periods of rapid structural change (Table 5). Africa's structural transformation challenge is, therefore, primarily one of increasing both foreign and domestic private investment in industry.

Table 5
Private investment as a share of GDP, 1990-2009

	1990-94	1995-99	2000-04	2005-09
Africa LICs	10.2	11.2	11.1	11.8
Africa MICs	14.6	14.5	13.8	15.8
East Asia	24.9	19.9	12.4	16.8
Low-income countries	10.0	11.5	12.9	15.4
All developing countries	13.7	14.5	14.0	16.6

Note: Entries are 5-yr averages in percentages.

Source: World Bank WDI; World Bank national accounts data, and OECD national accounts data files.

4 Aid and the investment climate: a missed opportunity

Since the 1990s the private sector development efforts of the international community in Africa have focused on improving the 'investment climate: the regulatory, institutional and physical environment within which firms operate. Around one-quarter of official

development assistance, some US\$21 billion per year, currently supports investment climate improvements (Table 6). Investment climate reforms are central to the success of any strategy to increase private investment. However, the way in which the international community has chosen to define priorities for the reform of the investment climate may be hurting, rather than helping, Africa’s prospects for structural change.

Table 6
Donor commitments to the investment climate (US\$ billion)

	Grants	Concessional loans	Total	Non-concessional loans	Guarantees
Policy based support	1.5	5.5	7.0	na	na
Technical assistance	1.7	1.0	2.7	na	na
Support to infrastructure	1.7	9.7	11.4	3.2	3.0
Total	4.9	16.2	21.1		

Note: Policy based support includes all general budget support operations with policy conditionality.

Source: World Bank (2005).

4.1 Easy answers: the institutional and regulatory reform agenda

Appropriate structural and macroeconomic policies make it easier to attract private investment, and many African countries have an unfinished agenda of economy-wide reforms that need to be pursued. Surveys of manufacturing firms in African countries highlight a number of areas in which regulatory or administrative burdens impose cost penalties on firms (Clarke 2005; Yoshino 2008; Farole 2011). The cost of doing business in Africa is 20–40 per cent above that for other developing regions.⁷

The donor reform agenda has centred on changes in trade, regulatory, and labour market policies designed to reduce the role of government in economic management. The centrepiece of this effort—propelled in part by a highly efficient and well-funded public affairs machine—has been the World Bank-International Finance Corporation *Doing Business* surveys.⁸ The philosophical underpinnings of *Doing Business* are unambiguous: seven of its nine indicators ‘presume that lessening regulation is always desirable’ (World Bank 2008: xv).

Africa does not score well on *Doing Business*. In 2011, the average rank of African countries on the *Doing Business* indicators (moving from 1 as the best to 183 as the worst) was 137. Clearly, Africa can do better at *Doing Business*, but the key issue in setting reform priorities for the investment climate is whether the constraints to industrialization have been correctly identified by the surveys and how the global rankings are used in the dialogue with policymakers.

⁷ There is by now a large literature on the costs of doing business in Africa. See for example the *Africa Competitiveness Report* of the AfDB, World Economic Forum and the World Bank.

⁸ The Independent Evaluation Group assessment of the *Doing Business* programme notes that in 2008 the budget for ‘dissemination’ by *Doing Business* management alone exceeded US\$1 million. This did not include the costs of the World Bank’s public affairs staff assigned to the programme nor the time of its country based staff.

Does Doing Business identify the binding constraints?

Doing Business measures selected business regulations in more than 180 countries and ranks the countries on nine dimensions, ranging from ease of opening and closing a business to investor protection. Table 7 lists the indicators and their components.⁹ A defining characteristic of the surveys is that they primarily measure laws and regulations as they are written, or interpreted by local experts, rather than attempt to measure the impact of the regulations on firms through quantitative or qualitative surveys. The indicators embody three important ideas that have guided the diagnostic conclusions and policy recommendations of the work:¹⁰

- Less regulation is always preferable. The ratings do not allow for a minimum level of regulation needed, nor do they distinguish between effective and ineffective regulations.
- Property rights and debt enforceability are important determinants of lending and investment. Five of the nine indicators include measures of the enforceability of debt contracts and availability of collateral.
- Lighter regulation and taxation can encourage firms to shift into the formal economy. Simpler procedures to start a business and lower tax burdens will encourage informal enterprises to formalize.

The annual *Doing Business* reports strongly convey the message that lack of progress in reforming the institutions and regulations covered by the survey constrains private investment and growth. This is partly due to the way in which the reports are written. In the words of the World Bank's own evaluation of the *Doing Business* programme: 'the drive for simplicity sometimes results in inaccuracies or statements that are inadequately supported by evidence. For example: simple causal relationships are asserted where the evidence supports only association and the causal factors are complex' (World Bank 2008: 41). The 2011 *Doing Business* report for example makes the following assertion: 'Simpler start-up translates into greater employment opportunities' (World Bank 2011: 15) citing three academic papers, none of which frame their results in that way.¹¹

Not surprisingly, such bold statements have provoked a cottage industry of academic research into the methodology and data underpinning the choice of indicators and their interpretation.¹² There is a substantial body of cross-country empirical research that demonstrates an association between the characteristics of the business regulatory environment—in particular barriers to entry and exit—and the performance of firms.¹³

⁹ In 2011 the World Bank removed the controversial ease of hiring and firing indicator from the rankings, although it continues to report the results of the annual data collected.

¹⁰ It is of interest to note that four of the five 'findings' from the academic empirical literature reported in *Doing Business, 2011* relate to these normative ideas.

¹¹ Freund and Bolaky (2008), Chang, Kaltani and Loayza (2009) and Helpman, Melitz and Rubinstein (2008)

¹² *Doing Business, 2011* asserts that 656 articles have been published in peer-reviewed academic journals, and about 2,060 working papers have been written using the eight years of available data. It is notably silent, however, on the balance of the evidence presented in these papers.

¹³ *Doing Business, 2011* provides a bibliography of such work.

Table 7
The *Doing Business* indicators, 2011

Starting a business Procedures, time, cost and paid-in minimum capital to open a new business	Paying taxes Number of tax payments, time to prepare and file tax returns and to pay taxes, total taxes as a share of profit before all taxes borne
Dealing with construction permits Procedures, time and cost to obtain construction permits, inspections and utility connections	Trading across borders Documents, time and cost to export and import
Registering property Procedures, time and cost to transfer commercial real estate	Enforcing contracts Procedures, time and cost to resolve a commercial dispute
Getting credit Strength of legal rights index, depth of credit information index	Closing a business Recovery rate in bankruptcy
Protecting investors Strength of investor protection index: extent of disclosure index, extent of director liability index and ease of shareholder suits index	

Source: Elaborated by author based on World Bank.

Indeed, it would be surprising from both theory and casual empiricism if barriers to entry were not relevant to firm performance. It is the causal link from firm performance to growth that has proved more difficult to establish (Commander and Tinn 2007; Eiffert 2007; World Bank 2008). This is precisely because firm performance is linked to within sector productivity change which is only one component of overall productivity change and growth. Unsurprisingly, studies using the *Doing Business* indicators to attempt to explain variations in growth across countries yield ambiguous results and suffer from the same econometric woes as all other cross-country growth regressions. The results depend on the explanatory variables chosen and causality is difficult, if not impossible, to establish convincingly.

From the perspective of aid policy the critical question is: Does *Doing Business* identify the binding constraints to private investment, structural change, and growth in Africa? The answer to that question is very likely to be no for at least two reasons. First, *Doing Business* was not designed to be used as a country-level diagnostic tool; it is a 'league table' or cross-country benchmarking exercise. The indicators were developed to support cross-country comparisons on the basis of uniform criteria. For this reason they cannot capture country context. The indicators are also uniformly weighted, but at the country level not all reforms will have equal impact. Is a trade reform for example more or less urgent than reducing the number of days to open a business? Thus, the indicators alone cannot be used to identify country-level priorities, even within the restricted range of regulatory reforms covered.

Second, and more fundamentally, *Doing Business* confines itself to only one part of the investment climate. There is a large body of literature, including the World Bank's own Investment Climate Assessments, that has identified other aspects of the investment climate that constrain investment and growth in Africa. These non-regulatory

investment climate constraints are responsible for much of the difference in costs and competitiveness between Africa and other developing parts of the world.

Table 8 gives a simple illustration of the ambiguity of the ease of doing business indicator. It contrasts the *Doing Business* scores of two groups of non-African countries—low-income East Asian late industrializers and Central American late industrializers—with those of Africa’s leading exporters, leading low-income manufacturers, and all African countries. It also provides data on manufactured exports and production for the period 2000-05 for the same groups.

The measures of industrial performance vary much more widely than the average *Doing Business* scores. Cambodia, Lao PDR, and Vietnam have the same average score as the leading five low-income African manufactured exporters (132) while at the same time they have triple the exports per capita, twice the share of manufacturing in value added, more than seven times the rate of growth of manufacturing’s share in GDP. Africa’s five leading low-income manufacturing economies (by share of GDP)—Ivory Coast, Kenya, Mozambique, Senegal and Zambia—score better than the East Asian new industrializers on the ease of doing business, yet their growth of exports is anaemic and their share of manufacturing in value added is declining.

Table 8
Ease of doing business and industrial performance

	New industrializers		Leading five African ICs		
	Southeast Asia	Central America	Exporters	Manufactures	Africa average
Average 'ease-of-doing business' score (range)	132 (78-171)	103 (86-125)	132 (67-170)	127 (76-169)	137 (20-183)
Mfg exports PC 2005, US\$	185.3	209	61	90	39
Growth PC exports 2000-05	4.49	1.73	4.88	1.66	1.65
% Mfg exports in total	80.2	69.4	50.46	54.3	54.9
Share of mfg in GDP 2005	19.0	19.0	10.1	13.3	07.6
Rate of growth of mfg share of GDP 2000-05	9.57	-1.27	1.26	-0.36	-0.45

Notes: SE Asian new industrializers: Cambodia, Lao PDR, Vietnam;
Central American new industrializers: Costa Rica, El Salvador, Guatemala;
Leading five African LIC exporters: Benin, Cameroon, Ghana, Mozambique, Tanzania.

Sources: Author’s calculations from Nicita and Orreagada (2007) and *Doing Business* (2011) databases.

Doing Business and the policy dialogue

If *Doing Business* were used by the international community in Africa in a way that recognized its limitations, it could be dismissed as an innocuous, if glitzy, way of calling the attention of African policymakers to regulatory reform. Unfortunately, the way in which some donors, notably the World Bank, have used *Doing Business* in their policy dialogue with individual countries has diverted attention and resources from serious diagnosis and public action needed to address the investment climate constraints to faster growth.

The published results of the *Doing Business* surveys identify and praise notable ‘reformers’. These are countries that have both improved their rankings on at least three individual indicators—indicating ‘breadth of reform’—and improved the most on their overall ‘ease of doing business’ ranking from the previous year—indicating ‘depth of

reform'. Senior officials of the World Bank have also singled out individual countries in Africa for praise or criticism as 'reformers' based on the level and rate of change in the *Doing Business* indicators. This rewards the quantity of ranking changes but does not assess whether the changes constitute important or meaningful reforms. Because the indicators neither prioritize among the nine dimensions of regulation nor provide detailed country-level analysis, they are not suited to the evaluation of country regulatory reform programmes.

Despite their inherent limitations, the *Doing Business* indicators are being used to guide resource allocation by donors. Two indicators—the days required and cost of starting a business—feature as 'guideposts' under the World Bank's Country Performance and Institutional Assessment (CPIA) component on the 'business regulatory environment'. The CPIA is a critical factor in determining concessional assistance (IDA) from the World Bank Group. The time and cost to start a business are also used as two of the 14 'outcome' indicators in the 'IDA results framework'. Since 2005 the same two indicators have been used by the United States' Millennium Challenge Corporation (MCC) in its formula for determining countries eligibility for grants.

The indicators have also entered the country level policy dialogue of bilateral donors. In Nigeria, the United Kingdom's *Department for International Development* (DFID) is supporting the collection of *Doing Business* indicators for every state. The data will be used for diagnostic analysis and for benchmarking by the government and donors. Tanzania's multi-donor Business Enterprise Strengthening in Tanzania (BEST) programme based on *Doing Business* has now become a key 'deliverable' for release of budget support.

Doing Business may also have contributed to an atmosphere of 'teaching to the test', encouraging efforts to improve country rankings at the expense of deeper analysis of the investment climate. In Rwanda, for example, the economic and finance commission asked *Doing Business* to explain its methodology after the country failed to make the top reformers list in the 2007 report. The presentation led to a workshop that involved over 70 participants, including legislators, officials, business persons, and donors, and the creation of a task force under the aegis of the president's office. The result: Rwanda has re-entered the ranks of notable reformers.¹⁴ Its share of manufacturing in GDP, however, remains among the lowest in the world.

4.2 Neglected priorities: infrastructure and skills

At the same time that regulatory reform has dominated the discussion on private sector development, donor attention to Africa's growing infrastructure and skills deficits has waned. In the case of infrastructure, a naïve belief in the ability of the private sector and non-OECD donors to finance the region's growing infrastructure deficit may have led to complacency. In the case of skills, the pursuit of the primary education MDG has crowded expenditures on post primary education out of development budgets.

¹⁴ World Bank (2011).

Closing the infrastructure gap

Firm-level studies in Africa highlight infrastructure deficiencies as a significant constraint. Efficient African enterprises have factory floor costs comparable to Chinese and Indian firms for some product lines, such as garments. They become less competitive because of higher indirect business costs, many of which are attributable to poor infrastructure (Eifert, Gelb and Ramachandran 2005). Sub-Saharan Africa lags at least 20 percentage points behind the average for low-income countries on almost all major infrastructure measures.¹⁵ In addition the quality of service is low, supplies are unreliable, and disruptions are frequent and unpredictable (Table 9).

Whether measured by generation capacity, electricity consumption, or security of supply, Africa's power infrastructure is the single greatest constraint to industrial investment. African firms report losing 5 per cent of their sales because of frequent power outages—a figure that rises to 20 per cent for firms unable to afford backup generation. More than 30 African countries experience power shortages and regular interruptions to service. The region needs to add an additional 7,000 megawatts a year of new power generation capacity and strengthen power interconnections between countries (World Bank 2009).

Closing Africa's infrastructure gap will require around US\$93 billion a year, about 15 per cent of the region's GDP. Forty per cent of the total spending needs are for power, alone (World Bank 2009). Existing spending on infrastructure in Africa amounts to about US\$45 billion a year. About US\$15 billion of this amount comes from external sources, including the private sector, official development assistance (ODA), and non-traditional development partners, mainly China. Even if potential efficiency gains could be fully realized, a funding gap of about \$31 billion a year would remain. About 60 per cent of which is in power.

Despite the magnitude of the infrastructure gap, infrastructure financing by the members of the OECD Development Assistance Committee (DAC) has been falling as a share of ODA since the early 1970s (Figure 8). For most of the 1990s and early 2000s, ODA to

Table 9
Impact of unreliable infrastructure services on the productive sector

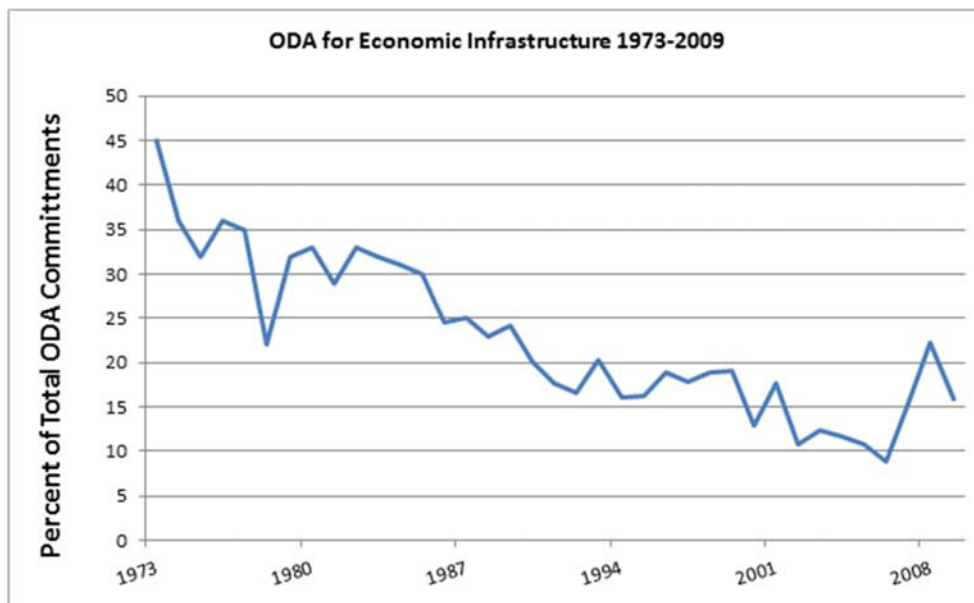
Service problem	Sub-Saharan Africa	Developing countries
Electricity		
Delay in obtaining electricity connection (days)	79.9	27.5
Electrical outages (days per year)	90.9	28.7
Value of lost output due to electrical outages (% of turnover)	6.1	4.4
Firms maintaining own generation equipment (% of total)	47.5	31.8
Telecommunications		
Delay in obtaining telephone line (days)	96.6	43.0
Telephone outages (days per year)	28.1	9.1

Source: Based on World Bank (2007).

¹⁵ An important exception is the penetration of fixed-line and mobile telephones, where Sub-Saharan Africa leads low-income countries by as much as 13 per cent. The largest gaps are for rural roads (29 percentage points) and electricity (21 percentage points).

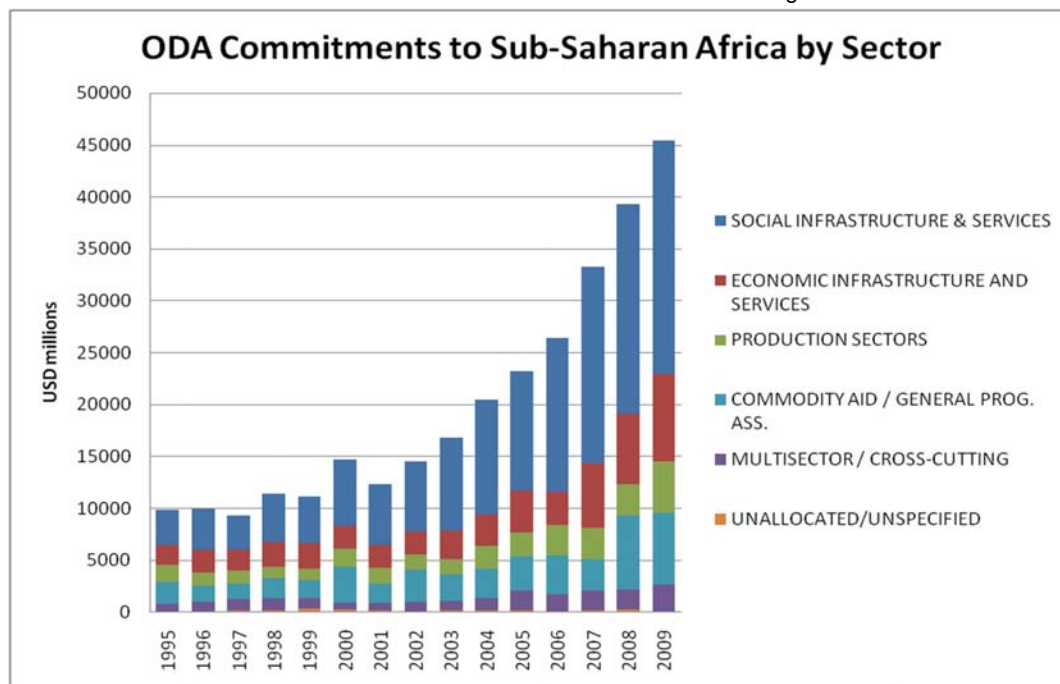
infrastructure in sub-Saharan Africa remained steady at US\$2 billion a year (Figure 9), mainly financing public goods such as roads and water supply that were seen as aligned to the MDGs. DAC donors have neglected power since the 1990s.

Figure 8
ODA for economic infrastructure, 1973-2009



Source: Elaborated by the author based on OECD Stat Creditor Reporting System, Development Aid at a Glance (2008) and OECD database on line.

Figure 9
ODA volumes committed to infrastructure are rising



Source: Elaborated by author based on the OECD-DAC database.

Non-OECD countries financed about \$2.6 billion of African infrastructure annually between 2001 and 2006, mainly in resource rich economies. The power sector received US\$1 billion per year, mainly for hydroelectric schemes. Non-traditional donor financing as a share of GDP for power projects (0.17 per cent) was about double that coming from traditional development partners (0.11 per cent). Railways received nearly US\$1 billion a year (World Bank 2009).

The recent (2008-09) uptick in the share of ODA devoted to infrastructure is encouraging, but it is clearly unrealistic in the current fiscal environment in the OECD to count on aid to fill the financing gap in infrastructure. It is crucial, however, that development partners meet their Gleneagles commitments. New approaches and products such as guarantee instruments could also leverage limited donor financing by reducing the perceived risk of private debt financing for infrastructure.

Any increase in donor financing should focus on the power sector. Although the private sector can contribute to funding power generation, donors will still need to scale up substantially to address the current crisis in the sector. Greater cooperation and coordination between DAC donors and non-traditional donors, perhaps through the international financial institutions (IFIs) to which they both belong, such as the African Development Bank and the World Bank, could also improve the focus and efficiency of resource use.¹⁶

Closing the skills gap

Africa's skills gap with the rest of the world is large and growing. East Asian countries increased secondary enrolment rates by 21 percentage points and tertiary enrolment rates by 13 percentage points between 1990 and 2005; Africa raised its secondary rates by 7 percentage points and its tertiary rates by 1 percentage point. Real expenditure on tertiary education in Africa fell by about 28 per cent between 1990 and 2002. Expenditure per pupil declined from US\$6,800 in 1989 to US\$1,200 in 2002. Staff student ratios in West African universities increased from 1:16 in 1990 to 1:32 in 2007 (World Bank 2007).

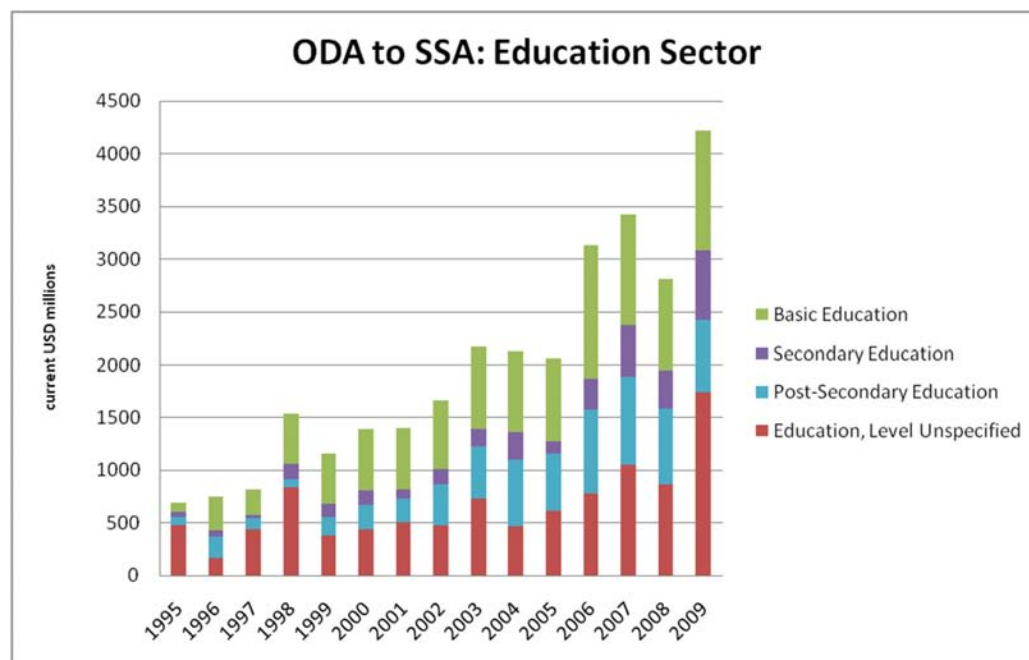
The skills gap poses a major threat to industrial development. Employer surveys report that African tertiary graduates are weak in problem solving, business understanding, computer use, and communication skills (World Bank 2007). Recent cross-country empirical research indicates that there is a strong link between export sophistication and the percentage of the labourforce that has completed post primary schooling (World Bank 2007). There is also evidence to suggest that enterprises managed by university graduates in Africa have a higher propensity to export (Wood and Jordan 2000; Clarke 2005) and that firms owned by university educated indigenous entrepreneurs grow faster (Ramachandran and Shah 2007).

Financing an expansion of post-primary education presents at least as daunting a challenge as closing the infrastructure gap. A recent report by the World Bank (Mingat, Ledoux and Rakotomalala 2010) undertakes a number of education policy and financing simulations for 33 African countries. In the most ambitious scenario the aggregate gap

¹⁶ Climate change financing, whether on concessional terms or not, is likely to further complicate the infrastructure financing picture, in particular for energy generation. For a survey of the issues on aid and climate change see Arndt and Bach (2011).

in recurrent funding for post-primary education in 2020 amounts to US\$29.1 billion a year. Even in the most restrictive scenarios—those reflecting highly selective policies for coverage in upper secondary and tertiary education and low unit costs—the recurrent funding gap is projected at US\$3.4 billion a year for post-basic education, and the gap in capital funding for basic and secondary education is projected to be US\$2.6 billion a year.

Figure 10
ODA commitments to the education sector, 1995-2009



Source: Elaborated by the author based on the OECD-DAC database.

The likelihood that these funding gaps will be addressed adequately is small. DAC donor commitments to all levels of education in Africa only approach US\$4 billion (Figure 10). Confronted with rising unit costs in primary education, increasing pressures on lower secondary education as a result of higher primary completion rates, and limited prospects of external finance, African governments have little choice but to open a dialogue with their development partners on the desirability and realism of the primary education MDG.¹⁷ If a more broad-based target were to be used, governments would have greater flexibility to reallocate expenditures from primary to post-primary education, while still making and reporting measurable progress in building human capital.

In addition to allowing greater budget flexibility and providing additional funding, donors can support two additional ways of expanding educational services. Because many of the returns to higher level education are appropriable by the individual,

¹⁷ Some African governments have already begun this dialogue in the context of moving from first generation to second generation poverty reduction strategy papers (PRSPs). Early PRSPs which were the principal expressions of donor-government objectives largely excluded reference to expanding post-primary education. More recent PRSP have introduced the topic but most often without specific goals.

encouraging private provision of educational services, especially in technical, vocational and tertiary education, represents a significant financing and service provision option.¹⁸ Private provision of technical and tertiary education raises important equity issues. Lack of financial depth in many African countries is likely to constrain poorer students from privately financing their education. Donors can strengthen equality of opportunity by supporting grants and low cost loans. Governments could also use such support to tackle gender and horizontal (ethnic) inequalities in educational access and outcomes.

Second, donors with significant African immigrant populations can help to develop ways of using the diaspora to build skills in their countries of origin. Africa is the region of the developing world in which the highly skilled form the largest share of all migrants. This braindrain offers the possibility of becoming a brainbank from which migrants are recruited to support skills development, through virtual, temporary, or permanent return.¹⁹

5 Investing in structural change: a new agenda for aid

As the successful experience of East Asia demonstrates, once a critical minimum threshold is crossed, industrial growth can be explosive. But industry is lumpy in size, space and time, and threshold effects are important. Below the threshold marginal changes in policies and investments may not yield results. A strategy to accelerate structural change through the rapid growth of industry—with and without smokestacks—is needed. Four inter-related strategic objectives—pushing non-traditional exports, encouraging agglomeration, acquiring and building firm capabilities, and strengthening regional integration—are critical to Africa’s ability to accelerate structural change. The donor community can help to shape and support such a strategy.

5.1 Pushing non-traditional exports

For the vast majority of countries in Africa the export market represents the only option for rapid growth of manufacturing, agro-industry and high value added services. Moreover, the growth of non-traditional exports such as manufactures, agro-industrial products and services can be an important driver of productivity growth. There is substantial evidence that African manufacturing firms improve their productivity by exporting (Soderbom and Teal 2003; Mengistae and Pattillo 2004). Bigsten et al. (2004) find that, controlling for self-selection, productivity by African exporters increases about 9 per cent per year.

Breaking into export markets will need an ‘export push’: a focused set of public investments and policy and institutional reforms designed to increase the share of non-traditional exports in GDP. One way to accomplish this would be to set priorities for

¹⁸ Private universities account for 73, 71, and 75 per cent of tertiary enrolments in Brazil, Chile, and Korea, respectively.

¹⁹ See Page and Plaza (2006).

investment climate reform that address the critical constraints to exporting. Improving trade logistics is essential. Trade in tasks has greatly increased the importance of ‘beyond the border’ constraints to trade. Because new entrants to task-based production tend to specialize in the final stages of the value chain, ‘trade friction costs’—the implicit tax imposed by poor trade logistics—are amplified. African countries have an average ranking of 121 out of 155 countries in the recently compiled World Bank (2010) Trade Logistics Index. These constraints directly reduce Africa’s ability to compete. In China, indirect costs, many of them attributable to trade logistics, are about 8 per cent of total costs; in Africa they are 18–35 per cent (Eifert, Gelb and Ramachandran 2005).

International support to an export push should act on two fronts: aid to improve trade logistics and policies to increase preferential market access. Since the 2005 Hong Kong World Trade Organization (WTO) Ministerial Conference, ‘Aid for Trade’ has attracted considerable donor attention. The OECD defines aid for trade to include all investments in transport, energy and telecommunications infrastructure.²⁰ They also include as ‘trade development’ any assistance for general private sector development and for activities aimed at improving the business climate, access to trade finance, and trade promotion. Based on this definition, aid for trade comprises about 25 per cent of total development assistance and about 30 per cent of aid that governments allocate to individual sectors.²¹

Aid for trade will not succeed unless the international community meets its promise to increase overall development assistance. Although Aid for Trade commitments have increased since the launch of the initiative, donors are not fulfilling the promise made at Hong Kong to make aid for trade additional to existing aid budgets. Aid for Trade’s share in total development assistance has fallen steadily since 1996 (Gamberoni and Newfarmer 2008). With such a large share of total ODA already appearing to be directly or indirectly targeted at trade, future increases are likely to occur only if the envelope for all concessional aid expands.

Some positive news is that although resources remain limited, donors appear to be allocating them to countries with the greatest needs. One recent study finds that countries with low levels of trade performance and trade logistics tend to receive a higher share of aid for trade in GDP—controlling for governance related factors—than those with lesser need (Gamberoni and Newfarmer 2008). Nevertheless, the same study finds that 26 African countries whose scores in trade performance and logistics indicate that they should receive large amounts of aid for trade in fact receive below average amounts.²²

²⁰ Arguably this is necessary, since it is virtually impossible to distinguish whether a power plant serves tradable or non-tradable activities, but it conveys no information concerning the strategic focus of the infrastructure investment.

²¹ This ‘sectoral allocable aid’ excludes fund for debt relief, administrative costs and budget support.

²² These are Burkina Faso, Burundi, Chad, Congo DR, Côte d’Ivoire, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Lesotho, Madagascar, Malawi, Maldives, Mali, Nepal, Niger, Nigeria, Rwanda, Sierra Leone, Sudan, Tanzania, Togo, and Uganda.

Given the very broad definition of aid for trade, it is perhaps unsurprising that relatively little is known about its impact.²³ Any realistic effort to link aid for trade to exports would require redefining the concept. Since there is a widely accepted measure of trade logistics performance published by the World Bank (World Bank 2010) it should be possible for donors (and the OECD/DAC) to align aid commitments to the specific infrastructure and institutional components of the trade logistics index. While this would result in a substantial decline in the apparent donor commitments to aid for trade, it would also make it possible to see whether donor assistance is directed at the critical constraints to exports.

Trade policy has an important role to play in the export push. A first step is to reduce escalating tariffs, especially in Asia, directed at higher stage processing of Africa's commodity exports. China could play a leading role here by shifting its preferential trading agreements with Africa from country by country bilateral deals to a single Africa wide initiative. It could also urge its Asian trading partners to offer similar tariff reductions.

A second step is to develop a simple, time bound system of preferences for Africa's nontraditional exports to high-income countries. At present different OECD countries have different trade preference schemes, and most of them are not well-designed or effective. Indeed, the multiplicity of schemes is a needless source of complexity. An obvious improvement would be for the European Union and the United States to harmonize their individual preference schemes for Africa: the Economic Partnership Agreements (EPA) and the Africa Growth and Opportunities Act (AGOA), respectively.

A third step could be for the UN to distinguish a separate class of least developed manufacturing countries, that are not LDCs but are low-income and have little manufacturing. This category could then be used by WTO members in devising a common preferential trading scheme that would apply to the vast majority of African countries.²⁴ To recognize the reality of task-based trade, preferences should feature liberal and simple rules of origin.

5.2 Strengthening agglomerations

Manufacturing and service industries tend to concentrate in geographical areas, usually cities, driven by common needs for inputs and access to markets, knowledge flows, and specialized skills (Fujita, Krugman and Venables 1990; Sonobe and Otsuka 2006). A large empirical literature has documented the significant productivity gains to firms from industrial agglomeration.²⁵ Because of the productivity boost that agglomerations provide, starting a new industrial location is a form of collective action problem. If a critical mass of firms can be persuaded to locate in a new area, they will realize productivity gains, but no single firm has the incentive to move to a new area in the

²³ One recent study suggests that aid to 'build productive capacity' may have played a role in fostering exports in mining and manufacturing (Cali and te Velde 2008). A World Bank (2008) study on the effectiveness of 88 trade development programmes in 48 countries found that exports in sectors receiving trade related technical assistance have increased.

²⁴ See Collier and Venables (2007) and UNIDO (2009) for such proposals.

²⁵ See UNIDO (2009) for a survey of the relevant literature.

absence of others. Africa has few large-scale, modern industrial agglomerations, making it both more difficult for existing firms to compete and more difficult to attract new industry.

Case studies indicate that governments can foster industrial agglomerations by concentrating investment in high quality institutions, social services, and infrastructure in a limited physical area, such as a special economic zone (SEZ) (UNIDO 2009; Farole 2011). In East Asia and Latin America spatial policies have been explicitly linked to an export push through the use of export processing zones (EPZs) which are properly viewed as industrial agglomerations designed to serve the global market.²⁶

To date Africa's experience with spatial industrial policy has been largely unsuccessful. A recent review of the performance of SEZs in Ghana, Kenya, Lesotho, Nigeria, Senegal, and Tanzania concludes that most African EPZs have failed to reach the critical threshold levels of physical, institutional and human capital needed to attract global investors (Farole 2011). For example, firms in non-African SEZs had an average downtime from electricity outages of only 4 hours per month, compared with a reported average downtime of 44 hours per month in African EPZs. A similar pattern is observed in customs clearance where clearance times in African zones are about double that of their non-African counterparts. Clearly, the first order of business is to upgrade the performance of Africa's EPZs to international standards.

Africa's traditional suppliers of aid have tended to neglect special economic zones as a development instrument. Indeed, the prevailing wisdom in the World Bank until quite recently was that EPZs were costly, inefficient substitutes for economy-wide reforms in trade policy and regulation.²⁷ China, on the other hand, building on its own success with spatial industrial policies, has launched a recent initiative to build export-oriented special economic zones in Africa.

China's Ministry of Commerce is supporting the development of six economic and trade cooperation zones in five African countries: Egypt, Ethiopia, Mauritius, Nigeria (2), and Zambia. In addition to contributing to China's Africa initiative, the zones are intended to help China's own restructuring by encouraging labour-intensive industries, such as textiles, leather goods and building materials, to move offshore. Chinese enterprises have also set up industrial zones outside the official ministry programme in Botswana, Nigeria, Sierra Leone, Uganda, and South Africa.

The official zones involve three parties: the Chinese government, Chinese developers, and African governments. The sectors, developers, and size of the zones vary considerably. The Chinese government has not involved itself in the design or direct operation of the EPZs, but it has organized marketing events in China to promote investment in the zones. The zones in Ethiopia and Mauritius are 100 per cent Chinese-owned, while the others are joint ventures with national or local governments as

²⁶ Much of the debate over the efficacy of EPZs is cast in terms of their role as an instrument of trade policy. The idea that they are also industrial clusters has only recently entered the literature (see UNIDO 2009 and Farole 2011).

²⁷ A recent World Bank study (Farole 2011) takes a broader view of EPZs and industrial agglomerations and provides a balanced view of their strengths and weaknesses in practice. However, the results of the study have not yet found their way into World Bank operational policy.

minority partners. The Chinese zone developers are obliged to construct high-standard infrastructure, promote the zone, and bring in world-class professional management. Host governments are expected to provide infrastructure outside the zones, including guaranteed supplies of electricity, water and gas, roads leading up to the zones, and improved port services (Brautigam and Tang 2011).

It is too early to evaluate whether this new initiative will succeed. In 2010 the six zones were still under construction or in early stages of operation. Most of the zones are designed to support clusters in textiles, home appliances, and other light industries, and the developers are clearly aware of the need for world-class infrastructure and responsive management. There are some warning signs, however, that point to the possibility that the potential of the new EPZs may not fully be realized. For example, there is no evidence that any of the host governments have made efforts to develop supplier programmes or other close links between the domestic private sector and the zones. In contrast to trends in China, none of the African zones appear to have been specifically designed to encourage synergies with local universities or technology institutes (Brautigam and Tang 2011).

5.3 Attracting and building capabilities

In most industries productivity and quality depend on a set of interlocking elements of ‘tacit knowledge’ or ‘working practices’ possessed jointly by the individuals who comprise the firm’s workforce (Nelson and Winter 1982; Sutton 2005). These ‘firm capabilities’ are the knowhow or working practices that are used either in the course of production or in developing a new generation of products. Often the critical constraints to industrialization are not technical items that can be successfully reduced to a statement in a manual. Technology can be codified and purchased. Rather they are complex and inter-related bodies of knowledge and patterns of behaviour.

The process of transferring (and building) capabilities consists of two phases. The first phase involves the initial introduction of a higher level of capability to some firm or group of firms. The transfer process is most often a result of FDI, but it can take other forms—such as supplier-purchaser relationships—as well. The second phase consists of the spillover of capabilities to other firms within and outside the host industry (Sutton 2005).

Because foreign direct investment is the main channel by which capabilities are transferred to low-income countries, there is limited scope for development assistance to support capabilities transfer directly. This is an area where properly designed investment climate reforms can have a large payoff by making it easier to attract FDI. Donors can also assign priority to supporting the development of effective foreign investment promotion agencies at the country level. Today, the vast majority of Africa’s foreign investment promotion efforts fall short of international best practice (Page 2012).

Donors can also support the formation of knowledge networks to ‘import’ global best practices. Donor agencies in Eastern Europe and Central Asia have created networks of related manufacturing companies to whom advice on achieving international standards in terms of quality and production is provided on a continuing basis (Sutton 2005).

Donors could play a similar role in establishing and supporting similar networks in cooperation with African governments and the private sector.

Transmission of capabilities to other firms in the local economy most often takes place through vertical supply chain relationships. This is not altogether surprising. Firms have little incentive to transfer capabilities to competing enterprises, but they may benefit from improvements in the capabilities of suppliers or customers. Because horizontal transfer of capabilities is limited, there may be a role for public policy in attempting to fill the void, mainly through public-private partnerships.

A potentially promising area for donor support in Africa is management training. Since 2007 the World Bank and the Japan International Cooperation Agency (JICA) have undertaken some pilot projects in which management training programmes are provided free of charge to small entrepreneurs in industrial clusters. Programme participants had very limited knowledge of standard management practices (Sonobe et al. 2010). Ex post evaluations indicate that the training programmes have had strong positive effects on the adoption of improved management practices and on willingness to pay for training in the future. Moreover, there were information spillovers from the training participants to non-participants (Otsuka and Sonobe 2011).

5.4 Supporting regional integration

The small size of Africa's economies and the fact that many are landlocked make regional approaches to infrastructure, institutional and legal frameworks in trade corridors (customs administration, competition policy, and regulation of transport) and trade related services imperative. For exporters in land-locked countries, poor infrastructure in neighbouring, coastal economies, incoherent customs and transport regulations as well as inefficient customs procedures and 'informal' taxes in transportation corridors slow transit times to the coast and raise costs.

The number of regional bodies on the continent has been steadily growing, but, tangible progress on regional integration has been slow. The size, scope, and objectives of Africa's regional organizations vary greatly. Many countries are members of several arrangements, resulting in a complex web of regional organizations, competition for resources and inconsistencies in policy. Investments in regional infrastructure are hampered by the technical complexity of multi-country projects and the time required for decisions by multiple governments. Institutional reforms to improve trade logistics, such as common standards, regulations, and one stop border facilities, have also moved slowly.

Recently, the regional integration agenda has picked up some momentum. Some regional economic communities (RECs) in West Africa and Eastern and Southern Africa have shown new dynamism. New initiatives to harmonize policies and programmes among RECs, such as the COMESA-EAC-SADC Tripartite Initiative, are potentially important steps towards building greater coherence among regional communities across Africa.

Africa's development partners have not aggressively helped regional integration, preferring to deal with individual countries rather than regional organizations and limiting financial commitments to trans-border projects. Among the bilateral agencies

that deal with Africa, only a relatively small number have taken up the regional integration agenda.²⁸ The African Development Bank (AfDB) has supported regional operations—mainly infrastructure and capacity-building—for a number of years through the African Development Fund (ADF). AfDB regional investments in 2005 accounted for nearly a quarter of all regional investments in Africa. The World Bank established a regional pilot programme in 2003 and has published a regional integration strategy, but implementation has been slow. As a regional organization itself, the European Community has taken up the regional integration agenda strongly, but has also linked it to progress on the Economic Partnership Agreement (EPA) initiative. Because the EPA initiative is driven in Brussels by orthodox trade negotiation objectives rather than by development objectives, this has undermined the role of EPAs in strengthening regional integration in the partner regional groupings.

Aid implementation and disbursement are particularly slow at the regional level. The regional organizations often lack the financial, institutional and technical capacity to develop bankable projects and to make countries implement their commitments. They are under-staffed and their procedures are cumbersome. Aid agencies are also often better structured and equipped to deal with national partners. Where agencies are under pressure to disburse, the perception that supporting regional projects is slower and more complex can be a disincentive.

There are a number of actions that African governments and their development partners can take to strengthen regional integration:

- National governments in Africa need to rationalize the membership of regional trading blocs and empower the regional organizations to develop coherent regional development strategies and solve collective action problems among member states.
- The capacity of RECs to develop bankable projects, to carry out monitoring and evaluation and to ensure adequate financial management needs to be strengthened.
- Donors should make the RECs the lead institutions in the dialogue on regional strategies and programmes.
- Donors also need to make stronger efforts to harmonize their support to regional organizations, decrease the use of their own systems to channel aid flows to regional programmes, and to integrate their national aid programmes into their regional strategies.

The Infrastructure Consortium for Africa (ICA) hosted by the AfDB is potentially an important tool to implement the agenda outlined above. It is a partnership between multilateral and bilateral donors and African institutions designed to catalyse donor and private sector financing for infrastructure. The ICA already facilitates collaborative work, donor harmonization and sharing of best practice. It could serve as a framework to implement more effective donor support to regional infrastructure and institutions.

²⁸ The main bilateral partners include: the UK Department for International Development (DFID), the Agence Française de Développement (AFD), the United States Agency for International Development (USAID), Germany's Gesellschaft für Technische Zusammenarbeit (GTZ), and the Japan International Cooperation Agency (JICA).

There is also an urgent need to link the trade preference initiatives of the European Union (EPA) and the United States (AGOA) to the regional integration agenda. At present they are often pulling in different directions. For example the current AGOA eligibility rules, which include governance performance criteria, discourage the development of regional supply chains. Removing a country from AGOA punishes that country's regional trading partners as well as the offending country. This was dramatically demonstrated in the case of Madagascar, which had developed regional supply chains in garments, including the supply of zippers from Swaziland, denim from Lesotho, and cotton yarn from Zambia and South Africa. Following a change of government, Madagascar became ineligible for AGOA preferences ending these supply chain relationships.

Stability in the eligibility for preferences should be a priority for the preferential trading agreements. One option is to allow a country which has lost its eligibility for preferences to continue to provide inputs to preference eligible countries within the regional group. A further step would be to allow a country declared ineligible to continue to export goods that contain a specified amount of inputs from eligible countries in the REC under a transitional arrangement.

To promote the creation of regional value chains, the United States and Europe could lower local content requirements for RECs that meet a minimum standard of integration. Another approach would be for the WTO to call for common treatment of all the countries within a regional trade agreement, so that in a regional grouping with a preponderance of least developed country members, the other members would also benefit from the same preferences.

6 Conclusions

Structural change is crucial for Africa's long-term success. Movement of workers from low productivity to high productivity jobs is the key to sustained long-term growth and faster poverty reduction. But, recent evidence suggests that structural change in Africa is moving in the wrong direction. Unlike any other part of the developing world, Africa has deindustrialized over the past 30 years. Private investment, the key driver of Asia's rapid economic transformation, has not increased at a pace that supports rapid expansion of high value added activities, and when Africa has succeeded in attracting foreign direct investment, it has been largely to exploit natural resources.

Aid is partly responsible for Africa's slow pace of structural change. Since the 1990s donor attention to private sector development has primarily focused on the regulatory and institutional aspects of the investment climate. These are undeniably important, but the principal instrument guiding the policy dialogue, the World Bank *Doing Business* indicators, is at best an imperfect guide to the binding constraints to industrialization. League tables—in public policy just as in sports—are a way of drawing attention to comparative performance. They are, however, poor guides to policy reform.

Donors have neglected two critical aspects of the investment climate, infrastructure and skills. Official development assistance to infrastructure has declined as a share of ODA continuously since the 1970s. The focus on achieving the MDG of universal primary

enrolment, while a major success story in Africa, has left African governments with little budget space to fund post-primary education and a growing skills gap with the rest of the world. Reversing the declining trend in aid to infrastructure and post-primary education is critically important. Redefining the Millennium Development Goal for education can also provide African governments with the flexibility to address critical post-primary educational needs.

Beyond the investment climate aid can play a catalytic role in accelerating structural change. Progress towards four interrelated strategic objectives—pushing nontraditional exports, supporting agglomerations, building firm capabilities, and accelerating regional integration—is critical for accelerated structural change in Africa. Aid and supporting trade policies have a key role to play in achieving each of these objectives.

Acronyms

ADF	African Development Fund
AFD	Agence Française de Développement
AfDB	African Development Bank
AGOA	the Africa Growth and Opportunities Act
BEST	multi-donor programme ‘Business Enterprise Strengthening in Tanzania’
CPIA	Country Performance and Institutional Assessment
DAC	Development Assistance Committee of OECD
DFID	Kingdom’s Department for International Development of the United Kingdom
EPA	Economic Partnership Agreements
EPZS	export processing zones
FDI	foreign direct investment
GDF	Global Development Finance Database of the World Bank
GTZ	Germany’s Gesellschaft für Technische Zusammenarbeit
ICA	Infrastructure Consortium for Africa
IDA	International Development Association of the OECD
IFIs	international financial institutions
JICA	Japan International Cooperation Agency
MCC	United States’ Millennium Challenge Corporation of the United States
MDGs	Millennium Development Goals
MIC	middle-income
PRSPs	poverty reduction strategy papers
RECs	regional economic communities
SEZs	special economic zones
USAID	the United States Agency for International Development
WTO	World Trade Organization

References

- Arbache, J. S., and J. Page (2009). 'How Fragile Is Africa's Recent Growth?'. *Journal of African Economies*, 19(1): 1–24.
- Arndt, C., and C. F. Bach (2011). 'Foreign Assistance in a Climate-Constrained World'. WIDER Working Paper 2011/66. Helsinki: UNU-WIDER.
- Bigsten, A., P. Collier, S. Dercon, M. Fafchamps, G. Gauthier, et al. (2004). 'Do African Exporters Learn from Exporting?'. *Journal of Development Studies*, 40(3): 115–41.
- Brautigam, D., and X. Tang (2011). 'African Shenzhen: China's Special Economic Zones in Africa'. *Journal of Modern African Studies*, 49(1): 27–54
- Cali, M. and D. te Velde (2008). 'Towards a Quantitative Assessment of Aid for Trade'. ODI Economic Paper Series. London: Overseas Development Institute.
- Chang, R., L. Kaltani, and N. Loayza (2009). 'Openness Can Be Good for Growth: The Role of Policy Complementarities'. *Journal of Development Economics*, 90(1): 33–49.
- Chenery, H. (1986). 'Growth and Transformation'. In H. Chenery, S. Robinson and M. Syrquin (eds), *Industrialization and Growth: A Comparative Study*. New York: OUP.
- Clarke, G. R.G. (2005). 'Beyond Tariffs and Quotas: Why Don't African Manufacturer Export More?'. WB Policy Research Working Paper 4317. Washington, DC: World Bank.
- Collier, P., and A. J. Venables (2007). 'Rethinking Trade Preferences: How Africa Can Diversify its Exports'. *World Economy*, 30(8): 1326–45.
- Commander, S., and K. Tinn (2007). 'Evaluating Doing Business'. Paper prepared for the World Bank IEG evaluation. Available at: www.worldbank.org/ieg.
- Eiffert, B. (2007). 'The Economic Response to Regulatory Reform, 2003–06'. Washington, DC: Center for Global Development.
- Eifert, B., A. Gelb, and V. Ramachandran (2005). 'Business Environment and Comparative Advantage in Africa: Evidence from the Investment Climate Data'. In F. Bourignon (ed.), *Proceedings of the Annual Bank Conference in Development Economics: Are We on Track to Achieve the Millennium Development Goals?*. Washington, DC: World Bank.
- Farole, T. (2011). *Special Economic Zones in Africa: Comparing Performance and Learning from Experience*. Washington, DC: World Bank.
- Fosu, A. (2011). 'Growth, Inequality, and Poverty Reduction in Developing Countries: Recent Global Evidence'. CSAE Working Paper 2011-07. Oxford: Centre for the Study of African Economies.
- Freund, C., and B. Bolaky (2008). 'Trade, Regulations, and Income'. *Journal of Development Economics*, 87(2): 309–21.

- Fujita, M., P. Krugman, and A. J. Venables (1990). *The Spatial Economy: Cities, Regions and International Trade*. Cambridge, MA: MIT Press.
- Gamberoni, E., and R. Newfarmer (2009). 'Aid for Trade: Matching Potential Demand and Supply'. WB Policy Research Working Paper Series 4991. Washington, DC: World Bank.
- Go, D. S., and J. Page (2008). 'Africa at a Turning Point? Growth, Aid and External Shocks'. Washington, DC: World Bank.
- Hausmann, R., J. Hwang, and D. Rodrik (2007). 'What You Export Matters'. *Journal of Economic Growth*, 12(1): 1–25.
- Helpman, E., M. Melitz, and Y. Rubinstein (2008). 'Estimating Trade Flows: Trading Partners and Trading Volumes'. *Quarterly Journal of Economics*, 123(2): 441–87.
- IMF (International Monetary Fund) (n.d.). International Financial Statistics and Balance of Payments databases. Washington, DC: IMF.
- Jacquet, P., and M. Kline (2005). 'Using ODA to Engage the Private Sector in Poverty Reduction'. Paper prepared for the Annual Bank Conference on Development Economics in Europe, Amsterdam Washington, DC: World Bank
- Kuznets, S. (1955). 'Economic Growth and Income Inequality'. *American Economic Review*, 45(1): 1–28.
- Lewis, W. A. (1954). 'Economic Development with Unlimited Supplies of Labour' *Manchester School*, 22(2): 139–91.
- McMillan, M., and D. Rodrik (2011). 'Globalization, Structural Change and Productivity Growth'. Washington, DC: IFPRI (processed).
- Mengistae, T., and C. Pattillo (2004). 'Export Orientation and Productivity in Sub-Saharan Africa'. *IMF Staff Papers*, 51(2): 327–53.
- Mingat, A., B. Ledoux, and R. Rakotomalala (2010). *Developing Post-Primary Education in Sub-Saharan African: Assessing the Financial Sustainability of Alternative Pathways*. World Bank's Africa Human Development Series. Washington, DC: World Bank.
- Moyo, M., R. Simson, A. Jacob, and F.-X. de Mevius (2012). 'Attaining Middle Income Status: Tanzania'. IGC Working Paper 11/1019. London: International Growth Centre.
- Nelson, R., and S. Winter (1982). *An Evolutionary Theory of Economic Change*. Cambridge, MA: Harvard University Press.
- Nicita, A., and M. Orreagada (2007). 'Trade Production and Protection Database, 1976–2004'. *World Bank Economic Review*, 21(1): 165–71.
- OECD (2009). 'Aid for Trade: Is it Working?'. Paris: Organization for Economic Cooperation and Development.
- Otsuka, K., and T. Sonobe (2011). 'A Cluster-Based Industrial Development Policy for Low-Income Countries'. Washington, DC: World Bank (processed).

- Page, J. (2012). 'Can Africa Industrialize?'. *Journal of African Economies*, 21(2): 86–124.
- Page, J., and S. Plaza (2006). 'Migration, Remittances and Economic Development: A Review of Global Evidence'. *Journal of African Economies*, 15 (Special Issue 2): 245–336.
- Ramachandran, V., and M. Shah (2007). 'Why Are There So Few Black-Owned Firms in Africa? Preliminary Results from Enterprise Survey Data'. CGD Working Paper 104, Washington, DC: Center for Global Development.
- Soderbom, M., and F. Teal (2003). 'Are Manufacturing Exports the Key to Economic Success in Africa?' *Journal of African Economies*, 12(1): 1–29.
- Sonobe, T., and K. Otsuka (2006). *Cluster-Based Industrial Development: An East Asian Model*. Basingstoke: Palgrave Macmillan.
- Sonobe, T., Y. Mano, J. Akoten, and K. Otsuka (2010). 'Assessing the Impacts of Management Skill Training in Ghana and Kenya'. Paper presented at the 2010 Centre for the Study of African Economies, Oxford Annual Conference. Tokyo: Graduate Research Institute for Policy Studies.
- Sutton, J. (2005). 'Competing in Capabilities: An Informal Overview'. London: London School of Economics. Mimeo.
- Timmer, M. P., and G. J. de Vries (2009). 'Structural Change and Growth Accelerations in Asia and Latin America'. *Cliometrica*, 3(2): 165–90.
- UNIDO (2009). *Industrial Development Report, 2009*. Geneva: United Nations Industrial Development Organization.
- Wood, A., and K. Jordan (2000). 'Why Does Zimbabwe Export Manufactures and Uganda Not?'. *Journal of Development Studies*, 37(2): 91–116.
- World Bank (GDF) (n.d.). Global Development Finance Database. Available at: <http://data.worldbank.org/data-catalog/global-development-finance>.
- World Bank (n.d.). World Development Indicators. On line.
- World Bank (2005). *World Development Report 2005: A Better Investment Climate for Everyone*. Washington, DC: World Bank.
- World Bank (2007). 'Expanding the Possible in Sub-Saharan Africa: How Tertiary Institutions Can Increase Growth and Competitiveness'. Washington, DC: World Bank.
- World Bank (2008). *Doing Business: An Independent Evaluation*. Washington, DC: World Bank, Independent Evaluation Group.
- World Bank (2009). *Transforming Africa's Infrastructure*. Washington, DC: World Bank.
- World Bank (2010). *Connecting to Compete: Trade Logistics in the Global Economy*. Washington, DC: World Bank.
- World Bank (2011). *Doing Business*. Washington, DC: World Bank.

Yoshino, Y. (2008). ‘Domestic Constraints, Firm Characteristics, and Geographical Diversification of Firm-Level Manufacturing Exports in Africa’. WB Policy Research Working Paper 4575. Washington, DC: World Bank.

Appendix:

Appendix Table A1
Countries in the structural change and poverty reduction sample

Asia		Mena		Latin America		Africa	
Malaysia	MYS	Turkey	TUR	Brazil	BRA	Nigeria	NGA
Thailand	THA			Argentina	ARG	Senegal	SEN
Indonesia	IDN			Chile	CHL	Kenya	KEN
Philippines	PHL			Mexico	MEX	Ghana	GHA
China	CHN			Venezuela	VEN	Zambia	ZMB
India	IND			Costa Rica	CRI	Ethiopia	ETH
Korea	KOR			Colombia	COL	Mauritius	MUS
Vietnam	VNM			Peru	PER	Malawi	MWI
				Bolivia	BOL	South Africa	ZAF
				Guatemala	GUA	Tanzania	TZA
				El Salvador	ELS	Mozambique	MOZ
						Tunisia	TUN

Source: Author's database on structural change and poverty reduction.