BACKGROUND PAPER

Agribusiness for Africa’s Prosperity

Summary Report

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Explanatory Note

This document is a summary of the publication “Agribusiness for Africa’s Prosperity” published by UNIDO in May, 2011 (see further details below). In this summary report, references to various chapters and sources refer to the text of the book, “Agribusiness for Africa’s Prosperity.”

Agribusiness for Africa’s Prosperity

Kandeh K. Yumkella, Patrick M. Kormawa, Torben M. Roepstorff, Anthony M. Hawkins (editors)

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## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>3ADI</td>
<td>African Agribusiness and Agro-industries Development Initiative</td>
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<td>ACP</td>
<td>The African, Caribbean and Pacific Group of States</td>
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<tr>
<td>AfDB</td>
<td>African Development Bank</td>
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<td>AGOA</td>
<td>African Growth and Opportunity Act</td>
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<td>AIDA</td>
<td>Accelerated Industrial Development of Africa</td>
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<td>AUC</td>
<td>African Union Commission</td>
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<td>CAADP</td>
<td>Comprehensive Africa Agriculture Development Programme</td>
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<td>CDM</td>
<td>Clean Development Mechanism</td>
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<td>DAC</td>
<td>Development Assistance Committee</td>
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<tr>
<td>DFI</td>
<td>development finance institution</td>
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<tr>
<td>ECA</td>
<td>Economic Commission for Africa</td>
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<td>EBA</td>
<td>Everything But Arms</td>
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<tr>
<td>EPA</td>
<td>economic partnership agreement</td>
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<td>EPZ</td>
<td>export processing zone</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<td>FDI</td>
<td>foreign direct investment</td>
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<tr>
<td>GDP</td>
<td>gross domestic product</td>
</tr>
<tr>
<td>GHG</td>
<td>green house gases</td>
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<tr>
<td>GSP</td>
<td>Generalized System of Preferences Agreement</td>
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<tr>
<td>ICT</td>
<td>information and communications technology</td>
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<tr>
<td>IEA</td>
<td>International Energy Agency</td>
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<tr>
<td>IFAD</td>
<td>International Fund for Agricultural Development</td>
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<tr>
<td>IFPRI</td>
<td>International Food Policy Research Institute</td>
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<tr>
<td>ILO</td>
<td>International Labour Organization</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>LDCs</td>
<td>least developed countries</td>
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<td>LICs</td>
<td>low-income countries</td>
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<td>LLCs</td>
<td>land locked countries</td>
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<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
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<tr>
<td>MFN</td>
<td>most-favoured nation</td>
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<tr>
<td>MNC</td>
<td>multinational corporation</td>
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<tr>
<td>MVA</td>
<td>manufacturing value added</td>
</tr>
<tr>
<td>NEPAD</td>
<td>New Partnership for Africa's Development</td>
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<tr>
<td>NGO</td>
<td>non-governmental organization</td>
</tr>
<tr>
<td>NICs</td>
<td>newly industrializing countries</td>
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<tr>
<td>NIS</td>
<td>national innovation system</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>ODA</td>
<td>official development assistance</td>
</tr>
<tr>
<td>PHL</td>
<td>post-harvest losses</td>
</tr>
<tr>
<td>PPP</td>
<td>purchasing power parity</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>research and development</td>
</tr>
<tr>
<td>RIS</td>
<td>regional innovation system</td>
</tr>
<tr>
<td>SME</td>
<td>small and medium-sized enterprise</td>
</tr>
<tr>
<td>SSA</td>
<td>sub-Saharan Africa</td>
</tr>
<tr>
<td>STI</td>
<td>science, technology and innovation</td>
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<tr>
<td>SWF</td>
<td>sovereign wealth fund</td>
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UNIDO United Nations Industrial Development Organization
Introduction: Agriculture, Agribusiness and the New Normal Paradigm

After the two ‘lost decades’ of the 1980s and 1990s, during which *per capita* incomes in sub-Saharan Africa (SSA) declined, the regional economy has enjoyed robust growth since 2001, interrupted briefly by the global recession in 2009 (Figure 1). In 2010/11 the sub-Saharan economy is forecast to grow more rapidly than emerging economies in Europe and Central Asia, Latin America and the Caribbean, and the Middle East and North Africa (World Bank 2010a), reflecting a move towards greater convergence in living standards across emerging markets as a whole.

**Figure 1: Real per capita income growth in SSA 1970-2011**

![Graph depicting real per capita income growth in SSA from 1970 to 2011.](image)

*Sources: IMF (2010) and UNCTAD (various editions)*

However, the recent improved growth performance cannot mask the reality that in 2005 SSA was the world’s poorest region with just over half its population living on less than $1.25 a day in purchasing power parity (PPP) terms (World Bank & IMF 2010). This proportion was little different from that of a quarter of a century earlier. Indeed, from the early 1960s *per capita* incomes in SSA began to fall behind
those of other developing regions with the gap between the two groups widening over the subsequent 40 years (Easterly 2009).

In fast-growing emerging market economies, most notably in Asia, expansion has been driven by manufacturing rather than the primary sector. But Africa is different. Its recent growth has been driven by commodity exports, primarily oil and metals, and in the process SSA has de-industrialized, which is reflected in the decline in manufacturing’s share of GDP from 16 per cent in 1995 to 15 per cent in 2008. Over the same period the share of agriculture declined from 18 per cent to 12 per cent, while (non-manufacturing) industry, primarily mining and energy, rose from 29 per cent to 33 per cent. Simultaneously, the service sector grew further from 53 per cent to 55 per cent (see chapter 1).

The drawbacks of reliance on a commodity-driven growth path have been well-documented over the years ranging from ‘resource curse’ concerns, secular terms-of-trade deterioration, ‘Dutch disease’ currency overvaluation effects, weak backward and forward linkages between oil or metal extractive industries and the domestic economy, capital intensity and technological sophistication and therefore limited direct job creation and the often narrow scope for value addition.

Above all, productivity in African agriculture is extremely low, meaning that there is considerable scope for producers to move to the efficiency frontier reached in other emerging markets. Average value added per agricultural worker (productivity) in SSA is just over $200 and labour productivity is lower in only seven non-African countries in the World Bank’s list of 133 countries (World Bank 2007a). For the most part too, labour productivity in agriculture is below the average in oil-exporting and mineral-exporting countries, suggesting that adverse Dutch disease effects have constrained agricultural development alongside investment policies that have prioritized oil and mining relative to agriculture and manufacturing.

The ‘New Normal’ Paradigm

Taken together, these arguments constitute a powerful case for focusing not on an agriculture-led growth strategy, as has been the case in the past, but on an agribusiness development strategy whereby policymakers, donors and—arguably most importantly—entrepreneurs, target the entire value chain. In the future, demand will continue its shift from unprocessed bulk products to value added products,
underscoring the need for close coordination between policymakers from different government ministries—agriculture, industry, manufacturing, trade, transport, finance, science and technology and the environment. Just as importantly, demand will continue to shift from developed to emerging economies, thereby necessitating that business strategies are framed with this in mind.

An agribusiness-led growth strategy ‘fits’ not only the resource endowment pattern of most of Africa’s resource-poor economies but also the reality that the vast majority of the poor lives in rural areas and depends on the sector for their livelihoods. It is also true that agriculture has long been neglected in terms of government and donor investment, not least because of the “‘agroskepticism’ of many donors” (World Bank 2007a). Agribusiness is labour-intensive especially in terms of creating jobs in value-adding, agro-processing activities, particularly for those who will inevitably leave the land as economic development proceeds. Both backward and forward linkages are far greater than in extractive industries, though at present value addition to African agricultural produce is very low by international standards (chapter 2).

Deep-seated and far-reaching structural change in the post-recession global economy has been characterized by some analysts as ‘shifting wealth’ (OECD 2010) and by others as the ‘new normal’ paradigm. Although the latter term has been applied mostly to the post-crisis financial market environment, especially in the industrialized economies of the OECD, it can be readily applied to Africa at this stage of its development, not least because policymakers, donors and entrepreneurs tend to assume that past development models or development experience elsewhere—notably the ‘green revolution’ in Asia—will apply in Africa 30 or 40 years later. Furthermore, governments in both African and donor countries continue to act on the assumption that the North-South flow of capital, aid and finance of the past 50 years will continue. This is unlikely in a post-crisis global economy because the combination of tightening fiscal stances in many donor economies and the ‘uphill’ flow of capital from surplus emerging market economies—oil exporters, China, Brazil—for ‘re-intermediation’ in industrialized countries will increasingly tilt the balance from traditional to new sources of capital, including foreign aid.

The new normal paradigm (Table 1) is suggestive, rather than prescriptive, and reflects forecasts that, by 2030, today’s emerging markets will account for around 60 per cent of global GDP, compared with 40 per cent in 1990 (OECD 2010).
Table 1: The 'new normal' paradigm

<table>
<thead>
<tr>
<th>1980-2000&lt;sup&gt;1&lt;/sup&gt; NORMAL PARADIGM</th>
<th>2001-2030 THE NEW NORMAL PARADIGM</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD economies drive economic growth</td>
<td>Emerging markets drive output growth</td>
</tr>
<tr>
<td>Robust global economic growth fuelled by financial globalization—the explosive acceleration of cross-border capital flows</td>
<td>Slower global economic growth in part reflecting weakened financial systems, a reaction against ‘excessive’ financial deregulation and a more constrained increase in cross-border capital flows.</td>
</tr>
<tr>
<td>Capital flows from North to South</td>
<td>Capital flows South to South and South to North</td>
</tr>
<tr>
<td>Private capital flows dominate</td>
<td>Sovereign Wealth Funds increase share of cross-border investment</td>
</tr>
<tr>
<td>Export-led growth, especially by Asian economies</td>
<td>Demand rebalancing in Asian economies</td>
</tr>
<tr>
<td>Limited state intervention in the economy</td>
<td>Growing state intervention</td>
</tr>
<tr>
<td>Market capitalism</td>
<td>Capitalism supported by the state</td>
</tr>
<tr>
<td>Deregulation, liberalization and privatization</td>
<td>Industrial policy rejuvenated</td>
</tr>
<tr>
<td>Western multinationals drive FDI</td>
<td>Emerging market multinationals, including state-owned enterprises, drive FDI</td>
</tr>
<tr>
<td>Factor accumulation drives growth</td>
<td>Total factor productivity drives growth</td>
</tr>
<tr>
<td>OECD donors dominate aid flows</td>
<td>OECD aid flows stagnate and eventually decline as new emerging market donors become increasingly influential</td>
</tr>
</tbody>
</table>

Three main lessons flow from this new normal paradigm: (a) that the centre of economic gravity will continue to shift from OECD to emerging market economies; (b) that the state will play an enhanced role in development; (c) and—specific to SSA—that ‘traditional’ export markets, traditional suppliers, traditional donors and traditional sources of FDI will shift towards Asia, Eastern Europe and Latin America.

**A Four-Speed World**

Table 1 implicitly relies on the assumption that the South and emerging markets are homogenous entities, which they are not. Wolfensohn’s concept (2007) of a four-speed world:

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<sup>1</sup> Policy reforms of the 1980s and 1990s focussed on the desirability of a few simple reforms, which can be summarized under the triple commandments: stabilize, liberalize and privatize. A wave of policy reforms around the world emerged, which was modelled after the now much-maligned ‘Washington Consensus’ dating back to 1989 (Rodrik 2004b).
speed world—the Affluent, the Converging, the Struggling and the Poor—adds a critical additional element of differentiation. Converging nations are those that are closing the gap with the affluent OECD, while struggling nations are those that have failed to progress from middle-income status. Poor countries—many of them in Africa—remain mired in extreme poverty.

Table 2 shows how much progress Africa has made. The number of poor countries has fallen to 21 from 35 in the 1990s, while the number of more developed ‘converging’ states has increased from 2 to 17. Significantly, no fewer than 12 of the 17 convergers are either oil exporters (Nigeria, Sudan, Chad, Equatorial Guinea, Angola) or mineral exporters (Botswana, Ghana, Tanzania, Mozambique, Sierra Leone, Namibia, South Africa), underscoring the extent to which growth in SSA has been commodity driven. Of the remaining five, two cannot be classified as resource-based economies (Cape Verde and Mauritius) leaving just three—Ethiopia, Uganda and Rwanda—which have achieved convergence status primarily through agricultural development. The circumstance that almost one quarter of the African ‘convergers’ are agricultural-based economies, while all 21 SSA countries classified as poor economies are also agricultural-based, highlights the stark reality that resource-poor economies, especially LDCs, face the risk of being left further behind unless they can more fully exploit their agribusiness potential.

<p>| Table 2: ‘Shifting wealth’ in a four-speed world |
|----------------------------------|--------|---------------|--------|</p>
<table>
<thead>
<tr>
<th></th>
<th>1990s total (SSA)</th>
<th>2000s total (SSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Affluent</strong></td>
<td>34 (0)</td>
<td>40 (0)</td>
</tr>
<tr>
<td><strong>Converging</strong></td>
<td>12 (2)</td>
<td>65 (17)</td>
</tr>
<tr>
<td><strong>Struggling</strong></td>
<td>66 (7)</td>
<td>38 (6)</td>
</tr>
<tr>
<td><strong>Poor</strong></td>
<td>55 (35)</td>
<td>25 (21)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>167</td>
<td>168</td>
</tr>
<tr>
<td><strong>SSA</strong></td>
<td>44</td>
<td>44</td>
</tr>
</tbody>
</table>

*Source: OECD (2010)*

This report examines how this can—and should—be achieved. It should be read in the context of Easterly’s (2009) timely warning of the dangers of “recycling failed ideas”, which he says “is very stark in African agriculture”. This is why the new normal paradigm is so important. The argument that Africa ‘must’ have a green revolution along the lines of those in Asia and Latin America is akin to stating that
Africa ‘will’ enjoy an industrial revolution as in East Asia. The world has moved on since those two events took place. Because technology and markets have changed and structural transformation has occurred, there can be no guarantee that such past growth models and experiences will be replicated today and in the future.

**Agribusiness, not Agriculture**

For these reasons, this report adopts an entirely different focus from others that have attempted to address Africa’s weak agricultural performance, by focusing on the entire agribusiness value chain and not just on agriculture *per se*: agricultural development cannot be conceived—as in the past—as a production-led strategy. It is linked to the entire value chain by market demand, which must play the driving force in development. Once it is acknowledged that growth will not flow from the production of commodities that the market does not want or at prices that are not competitive, the focus shifts from a supply-based strategy to a demand-driven one in which the entire agribusiness value chain—covering agriculture, industry and services—plays the critical role.

Until relatively recently the words competitiveness and productivity were used sparingly in the African development lexicon. Instead the literature was dominated by investment-led growth, by the necessity for OECD countries to provide the wherewithal in the form of finance, technical assistance, technology transfer, aid and market access. But the caravan has moved on. In the new normal paradigm, with the shift in wealth from North to South, the nature of the development process is changing. By planting agribusiness value chains at the very heart of the new normal global economy, this report seeks to change the fundamental terms of the debate.

**Structural shift towards a modern economy based on specialization**

An agribusiness development strategy involving higher value added and stronger productivity growth throughout the entire value chain system represents one of the best opportunities for rapid and broad-based economic growth and wealth creation in Africa and may be one of the few local paths out of poverty for the small farmer.

Structural transformation also involves a shift in the economy, from subsistence-oriented household production and household-based agro-industry, towards a modern integrated economy based on specialization and exchange often
relying on economies of scale. Many functions formerly undertaken on the farm are shifted to off-farm parts of the economy. The off-farm elements of the agribusiness and food retailing system expand relative to farm-level production both in terms of value added and employment. Such a shift is critical for poverty reduction as somewhere between one and two thirds of smallholder farmers (depending on the country) appear to lack the resources to ‘farm their way out of poverty’ and will therefore need eventually to move to more remunerative employment in emerging sectors outside farming, such as agribusiness, industry and services (Staatz & Dembélé 2008).

Issues of trade, infrastructure, private sector development and financing are equally important for agribusiness development in Africa. This report is crafted within the context of the interdependence of different sectors and different actors in the development process—why and how they participate in value chains—and its treatment of supply-side factors such as finance and infrastructure is part of an holistic approach. Without efficient infrastructure and logistics, there can be no competitive value chains. Indeed, in this approach the weakest part of the value chain defines the binding constraints and thus productivity of the whole chain.

It is with this in mind that the report develops a strategic framework for agribusiness development by analyzing the seven pillars crucial to the process (covered in detail in chapters 3 to 9). Chapters 1 and 2 set out the background to African agribusiness while chapters 10 and 11 pinpoint crucial policy and programme issues and integrate the pillars into a comprehensive programme of action for key actors and stakeholders in the agribusiness system.
The Setting

Globally, agro-industrial activities represent a substantial share of overall manufacturing value added (MVA) accounting for 14 per cent of total MVA in industrial countries and 27 per cent in emerging markets (UNIDO, 2009a). Within the developing world, there is a wide disparity between the newly industrializing countries\(^2\) (NICs) where agro-industry accounts for 26 per cent of MVA, whereas agro-processing industries accounted for 68 per cent of total MVA in the least developed countries (LDCs). According to the World Bank classification, agro-processing activity accounts for 68 per cent of total manufacturing in agriculture-based countries, 42 per cent in countries undergoing transformation and 37 per cent in urbanized developing countries (World Bank 2007a).

Although industrial countries continue to account for the majority of global agro-processing value addition, over the last decade there has been a marked shift away from industrialized states to the developing world. Developing countries now dominate tobacco products, textiles, wearing apparel and leather, and are rapidly approaching parity in the largest category by value, food and beverages (UNIDO & FAO 2009). Only in wood and paper products have OECD countries maintained their former dominance.

This shift reflects both the general impact of rapid manufacturing growth in East Asia, South-East Asia and Oceania, and structural change within the economies of both the industrialized and developing worlds. Past experience in industrialized countries suggests that the share of agribusiness typically rises from less than 20 per cent to more than 30 per cent of total GDP before declining as GDP per capita increases. Typically, over the same period, agriculture’s share falls from around 40 per cent of GDP to under 10 per cent. Moreover, although spending per capita on processed foods is still relatively low in the developing world at $143 per year in lower middle-income countries and $63 in low-income countries, it is growing the fastest in these countries—28 per cent annually in lower middle-income countries and

\(^2\) NICs refers to Brazil, China, India, Malaysia, Mexico, Philippines, South Africa, Thailand and Turkey.
13 per cent in low-income countries during the period 1996-2002 (Regmi & Gehlar 2005).

International experience clearly demonstrates the important role of agribusiness in development. The ratio of GDP generated by agribusiness to that generated by farming increases from 0.57 for a sample of nine “agriculturally-based countries” (all in SSA) to 1.98 for a set of eleven “transforming countries” (mainly Asian) and to 3.32 for twelve “urbanized countries” (Wilkinson & Rocha, 2009). For the United States (US), the ratio stands at 13. While in agricultural countries that have not undergone structural transformation, 63 per cent of the value added in the agro-food system was created on the farm, in the US, farming accounted for only 7 per cent. Input producers, agro-industry, trucking firms, restaurant employees, and others created the rest of the value added in the US agro-food system, implying that agribusiness is highly important for value addition and economic prosperity.

Agribusiness in Africa

The share of agribusiness in African GDP is very low. World Bank data (2009) show that the agribusiness GDP of Thailand matches that of the entire sub-Saharan region, while that of Brazil is nearly four times the African total (Table 3). Crucially too, in all but two of the African countries in the table (South Africa and Zimbabwe) and for the region as a whole, agriculture’s share of GDP exceeds that of agribusiness by 10 percentage points, highlighting the region’s failure to add value to farm production.

<table>
<thead>
<tr>
<th>Country</th>
<th>Agriculture’s share of GDP (%)</th>
<th>Agribusiness’s share of GDP (%)</th>
<th>Combined agriculture and agribusiness share of GDP (%)</th>
<th>Agribusiness (only) GDP ($ billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>4</td>
<td>16</td>
<td>20</td>
<td>14.9</td>
</tr>
<tr>
<td>Nigeria</td>
<td>42</td>
<td>16</td>
<td>58</td>
<td>5.7</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>28</td>
<td>26</td>
<td>54</td>
<td>3.1</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>56</td>
<td>30</td>
<td>86</td>
<td>2.9</td>
</tr>
</tbody>
</table>
### Missed opportunities for creating value addition

This relative inability to produce and process agro-industrial commodities has thus far limited the scope for industrialization, as opportunities to add value and create jobs have not been adequately exploited. High-income countries add $180 of value by processing one ton of agricultural products, but developing countries generate only $40 (UNIDO & FAO, 2007). Moreover, while 98 per cent of agricultural production in high-income countries undergoes industrial processing, only 30 per cent is processed in developing countries. In Africa, there is limited agro-processing activity and capacity in rural areas. Sub-Saharan countries experience large post-harvest losses (PHL) especially for perishable commodities such as fruit and vegetables where PHL average 35-50 per cent of total attainable production, while for grains such losses vary from 15 to 25 per cent. \(^3\)

Although many of the economies of sub-Saharan Africa have undergone substantial structural change with the share of agriculture in GDP declining from 41

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In 1960 to 2008—in most cases this has not been accompanied by the emergence of a dynamic and diversified manufacturing sector. The major part of the increase in industry’s share in overall GDP (from 17 per cent in 1960 to 33 per cent in 2008) was accounted for by the extractive industries, while the share of manufacturing increasing from 8.7 per cent to 15 per cent over the same period, having stagnated or even declined marginally since 1995, and with the service sector expanding very rapidly from 34 per cent in 1981 to 55 per cent in 2008 (World Bank 2010a).

Within the manufacturing sector, agro-industry generally represents the single largest component, accounting for more than half total manufacturing value-addition. Food, beverages and tobacco together account for the bulk of manufacturing value added (MVA) with food, beverages and tobacco accounting for 90 per cent of total agro-industry value added in Kenya and 60 per cent in Ghana (World Bank 2009).

Productivity growth has been stunted in part because producers make little use of modern inputs relative to other developing regions. Average chemical fertilizer use in SSA is only 12.5 kg/hectare (ha) of arable land, placing it substantially below both the global average of 102 kg/ha, and other developing regions such as Latin America and the Caribbean and South Asia (89.6 kg/ha and 106.7 kg/ha respectively) (World Bank 2007b). Similarly, African agriculture is substantially undercapitalized, with extremely low levels of mechanization: Africa’s average of 13 tractors/100km² of arable land compares unfavourably both with the global average (200/100km²) and with the average for other developing regions such as South Asia (129/100km²) (World Bank 2007b). The same applies to irrigation: SSA has only 4 per cent of arable and permanent cropland under irrigation (2002), compared with 39 per cent for South Asia and 11 per cent for Latin America and Caribbean (UNECA & African Union 2009). There is a large untapped potential for expanding irrigation in sub-Saharan Africa. Expansion of irrigated areas has been very limited compared with other developing regions, with only 4 million hectares added during the last 40 years.

Both within Africa and globally, the main demand trend has been the shift away from the consumption of undifferentiated staple crops and towards increased consumption of fruit, vegetables, vegetable oils, fish, meat and dairy products. This has translated into a shift away from undifferentiated primary commodity products in
international trade, towards higher value added product categories. Although high value and non-traditional agro-industrial production for export provide dynamic and growing market opportunities for some African countries, the most important demand driver in sub-Saharan Africa is, and will remain, the domestic and regional (intra-African) market. Diao et al. (2007) estimate domestic markets and intra-African trade to represent more than three quarters of total market value at a continental level, with domestic markets alone constituting 80 per cent of total market value in regions such as Eastern Africa.
Enhancing agricultural productivity (Pillar 1)

Reaching the 6 per cent annual agricultural growth rate targeted in the Comprehensive Africa Agricultural Development Programme (CAADP) requires significantly higher productivity, both in farming and the entire agribusiness system (chapter 3). The scope for factor-driven growth—bringing more land under cultivation—is limited by the scarcity of fertile land and by environmental concerns. This puts the onus squarely on productivity growth because over the past 45 years production growth has been primarily through area expansion, with yields per hectare essentially stagnant, especially for cereals, in contrast with substantial yield increases in other developing regions. However, these cereal yield comparisons may underestimate productivity growth in African agriculture as substantial diversification has taken place in some countries away from basic cereals into higher value products and other staples such as cassava that have had recent major productivity-enhancing breakthroughs.

Because African agricultural systems are extremely heterogeneous there can be no single transformational path. The FAO identifies 14 major farming systems in SSA, ranging from near desert to forest-based systems, with significant variation within each major category (African Development Bank et al. 2007). In contrast to Asian countries, few African countries are heavily reliant on rice and wheat (two of the three key green revolution crops), while maize (the third green revolution staple) is dominant only in Southern Africa. Sub-Saharan Africa’s diverse agro-ecologies lead to a wide range of farming systems and reliance on a broad number of staples—cassava in central Africa and millet and sorghum in the Sahel—along with significant reliance on livestock in most farming systems. Accordingly, more varied processing and input technologies for staple crops are required than those that existed in Asia at a comparable stage of agricultural development.

African agriculture is predominantly smallholder, but those smallholders are equally heterogeneous with huge variations in their access to resources, such as land, market access; and the degree to which they are able to produce marketable surpluses. In many countries land availability per person has halved over the past 40 years. Not only is land availability per person falling, but its distribution, even among smallholders, is highly unequal and were large-scale farms included, the inequality of landholdings would rise even further.
The same heterogeneity applies to agro-industry: four categories of enterprises can be identified ranging from artisanal (micro), semi-artisanal (small), semi-industrial (medium) and industrial (large) (Ilboudo & Kambou 2009). The bulk of Africa’s agro-industrial enterprises (approximately 75 per cent in West Africa) fall into the artisanal and semi-artisanal categories.

Given the smallholder dominance in agriculture and smallholder farmers and SME dominance in agro-industry, it is inevitable that, at least for the foreseeable future, policy will focus on fostering smallholder and SME growth in both sectors, but larger scale farming units should not be ignored especially where scale economies are large (fertilizer production) and where export opportunities exist. Experience in Senegal shows that exports of high-value crops by large-scale firms, can have important poverty reduction impacts (de Janvry 2009).

**Productivity Drivers**

Low productivity of African agriculture can be attributed largely to the limited use of industrial inputs as well as significant post-harvest losses resulting from inadequate storage, packaging and transport facilities in the following areas.

**Fertilizers:** Threatened by declining soil fertility sustained increases in agricultural productivity will be feasible only with very large increases in the use of inorganic fertilizer. However, incentives for farmers to apply fertilizers have been constrained by high costs relative to output prices. Moreover, the inadequacy of technical information available to farmers in respect of the application of the most appropriate fertilizer for their soil conditions seriously inhibits the efficiency of fertilizer use. Therefore, one of the main challenges for building competitive agro-industries in SSA is to develop more efficient fertilizer value chains both in terms of production and imports. In Asia, for example, small farmers can now use mobile phones for advice on how to grow rice, including advice on fertilizer application. Since scale economies are important both in production and international trade in fertilizers, subregional and regional cooperation among African countries is urgently needed to achieve lower unit costs of imported and locally manufactured fertilizers.

**Agricultural machinery:** Certain agro-industrial processes (land levelling, conversion of nitrogen into urea, tomato paste processing, and primary processing of sugar cane) dictate that they be carried out using large-scale, capital-intensive
equipment to garner the least cost. Where manufacturing of agricultural machinery and agro-processing are subject to such scale economies, regional cooperation and specialization in the location of plants serving African markets is needed in order to fully exploit economies. Few national markets are large enough to support such industries at efficient minimum scales of production. Prospects are likely to be most promising in the few African economies where the engineering industry is well developed, such as in Egypt and South Africa, although competition with imported machinery and equipment is very strong.

With some exceptions, large-scale mechanized farming has not proved economically profitable in SSA. Nevertheless the image of the modern farmer has inspired many policies that have subsidized a shift to larger scale. However, for agricultural machinery and agro-processing equipment, there is often a wide range of simpler, more labour-intensive technologies available that are efficient at current prices for labour and capital in SSA. Appropriate agricultural machinery and equipment technologies can be acquired through south-south trade, where factor endowments exhibit many similarities to SSA conditions.

**Water and irrigation:** The availability, quality and cost of water will assume increasing importance in the location and profitability of farming and agro-industry in the twenty-first century. Agribusiness and agro-industries are typically heavy users of water. Climate change, increasing population pressure and rising energy costs are making water more expensive worldwide. Such changes in water costs are likely to influence the outsourcing location of large international businesses, giving water-abundant areas a potential advantage provided that other elements of the enabling business environment are in place.

**Crop protectants:** There is an urgent need for developing more uniform and consistent regulatory frameworks for the importation, distribution and use of crop protectants such as pesticides. The weak point in implementation has been the limited funding of national committees for pesticide management, charged with enforcement of the regulations in individual countries.

**Germ-plasm:** Access to improved germ-plasm revolves around four issues of public policy: (a) providing adequate funding for national and regional agricultural research systems and systems related to higher education; (b) creating frameworks conducive to greater public-private partnerships for research; (c) developing the
regulatory framework to govern the use of various forms of biotechnology in agriculture; and (d) regional cooperation.

**Seeds and soil improvement:** There is a need for high-yield seeds at affordable prices, especially for smallholders. New promising technologies for organic soil restoration and enhancement are available, which could increase productivity and reduce the need for fertilizer application.

**Packaging and labelling:** For many SMEs the use of inappropriate packaging materials seriously affects competitiveness, reduces the quality of shelf life of processed foods and can lead to product contamination. Action is required to improve technical knowledge among agro-processors about the most suitable packaging material for various products; to make available suitable packaging materials and to reduce the currently high cost of these materials, linked to high energy prices. The role of labelling is underlined in the recent literature on consumption determinants of halal food (Bonne et al. 2007); the amount of information and the modalities by which nutritional and quality information should be provided by labelling (McCullough & Best 1980; Singer & Mason 2006). These are marketing issues that African agro-processors need to consider if they are to penetrate new international markets.

**Post-harvest processes, logistics and storage:** In order to reduce post-harvest losses and increase the shelf life of processed agro-products there is an urgent need to improve logistics, as well as to establish storage facilities such as warehouses, silos and refrigerators both at the producer and consumer levels in various locations close to agricultural production sites and market outlets along the value chain. In rural areas some of these storage facilities can be organized on a cooperative basis serving local communities. Improved post-harvest processes such as treatment and preservation of food products are also a prerequisite for enhanced African participation in global value chains.

**The Impact of Climate Change**
Climate change poses a serious threat to agriculture in many parts of the continent, by reducing soil fertility through erosion. Nordhaus (1998) estimates that, compared to a baseline scenario without global warming, a 2.5 degree centigrade increase in temperatures would cause about a 4 per cent decline in GDP in sub-Saharan Africa. The Economics of Adaptation to Climate Change (EACC) study (World Bank 2010b)
estimates that SSA will spend $3.3 billion (2005 prices) just to counteract the effects of climate change on children’s nutrition levels. An IFPRI study (2009) outlines that twenty-five million more children will be malnourished in 2050 due to effects of climate change. According to Kurukulasuriya and Mendelsohn (2008) total agricultural production losses for Africa could vary between $39 and $84 billion per year.

Climate change may have negative impacts on agribusiness beyond agricultural production. On the one hand, agribusiness development may improve growth and raise the capability of African countries to adapt to climate change if the Human Development Index (HDI) increases over time (Tol et al. 2004). The most serious adverse impact of climate change on manufacturing is likely to be the loss of competitiveness arising from increased production costs associated with the retrofitting of plants for cleaner production. Reduced surface-water supplies would lead to increased reliance on groundwater sources, which, in most cases, have to be treated on site to achieve desired water-quality standards for specific industrial applications. Other major effects will result from a lack of—or more expensive—water for industrial processes as well as the increased costs of cooling for temperature-controlled processes and storage.

In addition to these direct effects, IPCC (2001) stresses that there will also be indirect effects from climate change, such as rising water costs and shortages which could lead to relocation of industrial plants. Hydroelectricity supplies may be adversely affected by declining dam and river levels leading to a reduction in electric power used by industry. Water demand in many states in southern and northern Africa has already exceeded, or is expected to soon exceed, water supply (Bates et al. 2008). Countering climate change in agriculture will necessitate additional finance, especially from donor agencies, as a follow up to the December 2009 Copenhagen Summit and subsequent summits, such as Cancún 2010.

Climate change is likely to lead to greater dependence on food imports in many African countries, while increasing pressure on agricultural research systems to develop varieties that are more heat and drought-stress tolerant. At the same time, however, it may also create new opportunities for African agriculture. If institutional arrangements can be developed to link African farmers to world carbon markets there is a potential for sequestration among small farmers to become a new ‘cash crop’, and better management of agricultural by-products and manures can lead to greater local
production of biogas to fuel farm and agro-processing operations (World Bank 2007a).

The key message from chapter 3 is that agro-industries in Africa will have to undergo structural transformation as profound as that required of farming in the next 20 years in order to generate the jobs, the incomes and the food products so badly needed by the continent’s growing population. Indeed, the transformations of farming and agro-industry are inextricably linked and growth of vibrant agro-industries is essential to offer employment for a large number of smallholder farmers who are unlikely to farm their way out of poverty. The adequate and timely supply of agricultural raw materials for the agro-processing industry is critical for achieving productivity growth and competitiveness in markets where agro-industrial value chains predominate, highlighting the need to upgrade agribusiness value chains.
Upgrading value chains (Pillar 2)

Successful agribusiness growth depends on improvements along the value chain from efficient post-harvest policies to technologies in processing, storage, packaging, transport, marketing and distribution (chapter 4). Participation in modern value chains can increase farmers’ income by between 10 and 100 per cent according to evidence from Guatemala, Indonesia and Kenya (World Bank 2007a).

The transformation of agricultural raw materials into industrial products depends increasingly on the capacity of African entrepreneurs to participate in global, regional and local value chains. As agricultural trade in bulk commodities has declined relative to trade in processed foods and horticulture, value chain participation has become essential for countries seeking to widen their export portfolios and export markets while simultaneously exploiting diverse market opportunities at home. Across the continent, new opportunities to add value by processing agro-food and agro-industrial products have emerged, though as producers climb the ladder of value addition they face increasingly intense competition and mounting pressure to upgrade their products.

Important lessons have already been gained on the development of a variety of agribusiness value chains in Africa. Ten case studies are presented on African agribusiness value chain interventions highlighting upgrading and regrading trajectories, limitations, threats, risk and vulnerability as well as policy support in the following product areas: fresh fish (Uganda, United Republic of Tanzania), organic coffee and cocoa (Uganda), fresh fruit and vegetable (Kenya), fresh pineapple (Ghana), dairy (Kenya, Uganda), cassava (Zambia), furniture (South Africa, Kenya), biofuels (United Republic of Tanzania), wine (South Africa) and cotton-to-garments (Zimbabwe, United Republic of Tanzania). The case studies mainly refer to complete value chains within Africa, especially for food products due to perishable agricultural inputs requiring immediate processing. However, as highlighted by UNIDO (2009b), it is also possible—albeit more difficult—for Africa to pursue a strategy of specializing in particular tasks within international value chains, especially for non-food products, and “break in and move up” as capabilities and logistics develop.

In line with global experience, the majority of agro-food chains in Africa have become increasingly ‘buyer-driven’ over the last two decades. As retail, branded manufacturing and international trading sectors become ever more concentrated in
fewer hands, lead firms are increasingly able to govern value chains—by deciding who does what, when and how, and by setting price, volume, operational and product quality requirements. The dismantling of export monopolies in producing countries and of international commodity agreements has accelerated this process.

Different kinds of lead firms govern these value chains—retailers in wine, garments or fresh fruit and vegetables, and branded processors or manufacturers in coffee and cocoa. In other value chains, such as cotton and fish, there is no clear group of firms that govern. In buyer-driven chains, immediately upstream of lead firms (closer to the point of production), there are usually other powerful actors who do most of the day-to-day work of chain governance for lead firms, and who maintain relatively tight relationships with actors further upstream in the value chain (Gibbon & Ponte 2005). Unfortunately, there are no African lead firms in global agro-food value chains and only a few powerful suppliers while some second-tier African suppliers are active only in value chains that are not buyer-driven, such as fish.

Consequently in many global value chains, governance is largely outside the control of Africa-based operators. Upgrading opportunities are also shaped by downstream actors (closer to the point of consumption). This means that African producers, traders and processors who supply global value chains do so on terms and conditions dictated primarily by retailers and branded manufacturers/processors in developed countries. At the same time, the global financial and economic crisis of 2008 to present (2011) illustrated starkly the extent to which reliance on global markets brings with it greater risks and vulnerability. A beneficial consequence of the crisis was the realization that there are alternative opportunities in local and regional value chains, where entry barriers are lower, powerful firms (if any) less demanding, and standards easier to comply with. Indeed, learning and upgrading do not arise from participation in global value chains alone: local and regional value chains can offer opportunities especially where capabilities and technological know-how are limited. At the same time, they do not necessarily provide a launching pad towards supplying global value chains due to technology traps and the stringent standards in place.

Successful upgrading in value chains depends not only on a business-friendly operating environment for private sector players but also on specific opportunities that may be linked to a particular product or product form, to the emergence of particular technologies, to changes in international trade rules, or to the emergence of niche markets. Such windows of opportunity are often time-bound: first-mover advantage is
important, and abrupt changes in price and/or quality demands mean that rewards may be limited in time.

Value chain upgrading is about acquiring capabilities and accessing new market segments through participating in particular chains. There is no ideal path—success will depend on the value chain, the strategic objective of the industry (and/or government), and the specific structure and contingent situation in a given industry. Furthermore, where the profitability of a particular function is decreasing or carrying out such a function becomes too risky, African actors could be better off moving back to simpler products, processes or functions (also known as downgrading). Thus, a priori, the outcome of value chain participation and the kind of upgrading undertaken are not better or worse in global, regional or local value chains.

Accordingly, the importance of value chain upgrading must not obscure the growing significance of value chain restructuring and regrading. Implicit in the shifting wealth scenario is a change in the drivers of global demand from northern to southern economies with four main implications for global value chains (Kaplinsky et al. 2010):

- The combination of low per capita incomes and rapid urbanization in fast-growth emerging markets (especially, but not exclusively, in Asia) has increased demand for both hard and soft commodities, for food as well as inputs for infrastructure projects.

- Because per capita incomes are lower in emerging than in OECD markets, demand is shifting towards cheaper, undifferentiated ‘commoditized’ products in contrast to final demand in richer economies for ‘high quality, positional products’ (Kaplinsky et al. 2010, p.21).

- Consumer demand standards are likely to be lower for value chains serving emerging markets, in respect of both products and processes.

- While northern and southern economies often have complementary economic structures, growing south-south trade is often between countries with similar patterns of production and consumption, leading to intensified competition in the division of labour.

Kaplinsky et al. (2010) cite evidence from two southern value chains—cassava in Thailand and timber in Gabon—for which the market has shifted from the EU to
China resulting in reduced value added within the chain as well as reduced importance in both process and product standards. Cassava and timber are relatively undifferentiated products with low levels of value chain coordination and governance, but the researchers believe that the ‘shifting wealth’ syndrome is likely to have a similar, possibly more pronounced, impact for less commoditized and more sophisticated value chains.

The lesson is an obvious one: when demand shifts the impact is felt along the value chain and if the shifting wealth projections of the OECD (2010) do materialize, then agribusiness value chains will have to adapt to changed market conditions. Accordingly, the current focus on value chain upgrading may shift to regrading or even downgrading.

Kaplinsky et al. (2010) note three positive aspects of this potential shift: first, the fact that processes and products for low-income demand are often labour-intensive and secondly, the skill, technology and managerial expertise levels of low-income value chains is likely to be a better ‘fit’ to the resource endowments of emerging economies, especially for SMEs. Thirdly, low-income countries are less standards-intensive, as a result of which market access is often easier and cheaper. For timber exports to the EU, however, Gabonese producers face much more rigorous standards than in the Chinese market. Overall, private standards stipulated by buyers and mandatory standards set by official bodies are much stricter in the EU (Terheggen, 2010). Certification costs can also be burdensome. In the Gabonese timber industry, one large producer put the cost of certification at €4 million, with an annual cost of maintaining accreditation of around €100,000, while another estimated environmental compliance costs at €2.10 per hectare for an estimated minimum economic forest-holding of 50,000 hectares (Kaplinsky 2010).

In the light of these considerations it may well be that African exporters will prioritize lower-income markets where accessibility is simpler and cheaper. In strategic management terms this would be tantamount to pursuing a ‘cost-leadership’ strategy, rather than an upgrading or ‘differentiation’ strategy targeting more sophisticated higher-income markets. Arguably, at least for the medium term, a cost-leadership approach will be better suited to Africa’s pattern of resource endowment.
Smallholders benefitting from contract farming

OECD (2008) points out that African agriculture remains dominated by smallholder farmers working on fields of less than three hectares, and it is difficult for foreign companies to engage with such farmers. Companies can use outgrower schemes (contract farming) as binding arrangements through which a firm ensures its supply of agricultural products from individual farmers or farmer groups. Coordinated commercial relations between producers, processors, and traders have replaced ad hoc trade agreements, leading to vertical integration of the agricultural value chain. The schemes embrace a variety of arrangements, which differ according to the partners’ input and management obligations. The success of outgrower schemes will depend on the duration of contracts and on the level of trust between operators.

Value Chain Participant Councils (VCPCs) as a way forward

This report suggests the establishment of Value Chain Participant Councils in various countries to provide an important institutional mechanism for developing value chains through public-private sector cooperation. These are voluntary organizations organized along value chain lines and involving a broad spectrum of actors. VCPCs operate in tandem with a specific industry, value chain and/or technical working group to carry out analytical and support work. These working groups undertake assessments and reassessments of individual value chain dynamics, threats and opportunities and provide ad hoc support as may be required.

VCPCs offer an alternative way of enhancing agribusiness system performance rather than relying on either (a) top-down state-dominated organization of an industry or value chain or (b) purely private coordination through single-firm ownership of an entire vertical chain. Participants include representatives from firms, farmer and trader organizations, processors, exporters, marketing agents, government agencies, input suppliers and research and outreach organizations. Such councils are typically created in response to perceived threats or opportunities that individual actors in the value chain cannot address adequately on their own.
Exploiting local, regional and international demand (Pillar 3)

Although emerging market exports have expanded very rapidly in recent decades, growth has been fastest in manufacturing and much slower in agriculture, where significant protection remains (chapter 5). Aksoy (2004), using data for the 1980 to 2001 period, concludes that although there have been far-reaching changes in global trading patterns in the past 25 years, there has been “relatively little structural change” in global agricultural trade flows (Aksoy & Ng 2010).

Progress towards the liberalization of agricultural trade has been slow and fitful with some reverses in recent years, notably in emerging markets. The Uruguay Round of 1995 failed to secure any meaningful reductions in agricultural protection in developed countries, though there has been movement in the early 2000s, arising mostly from the strong increase in food and other agricultural commodity prices in recent years. Indeed, between 2000 and 2007, agricultural commodity prices doubled while those of manufactured products rose only 22 per cent (World Bank Commodity Price Database). This followed declines of agricultural commodity prices of 23 per cent in the 1980s and 15 per cent in the 1990s.

Higher prices were partially offset by reduced volume growth. Export volume growth slowed to 1.5 per cent (2000 to 2007) from 5.7 per cent in 1990s while volumes of manufactured goods exports expanded at an unchanged annual rate of around 8.5 per cent during both periods. At the same time, there has been a marked change in the direction of trade with emerging markets increasing their share of agricultural exports from 31 per cent in 1990 to 41.5 per cent in 2006/7. Most of this increase reflected south-south trade growth—from 7.3 per cent of the total in 1990 to 19.8 per cent in 2007, but the emerging market share of exports to developed countries declined over the period to 21.7 per cent from 24.5 per cent.

These figures highlight the failure of developing counties to increase their market penetration in developed country economies for agricultural products. In 1990 some 67 per cent of agricultural imports of developed countries were supplied by other industrial nations. By 2007 this had declined only fractionally to 66 per cent. In stark contrast, for manufactured goods there was marked structural change with the
share of imports supplied by emerging markets increasing from 21 per cent to 37 per cent.

For decades, OECD countries have supported their agricultural sectors against competitors through tariffs, trade barriers and subsidies to domestic producers and exporters. Relatively little progress has been made in reforming the agricultural policies of these countries, which continue to impose substantial costs on African agriculture through their effects on world prices and the barriers (tariff and non-tariff) they pose to effective participation of African farmers in global agricultural trade. OECD estimates indicate that OECD countries as a whole spent $265 billion to support their agricultural producers in 2008 (OECD, 2009). This amount is more than twice the total net official development assistance (ODA) from members of the OECD Development Assistance Committee (DAC) which stood at $119.8 billion in 2008, and almost seven times the net ODA to Africa in 2007 which amounted to $38.7 billion (AfDB & OECD, 2009).

**Tariffs and tariff escalation**

Although agricultural tariffs have fallen, they remain relatively high. Tariff escalation on agricultural products in a number of OECD countries shows that in the EU in 2006, semi-processed and fully processed agricultural products attracted, respectively, twice and three times the level of tariff imposed on primary products. This barrier hinders product diversification and higher value added export growth in African countries. Van Berkum (2009) shows that, although the number of commodities attracting escalating tariffs is declining in the EU, tariff escalation is still prevalent in many commodity chains of importance to Africa such as cocoa, tomatoes, palm oil, soya, leather and cotton. This issue calls for policy attention and negotiation for tariffs more conducive to diversification and value addition in African economies.

**Preferential trade agreements with developed countries**

On the positive side, a significant number of African countries benefit from preferential market access schemes, such as the Generalized System of Preferences (GSP), the Generalized System of Preferences for Least Developed Countries (GSP-LDC)—also known as the Everything but Arms (EBA) Agreement in the EU, the US Africa Growth and Opportunity Act (AGOA) and the EU’s Cotonou Agreement for
African, Caribbean and Pacific (ACP) countries, which is being replaced by the Economic Partnership Agreements (EPAs). As a result of these schemes, African exporters face below-average tariff rates in the EU and US markets for certain products, while LDCs enjoy free market access to the EU.

But these schemes have not generated remarkable export growth. Brenton et al. (2008) suggest three reasons for this. Firstly, preference margins for many products currently exported by African countries are typically small and will continue to be eroded by multilateral trade liberalization. Secondly, preferences have not addressed key supply-side constraints that limit access of African countries to all markets. Thirdly, for products with substantial preference margins such as clothing, market access had been severely reduced by restrictive rules of origin imposed by the EU, although these rules have now been relaxed under the interim EPAs that have been signed by a few regions. There is some evidence, in support of this relaxation, which suggests that preferences can act as a catalyst for manufacturing exports if they are designed to allow import of complementary inputs and to operate in countries with sufficient skills and infrastructure (Collier and Venables 2007).

**Seizing opportunities in domestic and regional markets in Africa**

While international demand for food is dominated by factors affecting consumer preferences in rich countries, food demand within Africa is driven by levels of poverty and income per capita. A rise in per capita income may be immediately reflected in increased demand for agro-industrial products though in Africa the future macroeconomic stability will be crucial.

Domestic and regional markets in Africa show signs of being able to nurture the growth of African agro-industry, agribusiness and trade. These markets offer the most promising opportunities for Africa’s producers, agribusinesses and value chains in the short to medium term (chapter 5; World Bank & FAO 2009). In Africa, demand for food is expected to reach $100 billion by 2015, doubling its level of 2000 (Dial et al. 2003). Although demand for staples will constitute a significant share of this increase, rising incomes, urbanization and changing consumer preferences are driving the demand for higher-value products, as well as semi-processed and processed commodities and convenience foods. These trends have propelled the entry and rapid
growth of supermarket chains and agro-industrial processing and food service industries in domestic and regional markets.

There is some evidence that higher-value markets catering for domestic consumption are the fastest growing markets in many African countries. Neven & Reardon (2004) reported that supermarkets in Kenya, beginning in the mid-1990s, grew at 18 per cent annually and had a one-fifth share of the overall food market in cities. In South Africa, the share of supermarkets in national food retail was 55 per cent in the early 2000s (Weatherspoon & Reardon 2003). This growth has been partly due to the significant foreign direct investment by multinational corporations (MNCs) either directly or through non-equity linkages such as franchises and licensing. But foreign MNCs are not the only players in the agro-food chains. African agribusiness companies have emerged to play an active role in shaping the markets and value chains, particularly in Southern, West and North Africa. The larger African companies have started to operate beyond their national borders in order to seek opportunities abroad within the continent (OECD, 2008). The emergence of indigenous African firms that are beginning to expand their operations beyond national borders suggests that, with continuing improvements in the business environment and removal of obstacles that impede regional trade and integration, regional value chains will develop to expand agro-industrial products trade.

In spite of many opportunities for African agro-industry, exports to the continent also face growing challenges in domestic markets. Market opportunities do not necessarily translate into domestic activity. Due to globalization and multilateral trade liberalization domestic agro-industries are being confronted with increasing competition in their local markets from large MNCs benefiting from scale economies, established brand names and efficient distribution systems. Such competition is likely to increase as developed country and emerging economy exporters are seeking new market opportunities in developing countries, including in Africa. This underlines the importance for domestic agribusiness firms to enhance capabilities and improve productivity in order to successfully compete in their own domestic markets.

Analysis of regional demand suggests that African industries have the potential to boost intra-African trade. However, realizing this potential is constrained, not only by similarities in import and export structures, but also by the increasing
international competition in local markets. Analysis of revealed comparative advantage (RCA) data suggests that African industries lack comparative advantage in relation to international suppliers in African markets (UNECA et al. 2010). This is a real competitive threat to accelerating Africa’s industrialization and requires policies to overcome supply-side constraints, improve competitiveness and accelerate industrial diversification.

**Seizing opportunities in developed and emerging export markets**

Africa enjoys trade preferences in OECD countries but lacks trade capacity to fully exploit these opportunities. Exports to OECD countries could target consumer preferences for higher value differentiated products aimed at niche markets, such as organic food and beverage products, fair trade, ‘origin-based’ products, and ‘functional’ or nutritionally-enhanced food products.

The emergence of the ‘Southern drivers’ of the global economy—in particular, China in industry, India in services and Brazil in agriculture—and their growing trade and investment links with Africa present further opportunities for expansion and diversification of agro-industrial products trade in the context of south-south trade and cooperation. However, unprocessed commodities destined for processing and horticulture (largely composed of unprocessed commodities exported for final use) constitute the vast bulk of China and India’s agro-industrial imports from Africa. In 1990, the share of unprocessed commodities in China’s agro-industrial imports from Africa was almost 95 per cent, declining somewhat to 86 per cent in 2008, reflecting an increase in the share of semi-processed commodities. Both China and India apply agricultural imports tariffs that are higher than what Africa currently faces in the EU and US. However, India has started to offer duty-free and quota free treatment to Least Developed Countries (LDCs) exports covering products such as cotton, cocoa, cane sugar and ready-made garments (WTO 2010).

Two strategic issues loom large in future agro-industrial trade relationships with China, India and other emerging economies: the first concerns the low share of processed and semi-processed products in Africa’s exports to these countries, while the second relates to the relatively high most-favoured nation (MFN) tariffs currently imposed on agricultural imports from Africa. Both issues warrant policy attention and
negotiation for increasing African participation in higher stages of the Chinese and Indian agribusiness value chains and the prospects for preferential market access for such products in these countries, *inter alia* through leveraging FDI inflows into Africa’s natural resources, in particular oil.
Strengthening technological effort and innovation capabilities (Pillar 4)

Technological change takes two distinct forms—learning-by-doing and R&D expenditure in innovation—and is crucial for the development of agribusiness in Africa (chapter 6). Learning-by-doing is technological change derived from experience: an increase in inputs used generates a higher input productivity as individuals become more efficient over time (Lall, 1987). Learning-by-doing is said to be a ‘free cost’ in the sense that productivity is increased without specific investment in R&D. In fact, ‘free cost’ is a misnomer because learning-by-doing effects are not automatic. They must be sought by management, which often involves training and skills development as well as improved production techniques, such as the layout of the factory floor or the batching of production.

A policy aimed at boosting technological change through R&D implies an intergenerational trade-off: expenditures today generate a higher level of productivity tomorrow. Unfortunately, although R&D expenditure has been increasing over time across all African regions, Africa’s share of global R&D spending has fallen.

Adding value to commodities through technological advance

A solid agribusiness value chain will need to be based on a production process that guarantees the highest quality in a challenging global market. Until relatively recently agribusiness products were seen as low-tech and low-R&D activities because of the limited degree of processing and value addition. However, today many are knowledge-intensive with greater value addition than some processed industrial goods. Meat and vegetables are examples where production and processing is linked to innovations in post-harvest systems and animal traceability, as well as logistics and marketing.

Building comparative advantage through innovation to increase value added

There are many cases of successful countries broadening their comparative advantage in primary commodities by investing in innovation to increase value added. Gouse et al. (2008) emphasizes the success story of the introduction of insect-resistant (IR)
cotton and yellow IR maize in South Africa. They stress that for IR cotton, several studies have found positive economic impacts for smallholder farmers in the Makhathini Flats of KwaZulu Natal province, where a local cooperative provided seed on credit along with technical advice.

The success of GM technologies in reducing poverty will vary across developing countries. Gouse *et al.* suggest that institutional factors such as national agricultural research capacity, environmental and food safety regulations, intellectual property rights and agricultural input markets matter at least as much as the technology itself in determining the level and distribution of economic benefits of GM food. However science still needs to provide unambiguous and reliable findings on the effects of GM on health.

**New learning and innovation platforms involving regional cooperation**

Important new learning and innovation platforms are emerging in Africa. Strengthening Capacity for Agricultural Research and Development in Africa (SCARDA) is an effort to reach out beyond the national borders and subregional political entities. Producers and disseminators of R&D results (research and training institutions) and users of R&D results (producers and processors) are linked to one another in a novel manner. SCARDA encompasses the most relevant actors and institutions for accelerating agriculture and agro-industrial development in Africa on the back of a common learning and innovation platform (von Kaufmann *et al.* 2009). The SCARDA approach and similar initiatives could contribute to the productivity revolution needed for the green revolution in Africa. Accelerating human resource development, STI infrastructure development, cross-border flows of skilled labour and STI professionals, and exchanging experiences in institutional capacity building are centre pieces of regional integration.

**Building industrial capabilities for catching up**

UNIDO has developed a comprehensive strategy for building industrial capabilities for catching up by improving business access to knowledge systems, strengthening links between businesses and knowledge institutions, and building entrepreneurial
capabilities in such fields as standards and regulations, and food safety (UNIDO 2005). All these issues should become part of aid to STI, especially in the form of support for closer linkages among enterprises and between businesses and knowledge systems, universities in particular.

**Increasing funding and donor support for STI**

Additional funding is essential as STI-related aid is very small, covering only 0.4 per cent of total disbursements for research in LDCs, and 3.2 per cent of all disbursements for advanced and specific human skills. The current level of aid for STI in agriculture and agro-industry is clearly inadequate for meeting the required systematic support for learning and innovation, and urgent steps are needed to increase this support.

Agribusiness development policies in Africa will depend on substantially increased support for stimulating innovation at the enterprise level and Aid for Trade programmes. Unfortunately, recent trends in aid for agriculture, forestry and fishing and agricultural R&D have been unfavourable (see chapter 7; OECD 2008). The contrast between the large share of aid for agricultural administration and policy formation (20.9 per cent) and that for agricultural education, training, extension, post-harvest protection, and agricultural R&D (5.7 per cent) is striking but also unsustainable (OECD 2008).

Aid designed to develop STI infrastructure for agribusiness development and for linking agribusiness to modern knowledge systems is therefore limited, volatile, and biased in structure. Aid is little related to strengthening the links between enterprises (farms and firms) and R&D institutions, universities, and technical and business support systems that are so crucial to agro-industrial growth. All areas relevant to innovation in enterprises, including vocational training, advanced technical and managerial training, agricultural education, and strengthening key technical support systems are poorly financed. A more strategic orientation of aid policies and donor support for STI is urgently needed (UNCTAD 2006).

**New forms of cooperation between farmers, processors and researchers**

Coffee sector development projects in Rwanda could be a model for future action by donors. The Partnership for the Enhancement of Agribusiness in Rwanda (PEARL)
project, supported by the United States Agency for International Development (USAID), has stimulated new forms of cooperation between farmers, sellers and researchers (from the National University of Rwanda). The gains—in terms of higher coffee prices—derived from STI inputs into the Rwandan coffee sector have been considerable: the price for a kilo of unprocessed dried coffee increased from $0.22 to $2.00 in the project period 2001 to 2006; however this is obviously related to both market developments and project actions. A follow-up programme, Sustaining Partnership to Enhance Rural Enterprise and Agribusiness Development (SPREAD), started in 2007 and is supporting the second-level effects, such as coffee roasting and spinoff enterprises that will increase value addition in the industry (UNCTAD 2006).

Agribusiness development can be greatly facilitated by focusing on five pillars of National Innovation Systems (NIS) and Regional Innovation Systems (RIS): (a) the enterprise sector comprising farms and firms as the central pillar; (b) R&D, education, training, and other skills development institutions; (c) financial institutions; (d) intellectual property protection agencies and technology and business support systems; and (e) public regulatory agencies. Public action is needed to strengthen the linkages between the pillars, especially with the enterprise sector. NIS and RIS institutions would need to be upgraded and linked to each other, as well as to STI policies that have to be more closely linked with national economic policies. Subregional and sectoral innovation systems are also emerging in Africa and can support the move towards new agro-industrial technologies and approaches.
Promoting effective and innovative financing
(Pillar 5)

Promoting financing and investment in agribusiness requires attention to two critical areas: (a) facilitating pooled funding for agribusiness that uses the public sector to leverage resources from the private sector, and (b) creating the enabling conditions for local resource accumulation and investment.

Concerning the first issue, chapter 7 stresses that the key to unleashing resources from the private sector is to increase profitability, reduce risk and mobilize both traditional and innovative sources of finance. In this regard, it is important to emphasize that long-term investment can be promoted most efficiently in locations that have favourable investment climates and enabling infrastructure, combined with solid agricultural supply, and innovation capabilities leading to competitive value chain operations. Efforts will need to focus on large-scale resource mobilisation, as well as improvements in financial infrastructure, innovative models, and building capacities in the system. Some of the more traditional measures for improving the situation for financing of agribusiness development comprise domestic resource mobilization; funding from development finance institutions (DFI); and targeting foreign direct investment (FDI). Some of the more innovative financing tools and models include the creation of dedicated sovereign wealth funds (SWF); leveraging diasporas for investment; expanding collateralization and encouraging leasing; developing appropriate banking models and regulations including risk mitigation through insurance and reinsurance schemes; external finance through large lead firms in value chains; and provision of equity, venture and hybrid finance.

The second issue of creating the right enabling environment is equally pressing, to ensure local communities, local governments, NGOs and the private sector mobilize their own resources to invest in agribusiness. Identifying the right types of investments and public actions, which ‘crowd-in’ rather than ‘crowd-out’ private investment, is a key to developing productive agribusiness capacities. Ultimately the onus of increasing investment and facilitating the financing of agribusiness in Africa lies with African policymakers, by making the sector more attractive and sustainably profitable.
Stimulating private participation (Pillar 6)

There are solid grounds for optimism that enterprise development and investment in agribusiness will foster inclusive, pro-poor growth, provided African entrepreneurs can exploit new market opportunities from rising incomes, at home and abroad, including emerging economies, and the shift in the policy focus towards agribusiness development fuelled by enhanced productivity and competitiveness (chapter 8).

However, longstanding challenges—low levels of human resource development, poor rural infrastructure, weak market linkages and vulnerability to external shocks—along with more recent ones brought about by globalization, such as unfavourable and inequitable trade regimes, must be resolved. A conducive business climate would go a long way towards creating appropriate conditions for the private sector to play the driving role in the exploitation of Africa’s untapped potential in agribusiness. At the same time, policymakers should continue to play an active role by providing the vision, the strategy, the long-term commitment and the enabling environment needed to foster private sector investment.

Creating competitiveness through private enterprise development

Private agribusiness development can be promoted through ‘created’ competitiveness within the framework of inherited comparative advantage and a business-friendly environment, while building on policy reforms that aim at creating the conditions for enterprises to achieve international competitiveness. Private sector development can be promoted through three channels:

- **Investment**: In view of Africa’s savings deficiency, policy measures could assign priority to fiscal incentives and macroeconomic stability to facilitate both private sector investment in enterprise growth and public sector investment in public goods such as infrastructure and human capital.

- **Enterprise development**: Since the major part of economic activity in the private sector in Africa is still informal, enterprise development is critical for generating efficiency and improving productivity in the private sector. Enterprise development requires a focus on removal of constraints that inhibit the transition from informal to formal sector as well as policy and institutional measures for attracting private investment through:
Creating an enabling environment by fostering macroeconomic stability, efficient financial systems and institutions, political and social stability, good governance, improved conditions for land tenure and the capacity to adapt foreign technologies to local conditions.

Business climate improvements especially in areas where inappropriate regulations exist, bureaucratic delays in establishing businesses and registering property occur, excessive taxation applies and unfair competition and unstable policy environment frustrate and stifle entrepreneurial initiatives. Industrial policy is needed to fill the gap caused by market failure in the business environment as part of a process of industrial policy as a “process of economic self-discovery”, involving public-private sector cooperation with a view to providing information on business opportunities and related policy initiatives to respond to those opportunities (Rodrik, 2004a)

The provision of business advisory and support services for developing value chains, supporting a revival in cooperatives, and facilitating development of export processing and free trade zones (EPZs), as well as investment parks.

Entrepreneurship promotion and expansion with emphasis on removing legal, financial and structural obstacles that adversely influence entrepreneurial capacity and providing public goods that are critical for reviving the entrepreneurial spirit rather than providing formal training in entrepreneurship development. Emphasis should be on easing prohibitive business regulations and removing excessive constraints on small business development.

The strengthening of the agribusiness environment may stimulate new and emerging markets with high value added products. Canavari & Cantore (2010) test whether countries that grant equivalence in organic standards and provide privileged import procedures of organic products to partners are more likely to also develop relatively more intense trade in conventional products. Empirical evidence shows that if African countries want to capture business opportunities from agro-food products showing green attributes and stimulate growth in new and emerging markets, they need to build solid commercial relationships in the primary commodities markets.
Improving infrastructure and energy access
(Pillar 7)

Infrastructure for agribusiness development
The existence of a reliable and appropriate infrastructure system is essential for any meaningful agro-industrial development (chapter 9). The presence of good quality and appropriate transport infrastructure lowers transaction costs and promotes openness and integration of economies while facilitating labour mobility. Dercon et al. (2009) estimate that public investment in infrastructure in Ethiopia should reduce headcount poverty by 9.8 percentage points and increase consumption growth by 7.1 percentage points. Access to all-weather roads reduces poverty by 6.9 percentage points and increases consumption growth by 16.3 percentage points.

Poor infrastructure is a major obstacle to development and, for agriculture, Bachewe (2008) demonstrates that in Ethiopia, agricultural infrastructure together with research and development (R&D) activities and the empowerment of rural communities increase agro-industrial efficiency. A study of ASARECA and IITA (Collinson et al. 2005) in Uganda shows that prices received by farmers for the sale of their goods were significantly lower than what they could have achieved if they had the means of transporting their farm produce to markets. Efficient market information systems enhance the income-generating opportunities available to both farmers and traders due to quicker and better means of communication with market centres.

Strategic investments in transport infrastructure and transit corridors
Internal handling and transportation of goods takes over 1.5 months on average in Africa, versus 29 days in Latin America and only 13 days in developed countries. Investment in logistics infrastructure for air-freighted perishable exports has been a key driver of Kenya’s export diversification success. In some countries, African suppliers, who in the past built up significant market share, are losing this advantage to suppliers with access to better infrastructure and/or to competitors who have been more successful in innovating and increasing productivity to overcome infrastructure or geographical disadvantages.
Investment in transport infrastructure—covering road, rail, air and sea transport as well as related cold storage and cooling capacity—needs to be strategic and avoid sporadic implementation that may be driven by external interests. Africa’s uniqueness should offer guidance on the appropriate methods of deploying infrastructural services. These infrastructural investments should be built upon each other through systematic integration of operational systems, countries and legal frameworks. The further development of air traffic, rail network, container sea traffic and the crucial transit corridors to LLCs as well as the trans-African highways will undoubtedly strengthen the scope for agribusiness growth, diversification and competitiveness in Africa.

**ICTs and managerial efficiency and value chain participation**

In the area of information and communications technology (ICT) Africa has made commendable progress especially in the use of mobile phone services. Even though ICT provides channels for information sharing and communication which open up new frontiers for technology, trade and collaboration, its application and use in agro-processing remains limited, and access prices in Africa for the Internet remain the highest in the world. This is critical because the use of ICTs is a precondition for participation in international value chains. The potential for growth needs to be fully utilized to ensure expansion especially in rural and remote locations on the continent. This will not only improve efficiency and raise productivity but will ensure that producers are closely connected to key actors and process in the value chain, while timely access to market information will increase their bargaining power, raise profit and increase production volumes to allow processing plants to operate at full capacity.

**Access to water**

Access to water and related infrastructure is critical for realizing the full potential of agricultural production and for ensuring the emergence of vibrant agro-industries. Water supply improves the predictability of quantity of agricultural produce through more assured harvests, and provides incentives for investors with long-term interests. With increasing climatic variability, the need to wean off rain-fed agriculture is even more pressing, especially given the diversity of crops that rely on rain-fed agriculture and the huge potential for such crops to feed emerging agro-industries and reduce...
seasonal fluctuations in food supply, through processing, value addition and preservation.

**Access to energy**

The need for clean, affordable and reliable energy from a variety of sources, based on solar, hydro, wind and biomass sources, appropriately matched to provide relevant energy services within the agribusiness sector is fundamental. Delivering pertinent energy services, as opposed to simply improving energy access, should be the guiding goal of any development intervention. This distinction is critical and plays an important role when matching the utilities of energy with developmental needs in any sector, including agribusiness. With a large proportion of the continent’s population living in conditions of acute energy poverty, especially in rural areas, increased energy access is a priority for Africa. However, following the high-carbon emission growth path pursued by OECD economies is not the recommended solution, due to the pollution constraints imposed by climate change. In addition to energy generation, the high cost of transportation services due to scarcity of refined liquid fuels, and ‘information poverty’ linked to the need to communicate with all actors is a constraint to participation in local, regional and global value chains, including trade. Energy scarcity, poverty and insecurity limit the range of production possibilities and reduce competitiveness⁴.

**Green certification schemes**

The effects of global warming mean that the structural composition of inputs and the mix of energy sources in African economies will have to change. Although Africa will not be among the major sources of CO₂ emissions, land use emissions may represent almost 30 per cent of total African emissions in 2055 (Nordhaus 1998).

The Kyoto Protocol specifically mentions land use as a crucial tool for the reduction of emissions. Whereas the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD) and the prevention of deforestation have been long established as policy tools to mitigate pollution, the adoption of appropriate land management practices is a less debated method. Appropriate green certification schemes (‘offsets’)

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that can be purchased by rich countries could represent innovative policy tools to improve the environment while simultaneously boosting farm profits and possibly providing a strong impulse for the entire agribusiness value chain.

**Biofuels**

Biofuels represent another possible energy source for agro-industrial growth. Most African countries have the potential to develop alternative energy sources with both economic and environmental benefits. Several African governments are already moving to attract investment in biofuels and to encourage inclusion of local producers in production and processing. For example, Mali Biocarburant SA (a Dutch-owned company) is investing in locally appropriate research and development, testing new ways to improve the profitability and durability of multi-function platforms and there is already a Malian National Agency of Biofuels Development. In Mozambique both large and small-scale biofuel development projects are underway. The largest, Procana, a private company with British interests, is investing $510 million to develop 30,000 ha, of which 60 per cent will be under sugarcane feedstock and the remainder will be used for a bioethanol plant and other infrastructure.

Many investors in biofuels are already planning and implementing value chain innovations that include local people. But they focus primarily on the inclusion of small-scale farmers—and pay much less attention to enterprises in the downstream value chain. There is scope to innovate in areas such as inclusion of small-scale contractors (such as, for services and transport) and biofuel supply at affordable prices to low-income consumers locally and nationally. Bioenergy production could attract investment and provide rural employment and income generation, thereby helping to curb rural-urban migration. However, biofuel development is controversial, both environmentally and politically, partly because globally the conversion of food to energy crops (wheat, maize, soya, palm oil and sugar cane), has been one of the drivers of food inflation and food security deterioration (UNIDO et al. 2008). Just how large a role biofuel production plays in food price inflation is a disputed area (Leturque & Wiggins 2009), and African policymakers would be well-advised to undertake careful analysis of the implications of bioenergy development before setting out.
Accelerating regional integration and investment in infrastructure and energy

There are opportunities for attracting and leveraging investment in infrastructure and energy, for instance emerging forms of project financing including carbon finance (suitable for the energy sector), climate change adaptation funds, microfinance facilities, public-private partnerships and bilateral investments (see also chapter 7). A recent example is China’s growing participation in African infrastructure, especially projects related to natural resources. Governments ought to go beyond pursuing traditional forms of project financing and aggressively explore innovative schemes. The bottom line for improving the state of infrastructure in Africa is enhanced service delivery capacity, improving operation and maintenance, while upgrading existing infrastructure. This quest comes with a triple beneficial effect: improved infrastructure base, increased foreign and local investment, and employment creation.
Agenda for Action

Agribusiness to emerge as a dynamic source of wealth creation

African governments, donors, international agencies and academics have for the last decades prescribed policy solutions for transforming Africa’s stagnant agricultural sector into a modern vibrant industry. Unfortunately, the sad reality is that very little progress has been made towards agricultural development in Africa. Eicher (1999) pointed to experts “falsely assuming that Africa had the requisite infrastructure, irrigated land, trained scientists, technology and national and local institutions to replicate the Asian model” (p. 31). With a focus on science and technology, training and education, infrastructure and financing, this report highlights the reality that these factors remain binding constraints on the development of agribusiness as they did 20 or 30 years ago (chapter 10). Three lessons flow from this:

Macro versus micro foundations of economic growth

Macroeconomic management has improved dramatically in Africa during the last fifteen years. However, improved macroeconomic performance has, thus far, failed to narrow the gap with firm-level performance. Lewis (2004) underlined that an evaluation of economic performance requires analysis at the level of individual industries, as well as analysis of macroeconomic performance, and that it is necessary to look at the sector level for causal factors for economic performance. Porter et al. (2006) argue that wealth creation occurs at the enterprise level and that “only firms can create wealth, not governments and other societal institutions” (p.53). The microeconomic foundations for improving productivity rest on the capabilities with which companies compete, and the quality of the microeconomic business environment in which they operate. It is argued that a strong macroeconomic platform is a necessary though not sufficient condition for agribusiness development. Moreover there can be no ‘one-size-fits-all’ strategy; strategies that ignore the need for country-specific, industry-specific, time-specific and institution-specific solutions are doomed to fail (Easterly, 2009).
Dynamic versus static environment

Only one sub-Saharan African economy—Mauritius—has partially emulated the South-East Asian model of export-led industrialization. This demonstrates the danger of assuming that models, including the green revolution in Asia, can be readily transplanted to Africa. Technological progress, radically different market conditions, shifts in the centre of global economic activity, and the addition of well over one billion workers from formerly command or semi-command economies in Eastern Europe, China and India to the global workforce have changed the rules of the development game. One such crucial change is the emergence of value chains as a driver of economic growth and poverty reduction in underdeveloped regions. Accordingly policies should go beyond agricultural development per se and embrace agribusiness and all actors in the entire value chain from ‘farm to fork’.

Institutions and sustained growth

The failure of poverty trap-based policies to achieve sustained growth has partially shifted the focus to institutional obstacles to development. Rodrik (2003) concluded that strong, well-functioning institutions are central to sustaining growth though not necessarily to ‘catalysing’ it.

Levels of policy intervention

These three issues—the need for policy to target microeconomic foundations within the context of a sound macroeconomic strategy; the acknowledgment that the world in 2010 is a very different place from that of the 1980s and 1990s; and the pivotal role of institutions—are the platform of an agenda for policy action. Five levels of policy interventions are required:

1) Improving trade logistics—infrastructure, transport, energy, water and ICTs, supported by reforms to make ‘doing business’ more efficient and at lower transaction costs.

2) Enhancing microeconomic business environment.

3) Enabling measures to foster the upgrading of agribusiness value chains and to facilitate the development of agribusiness and agro-industrial clusters.
4) Targeted science, technology and training policies towards stronger focus on skill development and better organizational capability, especially on-the-job, in-house skill development rather than national level education strategies.

5) Accepting that without strong, well-functioning institutions it will not be possible to design, let alone implement, effective policies, Birdsall (2007), Easterly (2009) and others warn of the dangers that well-intentioned aid programmes may undermine the very institutions that donors seek to build. In Birdsall’s words, donors should “systematically focus on avoiding harm to middle-income households, in particular avoiding creating disincentives to small entrepreneurial activity and job creation in the private sector” (2007, p. 588).

**Growth diagnostics and binding constraints**

A policy agenda for agribusiness development in Africa must be contextualized. Obviously there is a complexity of factors underpinning economic growth and there is no unique policy formula. Recommendations have been made to have less reliance on simple formulas (World Bank 2005), and instead deal with one or two ‘binding constraints’ on growth (Hausmann et al. 2008). While such an approach is intuitively attractive, there are a number of real drawbacks: for a start, it is concerned mainly with igniting, rather than sustaining, growth, while Africa’s needs are more about sustaining long-term growth. Secondly, the identification of binding constraints is difficult, involving both price and non-price signals and shadow prices to be identified at the country level. A third drawback is that the approach is based on the premise that capital is the binding constraint, while in many cases there is a need to make better use of existing capital. Four conclusions emerge from this:

1) There can be no ‘one-size-fits-all’ strategy but rather policies suited to the particular conditions prevailing in individual countries.

2) “Five striking points of resemblance” emerge in all highly successful countries (World Bank & Commission on Growth and Development 2008): (a) openness to the global economy; (b) macroeconomic stability; (c) high savings and investment rates; (d) market allocation of resources; and (e) strong leadership and governance.
3) These fall short of being sufficient conditions for growth, which is where policy interventions are justified to establish the microeconomic foundations for growth, especially well-functioning institutions.

4) In contrast to the old structural economics, Lin’s *New Structural Economics* (2010) “stresses the central role of the market in resource allocation and advises the state to play a facilitating role to assist firms in the process of industrial upgrading by addressing externalities and coordination issues” (p.20).

**Evolving policy framework**

A new industrial policy dialogue has emerged in the wake of the global economic and financial crisis of 2008 to present (2011), focusing on revisiting industrial policy in the post-Washington Consensus period. There is also growing concern over the effects of climate change and the need for environmental sustainability. In this regard, a new policy focus is needed on green and clean industry growth within the framework of a resource-efficient and low-carbon growth trajectory. This is particularly relevant to Africa in view of growing investment in oil exploration and high-carbon projects.

**Agribusiness policy lessons from emerging economies**

Possible lessons for Africa can be drawn from some of largest emerging economies (China, India, Indonesia, Brazil, Russia):

- **Policy reform**: Trade and FDI liberalization was undertaken in the context of wide ranging macro and microeconomic market-based reforms; however, liberalization in agriculture has lagged behind. Countries and sectors that have opened up the most achieved the fastest growth rates.

- **Agro-industrial research and extension services** have contributed significantly to improved productivity and competitiveness.

- **Market orientation in line with comparative advantage** in China led to the expansion of labour-intensive export industries, avoiding mistakes made by other countries in promoting capital-intensive industries in labour-abundant economies (Sally 2008).
• **Trade negotiations and agreements** have increasingly been used to promote growth (in Brazil, China, India) as they are reciprocal and provide a framework for multilateral trade rules for unilateral reforms (OECD 2009). However, there is a need to avoid competitive devaluation of major currencies and for a market based systems in line with the multilateral trading system.

• **Social inclusion and environmental sustainability**: In Brazil growing FDI by large agribusiness companies led to growing share of MNC in the domestic food market, displacing many SMEs as well as small farmers in the domestic market. To redress the situation the Brazilian Government embarked on programmes on environmental sustainability and social inclusion goals such as family planning programmes, credit to low-income small farmers, food assistance and an initiative for ‘Zero Hunger’.

**Contentious policy choices**

While there is agreement in many areas on the way forward for African agribusiness there is controversy over the following issues (Wiggins & Leturque, 2010):

• Production of genetically modified foods and whether increased productivity is offset by long-term health concerns.

• Optimal farm size: While small farms need less capital, large farms can benefit from scale economies. Small farms face problems of coordination in value chains and product quality.

• The long-term impact of climate change is an area of disagreement making the design of adaptation and mitigation policies difficult in Africa (Cantore *et al.*, 2009).

• Biofuel value chains represent an opportunity though there is uncertainty over the potential negative impact on food security and food prices.

• Purchase of large land holdings by foreign investors (so-called ‘land grab’).

Undoubtedly these unresolved issues need further research and evidence-based advocacy. In addition, there are diverging views on solving global economic imbalances in the following areas: (a) reducing global trade imbalances, refraining from competitive devaluation of currencies among global players, moving towards market–oriented currency reforms, and resisting protectionism; (b) subsidies to
farmers in developed countries (for example, cotton), which affect agricultural income in developing countries including Africa; (c) continued stalemate of global trade liberalization, which is superior to the increasingly popular, but second-best strategy of bilateral and regional trade agreements. The twenty major global economic players have agreed to “bring the Doha Development Round to a successful, ambitious, comprehensive and balanced conclusion….and build on the progress already achieved” (G20, 2010). In this regard it is essential that the strategic interests of African agribusiness are fully considered in these global negotiations.
Key policy messages

The onus of investing in and developing the agribusiness sector falls upon the private sector with the public sector playing a supporting and facilitative role. The study concludes with the following six key policy messages:

1. **Agribusiness has a direct link with poverty reduction and social inclusion.** Effective social development depends on using agribusiness to provide employment, food security, social inclusion and basic social services in rural areas (chapter 2).

2. **Addressing market failures** are crucial to enhancing efficiency and therefore policy actions must be well coordinated to avoid undesired side effects. For example, value addition in Africa can be promoted by organic farming and the introduction of certification systems (chapter 5). However a solid certification system will only be useful if a large number of farmers will have easy access to market mechanisms.

3. **Aid for Trade** is one specific measure that donors can use to promote agribusiness. Aid for Trade funds cover trade-related technical assistance and capacity building as well as infrastructure. The international efforts to promote trade need to be continuous. Transport infrastructure investment should be strategic and avoid sporadic implementation (chapter 9). Donors’ commitment and knowledge management by recipients will be crucial for successful Aid for Trade policies.

4. **Public-private sector cooperation and dialogue** is an essential ingredient for agribusiness development. Chapters 3 and 4 advocate the integration of Value Chain Participant Councils (VCPCs) and specific value chain working groups that should assess policies and strategies to promote selected industries. Such councils could represent voluntary organizations aimed at tackling threats or identifying opportunities for value chain development. In particular, public-private sector cooperation is crucial for overcoming infrastructure and energy constraints (chapter 9).
5. **Coordination among actors promotes faster innovation** in agribusiness. The success of African agribusiness will depend on integrating the enterprise sector with research & development institutions, and finance providers (chapter 6).

6. In this context **international organizations** will play a decisive role for promoting technical cooperation and R&D activities on agribusiness development for knowledge diffusion and as network of facilitators bringing together the various actors of the public and private sectors to address market failures following the value chain approach.

**Policy issues and options**

By nature, a broad range of policy issues and options are relevant to agribusiness development. This easily leads to a multiplicity of policy messages. However, this is justified as agribusiness requires progress on numerous different fronts simultaneously and requires a holistic approach to development.

In the field of **agricultural supply for value addition in agribusiness**, this report emphasises the need to integrate Africa into global agribusiness value chains and to promote agribusiness development as a path to prosperity. It is crucial to learn from the policy experience of emerging economies, where agribusiness development resulted from deliberate strategy, policy and institutional support and development. Intensifying regional integration within Africa is crucial in all development pillars. This also applies to establishing priorities for sustainability and social inclusion. Market failures need to be addressed by key stakeholders such as national and local policymakers, learning institutions for tertiary education and universities, donors and government for reducing the very high transaction costs of doing business. At the same time the capability of governments themselves require improvements to deal with complex development agendas. A critical issue is the need for enhancing agricultural productivity through increased industrial inputs such as improving the fertilizer value chains, technology policies for agricultural mechanization and agro-processing equipment, and enhancing the supply of water and irrigation with due regard to the impact of climate change. Moreover, upgrading competitiveness of farms and firms, irrespective of size, for entry into value chains will be crucial. Above

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5 Such as the AUC, AfDB and ECA together with their UN partners UNIDO, FAO, IFAD and others as stated in the Abuja Declaration on the African Agribusiness and Agro-industries Development Initiative (3ADI).
all, the establishment of Value Chain Participant Councils (VCPCs) can play a crucial role in coordinating the functions and activities of key actors and for strategic positioning in the value addition ladder through upgrading and regrading agribusiness value chains.

In the field of **agribusiness trade and competitiveness** many African countries have yet to gain greater access to dynamic markets due to lack of competitiveness and inability to adjust supply to changing market opportunities. In this regard, Aid for Trade can play a crucial role in building capacities to trade, overcoming supply-side rigidities to market opportunities and strengthening standards and compliance systems. It is also crucial to promote cooperation among developing countries by reducing intra-African tariff and non-tariff barriers, negotiating reductions in such barriers with the South, and more generally foster industrial cooperation within the South in the field of agribusiness value chains, technology transfer and FDI. The establishment of one free trade area in Africa, instead of the current three, would help the continent aspire to higher growth. Dovetailing ‘China’s resource priority’ with ‘Africa’s processing priority’ requires a fresh approach to China-African cooperation in agribusiness. Moreover, there is a need to promote agribusiness cooperation with developed countries, both with regard to reducing tariff escalation and concluding Economic Partnership Agreements (EPAs) in Africa.

In the area of **technological efforts and capabilities** there is an urgent need to strengthen science, technology and innovation (STI) policies with emphasis on improving the coordination mechanism for learning and innovation, promoting national and regional innovation systems, strengthening human resource development and generally improving STI infrastructure. It is essential to enhance the link between knowledge created by universities, exploited by laboratories and commercialized by private enterprise.

With regard to **financing and investment** there is a need to facilitate the establishment of a pooled funding mechanism for agribusiness financing. The key to unleashing resources from the private sector is profitability, risk reduction and mobilization of traditional and innovative finance sources. Traditional financing mechanisms comprise domestic resource mobilization, development finance institutions (DFI) and FDI. Some of the more innovative financing tools comprise sovereign wealth funds (SWFs), funding from diasporas, expanded collateralization and leasing, new banking models and regulations and mechanisms for risk mitigation,
finance through large lead firms in value chains, equity, venture and hybrid finance (chapter 7). Creating the enabling conditions for local resource utilization is important for ‘crowding in’ private investment.

The creation of an overall enabling environment for **private enterprise development** requires favorable business environmental factors that are not determined by the internal capabilities of the enterprise. These include, *inter alia*: macroeconomic stability; global market conditions; favorable exchange rates; financial system and institutions, political and social stability; governance; land tenure; business climate; business advisory services and support services; business incubators; export consortia; global value chains; cooperatives; export processing zones (EPZs) and free trade zones or investment parks; entrepreneurship promotion, corporate social responsibility as well as knowledge creation and diffusion.

It is essential that agribusiness expansion be promoted in areas that have developed the required **infrastructure and energy services**, especially linked to the new transport and highway corridors. In this regard public-private partnerships have been particularly successful. A focus on clean, renewable, efficient, low-carbon and sustainable energy services as well as a reduction of green house gas (GHG) emissions is an important strategy. The promotion of ICTs is also a precondition for participation in value chains. Moreover the Clean Development Mechanism (CDM)\(^6\) under global climate change agreements could be a future driver of technology diffusion processes in Africa and of the creation of green jobs and investment opportunities through the penetration of renewable sources of energy. If the institutional implementation arrangements can be worked out to link African farmers to world carbon markets, there is a potential for carbon sequestration among small farmers to become an important new ‘cash crop’ in Africa. Better management of agricultural by-products and manures, including within the agribusiness sector, can also lead to greater efficiency as well as local production of biogas to fuel farm and agro-processing operations.

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\(^6\) The Clean Development Mechanism (CDM) is one of three ways under the Kyoto Protocol in which developed countries can reduce their green house gas emissions (GHG), under which developed countries invest in projects implemented in developing countries which reduce GHG including energy projects. Africa is yet to tap adequately into this financing source and currently only holds two per cent of the number of projects under CDM worldwide with a total world market of $64 billion in 2007. Carbon finances are monetary resources generated from carbon markets. The overall goal of the carbon market is to provide cost-effective measures to reduce greenhouse gas emissions, which are the main drivers of climate change.
Table 4 provides a synopsis of the critical determinants and options for policy, strategy and institutional development as well as broad indicators, actions and actors of the seven agribusiness development pillars.
Table 4: Agenda for Action: Synopsis of critical determinants and key policy options of seven pillars for agribusiness development in Africa

<table>
<thead>
<tr>
<th>Development pillar</th>
<th>Critical factors</th>
<th>Indicators</th>
<th>Actions</th>
<th>Actors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural supply for</td>
<td>Labour</td>
<td>High availability, but low quality in terms of health, literacy and education</td>
<td>Education system enhancement, on-the-job training</td>
<td>National and local decision makers, universities, private companies</td>
</tr>
<tr>
<td>agribusiness value</td>
<td>Capital goods</td>
<td>Lack of mechanization in many countries and lack of high productive inputs use</td>
<td>Improvement of inputs (demand side) and supply-side conditions</td>
<td>National policymakers, trading operators, local communities</td>
</tr>
<tr>
<td>chains and competitiveness</td>
<td>Land</td>
<td>Limited land for agricultural expansion at continental level; social exclusion and pessimistic estimates from global warming if no action is taken</td>
<td>Promotion of sustainable pro-growth agricultural technologies; land reforms</td>
<td>National policymakers, local decision makers and communities, real estate administration agencies, donors</td>
</tr>
<tr>
<td>Value chain conditions</td>
<td>Certification system for commodities and quality food products</td>
<td>Fragmented supply conditions, scarce vertical integration and economies of scale. Often market power of retailers towards farmers</td>
<td>Measures to promote cooperation amongst firms in a value chain (bureaucracy, laws, infrastructure), enhancement of outgrower schemes</td>
<td>Foreign investors, national and local authorities, local communities, consortia</td>
</tr>
<tr>
<td>Demand</td>
<td>International demand</td>
<td>Lack of integration with international markets and absence of certification bodies to signal quality of food</td>
<td>Strengthening of the ‘demand pull’ side African of agro-food marketing system</td>
<td>International consumers, private companies, national policymakers, local communities</td>
</tr>
<tr>
<td></td>
<td>Internal demand</td>
<td>Higher levels of poverty in SSA and low levels of</td>
<td>Industrial development</td>
<td>National policymakers, local governments and communities</td>
</tr>
<tr>
<td>Area</td>
<td>Policy/Action</td>
<td>Description</td>
<td>Stakeholders</td>
<td></td>
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<td>-------------------------------------------</td>
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<tr>
<td>R&amp;D</td>
<td>R&amp;D</td>
<td>Low level of public R&amp;D and of private initiatives for innovation</td>
<td>University-private partnership. Innovation institutions. Promotion of transboundary knowledge spillovers Universities, private companies, national and international policymakers, donors</td>
<td></td>
</tr>
<tr>
<td>Business climate and trading</td>
<td>Policy</td>
<td>Inefficient domestic economic policies of some African countries’ governments</td>
<td>Use of domestic policy instruments on the basis of sound economic principles (e.g. addressing market failures) National and local policymakers</td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td>Trading</td>
<td>Distortive international sector specific subsidies and import tariffs</td>
<td>Educating the international community for appropriate trading agreements Multilateral institutions, private companies, trading operators, national and international policymakers, civil associations</td>
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<td></td>
<td>Institutional context</td>
<td>Weak enforcement of laws; weak institutions</td>
<td>Enhancement of the legal system and enforcement mechanisms National decision makers and citizens</td>
<td></td>
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<td></td>
<td>Financial system</td>
<td>Fragile financial systems vulnerable to crisis and commodity price fluctuations; credit restrictions</td>
<td>Linkages to international financial systems and investors. Robust regulatory framework and institutions to eliminate market failures Banks, donors, DFIs, private investors, social/impact investors, national and international policymakers</td>
<td></td>
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<tr>
<td></td>
<td>Value chains</td>
<td>Inadequate linkages along chains</td>
<td>Incentivizing and assisting finance providers to leverage value chain relationships to improve access to finance Central banks, commercial banks, DFIs, private investors, social/impact investors, large scale value chain actors, national policymakers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Infrastructure</td>
<td>Poor infrastructure leading to high transaction costs</td>
<td>Transport and communication systems integration plans, ICTs and pooling of resources across countries. Public/private partnerships, DFI loans DFIs, national policymakers, donors, banks and finance providers, private companies</td>
<td></td>
</tr>
<tr>
<td>Infrastructure, energy supply, sustainability</td>
<td>Energy supply</td>
<td>Increasing need in the coming years, unreliable supply system</td>
<td>Green sources of energy. Low carbon path. CDMs and carbon finance International and national policymakers, local communities, private companies</td>
<td></td>
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<td></td>
<td>Sustainability</td>
<td>High vulnerability of many</td>
<td>Adaptation policies Multilateral institutions, national and international policymakers</td>
<td></td>
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<tr>
<td>Social exclusion</td>
<td>African economies to climate change</td>
<td>international policymakers and local governments, private companies</td>
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<tr>
<td>Inequality and poverty</td>
<td>Strong economic inequality</td>
<td>Industrial development</td>
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</tbody>
</table>

National and local policymakers, local governments and communities

Note: Based on analysis of D.W. te Velde and N. Cantore of the Overseas Development Institute
Practical guidelines for policy makers

Converting the key messages of this report into practical guidelines for policymakers and stakeholders in agribusiness value chains is an important endeavour for maximizing the development impact of agribusiness opportunities. The role of industrial policy and institutional support is increasingly recognised by industrial stakeholders as an effective means to foster agribusiness development. In this context, the state tends to emerge as a facilitator of dynamic growth through appropriate policy instruments. The proposed ten points of action, listed in the box below, is intended to ignite a new beginning in promoting agribusiness development for Africa’s prosperity, based on the analysis contained in this report and book.

An Action List: Ten practical guidelines for policymakers and agribusiness stakeholders

1. Create awareness, initiate policy dialogue and establish Value Chain Participant Councils (VCPCs)

2. Establish inventory of modern industrial applications and value addition of a country’s agricultural resource potential and identify binding constraints

3. Enhance institutional capacity for assessing industrial competitive performance as feedback for public-private policy dialogue and policy response

4. Promote Aid for Trade, remove supply-side rigidities and establish the required standards and certification systems for entry into global markets and value chains

5. Create growth poles and clusters as pockets and models of competitive industrial dynamism, with positive spillovers on employment, skills and environment

6. Promote knowledge and technology-based entrepreneurship development based on practical on-the-job training and skills enhancement

7. Foster public-private partnership, dialogue and cooperation on enabling business environment in terms of microeconomic foundations, industrial policy, regulatory environment, factor endowments and demand conditions
8. Strengthen the national, subregional and regional industrial innovation system for commercializing new knowledge and research findings

9. Remove infrastructure and energy constraints through public sector dialogue for value chain development in strategic locations

10. Establish regional and global partnerships in the fields of trade, technology, investment, skills, market access and technical cooperation
Programme framework

Over the past decade, new approaches to development assistance have emerged, involving a transition from project assistance towards programme-based approaches to development. A programme framework is needed to supplement endeavours of African stakeholders such as the Strategy for the Implementation of the Action Plan for the Accelerated Industrial Development of Africa (AIDA) and the African Agribusiness and Agro-Industries Development Initiative (3ADI) as reflected in the Abuja Declaration.

This report proposes a programme framework with the following six programmes (chapter 11):

1. Public-private dialogue on agribusiness development;
2. Technical cooperation for agribusiness development;
3. Aid for Trade for agribusiness exports;
4. Global agribusiness partnerships;
5. Agribusiness knowledge and information sharing;
6. Programme governance.

This programme framework should be viewed against the circumstance that progress towards meeting the MDGs falls far short of what is required to halve poverty by 2015. A series of large aid commitments were made by the international donor community at Monterrey (2002), Gleneagles (2005), L’Aquila (2009) and Copenhagen (2009). However, pledges made at each occasion fell far short of pronouncements. Much aid has remained bilateral, which is often fragmented, slow, politically tied and often unaccountable, especially when influenced by governance problems in recipient countries and lacking clear implementation.

A more constructive and efficient approach has emerged when aid is linked to investment in major development themes such as smallholder agriculture, health, education such as the Global Fund to Fight AIDS, TB and Malaria, where resources are pooled from different donors with sound governance principles. This model, which has showed significant success in transparency and in achieving desired development objectives, could also be considered for accelerating agribusiness development in Africa as an important complement to the endeavours of the private sector and its potential partners in developed and developing countries. This is in
particularly critical considering the effects of global food crisis of 2007/8, which seriously affected many net food-importing countries. Yet, funding for agribusiness and agro-industry remains subdued with only a limited proportion of ODA earmarked for this purpose and national budget allocations falling far short of the 10 per cent commitment by African countries. A widening of donor funding beyond agriculture to embrace other parts of the agribusiness value chain would bring many benefits towards Africa’s prosperity because agribusiness permeates practically all productive roots and actors of African growth and development.

The twenty global economic players have agreed to the Seoul Development Consensus for Shared Growth that sets out their “commitment to work in partnership with other developing countries, and LICs to help them build the capacity to achieve and maximize their growth potential, thereby contributing to global rebalancing” (G20 2010). The Seoul Consensus complements G20 efforts to achieve the MDGs and concrete measures are summarized in their Multi-Year Action Plan on Development, which aims at making significant impacts on people’s lives, including in particular through the development of infrastructure in developing countries. In addition, the Financial Inclusion Action Plan, the Global Partnership for Financial Inclusion and a flexible SME Finance Framework, will significantly contribute to enhancing access to financial services and expanding opportunities for poor households and SMEs.

These G20 agreements are underpinned by nine pillars intended to strengthen cooperation between developed and developing countries in the following fields: infrastructure building, trade promotion, human resources development, private investment, job creation, domestic resource mobilization, growth with resilience, financial inclusion and knowledge sharing. These pillars are entirely consistent with the development pillars advocated in this report for agribusiness development for Africa’s prosperity.
References


**Agriculture, Nigeria. ASARECA/IITA Monograph 6, IITA, Ibadan, Nigeria. 168 pp. Available at:**
http://www.foodnet.cgiar.org/projects/trans_cost_study_ug.pd


UNECA.


