Trade Integration and Global Value Chains in Sub-Saharan Africa:
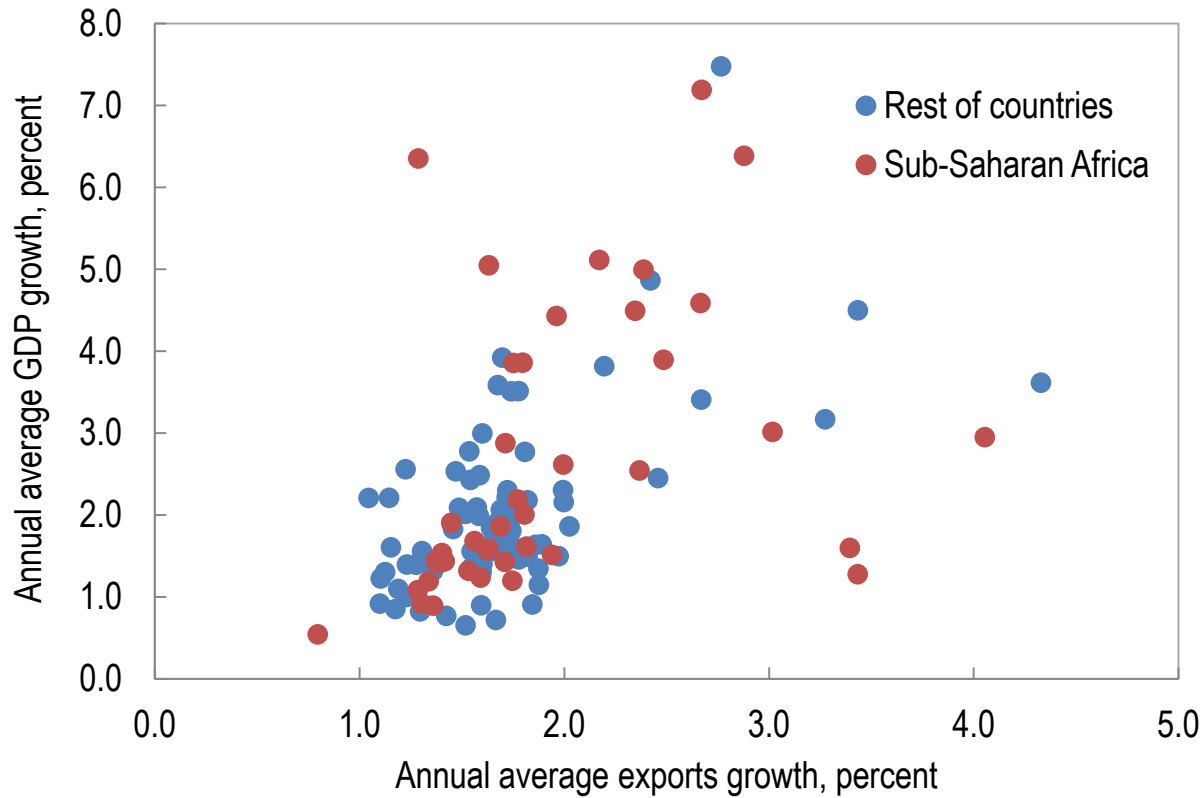# In Pursuit of the Missing Link

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International Monetary Fund

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Context

**Emerging and Developing Countries:
Annual Average Growth of GDP and Exports, 2000–13**

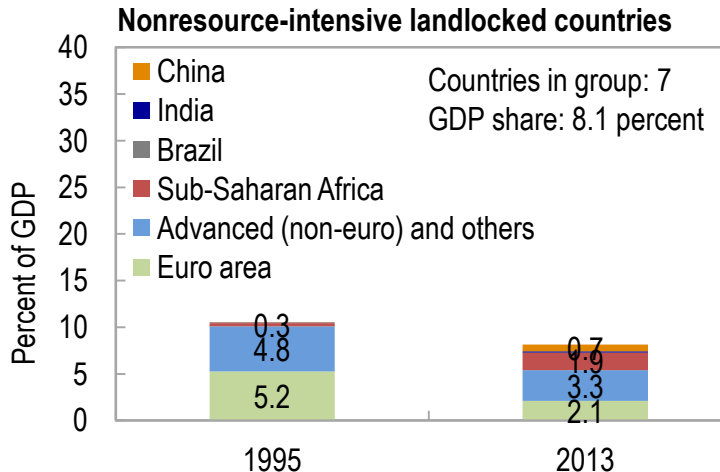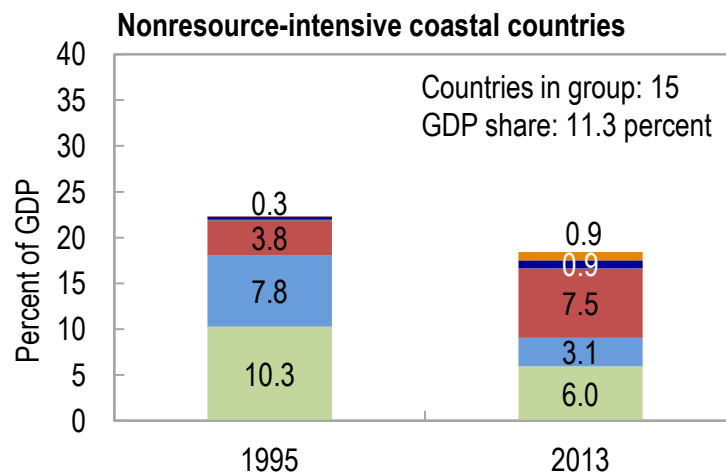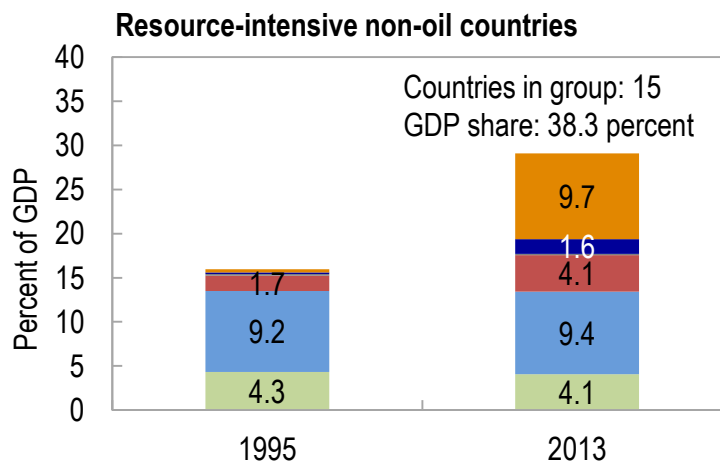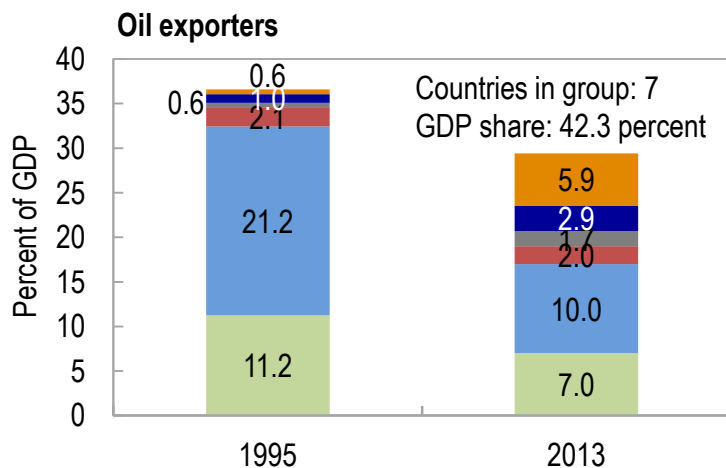Note: Sample includes emerging and developing countries with 2013 GDP per capita below US$ 20,000.

Outline

- ➢ **Sub-Saharan Africa in the Global Trade Network**

- ➢ Global Value Chain Integration

- ➢ Policy Options to Integrate into Global Value Chains

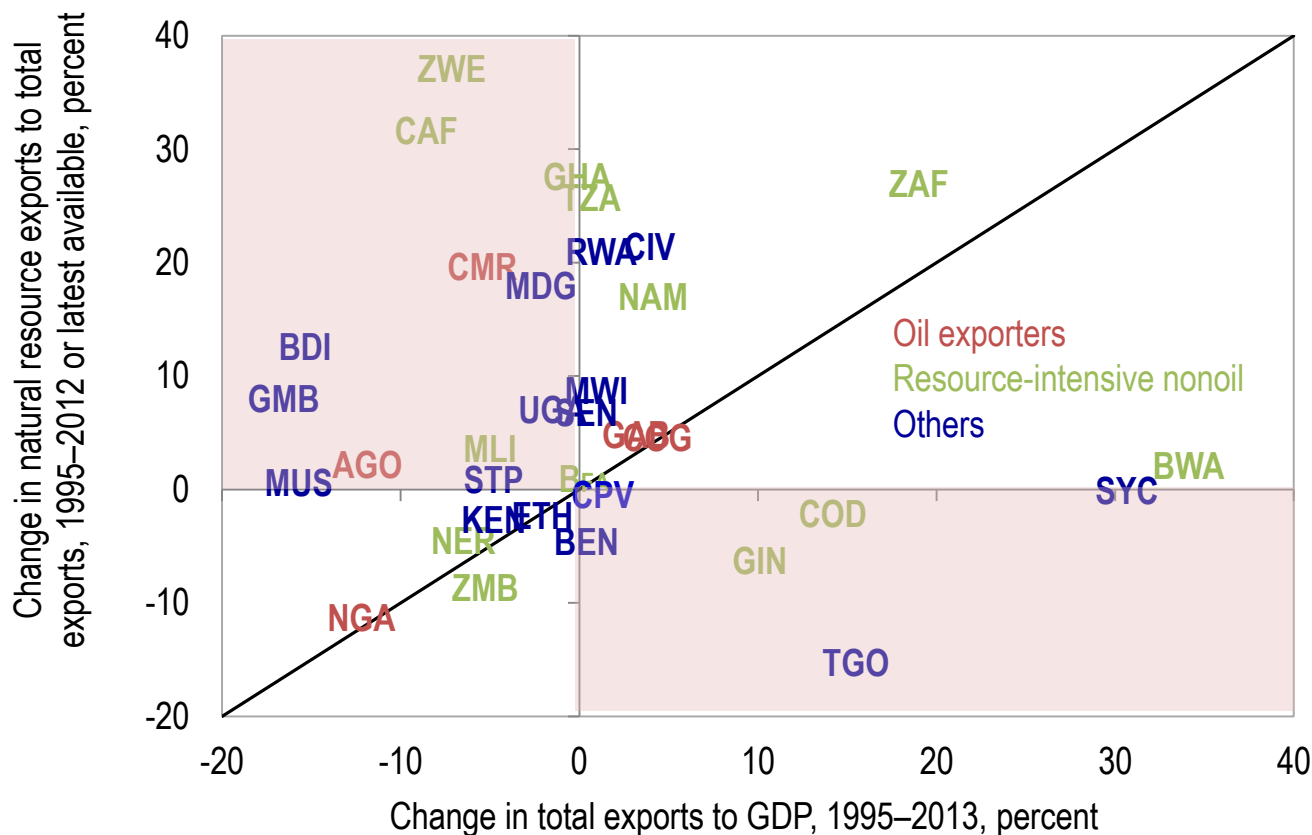# A rapid expansion in the last 20 years, marked by new partnerships …

Sub-Saharan Africa: Exports of Goods, Shares by Partner 1995-2013

Oil exporters

Countries in group: 7
GDP share: 42.3 percent

1995: 0.6, 0.6, 1.0, 2.1, 21.2, 11.2
2013: 5.9, 2.9, 1.7, 2.0, 10.0, 7.0

Resource-intensive non-oil countries

Countries in group: 15
GDP share: 38.3 percent

1995: 1.7, 9.2, 4.3
2013: 9.7, 1.6, 4.1, 9.4, 4.1

Nonresource-intensive coastal countries

Countries in group: 15
GDP share: 11.3 percent

1995: 0.3, 3.8, 7.8, 10.3
2013: 0.9, 0.9, 7.5, 3.1, 6.0

Nonresource-intensive landlocked countries

Countries in group: 7
GDP share: 8.1 percent

Legend:
- China
- India
- Brazil
- Sub-Saharan Africa
- Advanced (non-euro) and others
- Euro area

1995: 0.3, 4.8, 5.2
2013: 0.7, 0.9, 3.3, 2.1

… but it is not all about commodities

Sub-Saharan Africa: Change in Exports Shares

Chart axes:
- Y-axis: Change in natural resource exports to total exports, 1995–2012 or latest available, percent
- X-axis: Change in total exports to GDP, 1995–2013, percent

Legend:
- Oil exporters
- Resource-intensive nonoil
- Others

Country labels: ZWE, CAF, GHA, TZA, ZAF, RWA, CIV, CMR, MDG, NAM, BDI, GMB, MWI, UGA, SEN, GAB, TGO, MLI, AGO, STP, CPV, BWA, SYC, MUS, KEN, ETH, BEN, NER, COD, GIN, ZMB, NGA, TGO

Centrality of Trade

- PageRank algorithm based on Brin and Page (1998)

- centrality score of each exporting country is computed as the probability of being chosen in the trading network by an importing country:
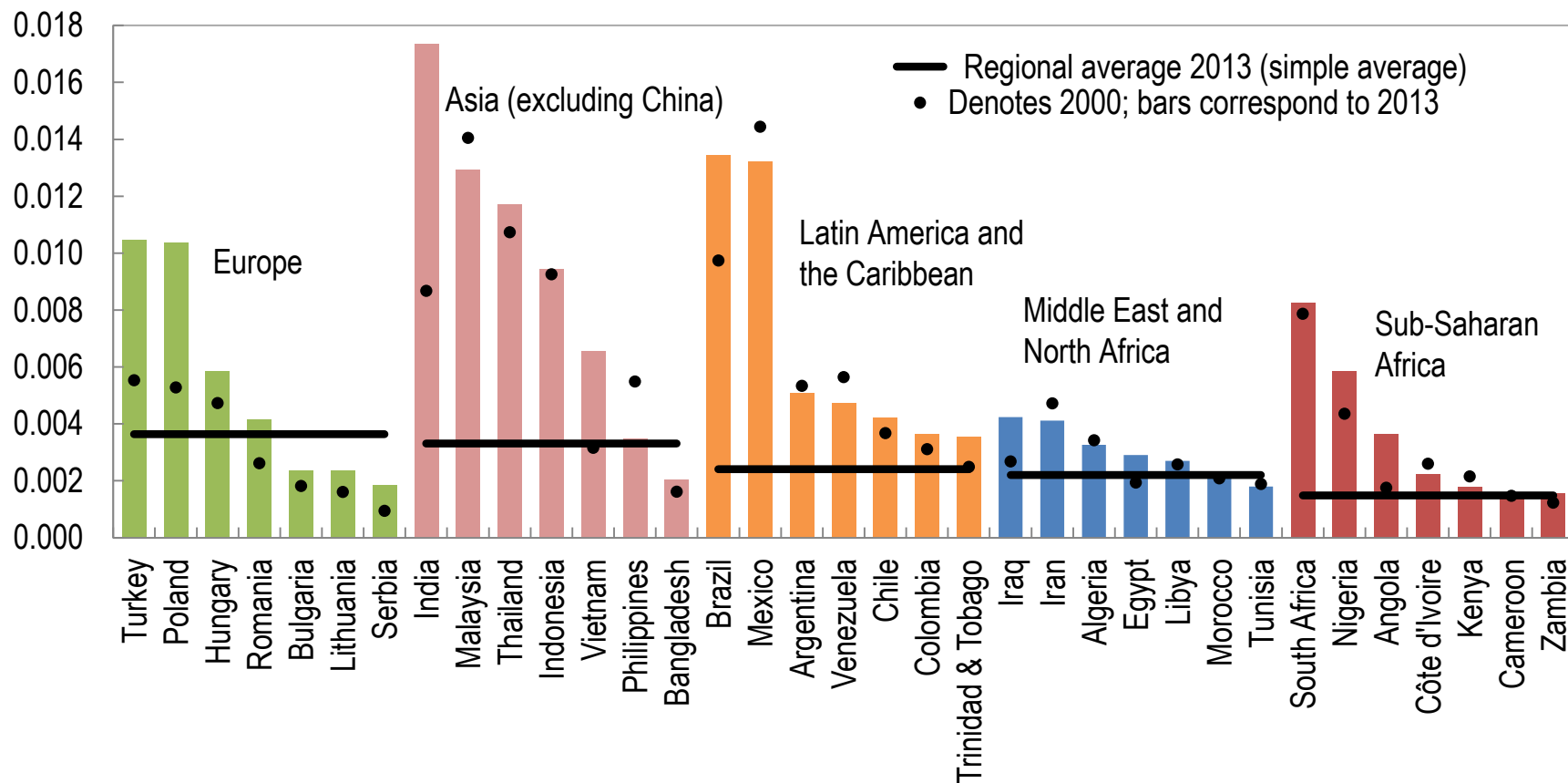
$$C(i) = p \sum_{j \to i} \left[\frac{1}{d_j} C(j) \right] + \frac{1-p}{N}, \quad for \ i = 1, \ldots, N$$

- where C is the centrality of country i, j is a country that i exports to, d_j is the number of countries that j is exporting to, and (1-p) is probability of starting the random walk from another country i

The rapid expansion of SSA's trade, however, has barely matched the rapid growth of global trade flows


World: Trade Centrality per Region, 2000-13

Legend:
- —— Regional average 2013 (simple average)
- • Denotes 2000; bars correspond to 2013

Regional labels: Europe, Asia (excluding China), Latin America and the Caribbean, Middle East and North Africa, Sub-Saharan Africa

Gravity Model

$$\ln x_{ijt} = a^{Ex} M^{Ex}_{it-1} + a^{Im} M^{Im}_{jt-1} + \theta D_{ijt-1} + a_t + u_{ijt}$$

- exports from exporting country *i* to importing country *j* in year *t*, x_{ijt}, are conditioned on M^{Ex}_{it-1} and M^{Im}_{it-1}, which denote the vectors of the attributes of exporter *i* and importer *j* in year *t-1*.

- Factors that affect trade costs between *i* and *j* are represented by D_{ijt-1} and u_{ijt} denotes the unobserved bilateral trade cost determinants

Still substantial potential for further trade integration…

Sub-Saharan Africa: Trade Flows Compared with Other Regions
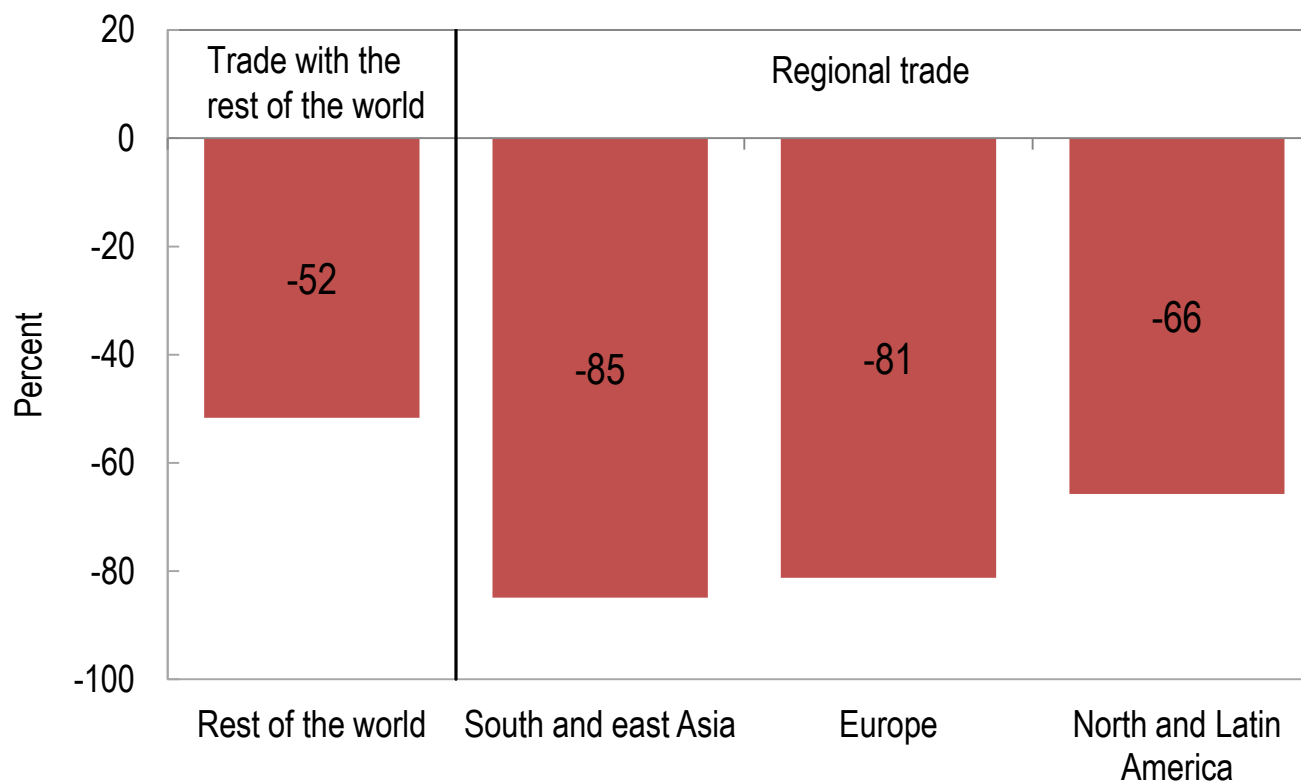
Note: Sub-Saharan Africa trade compared with trade of other regions, after controlling for size, level of development, cultural ties, and geographical conditions.
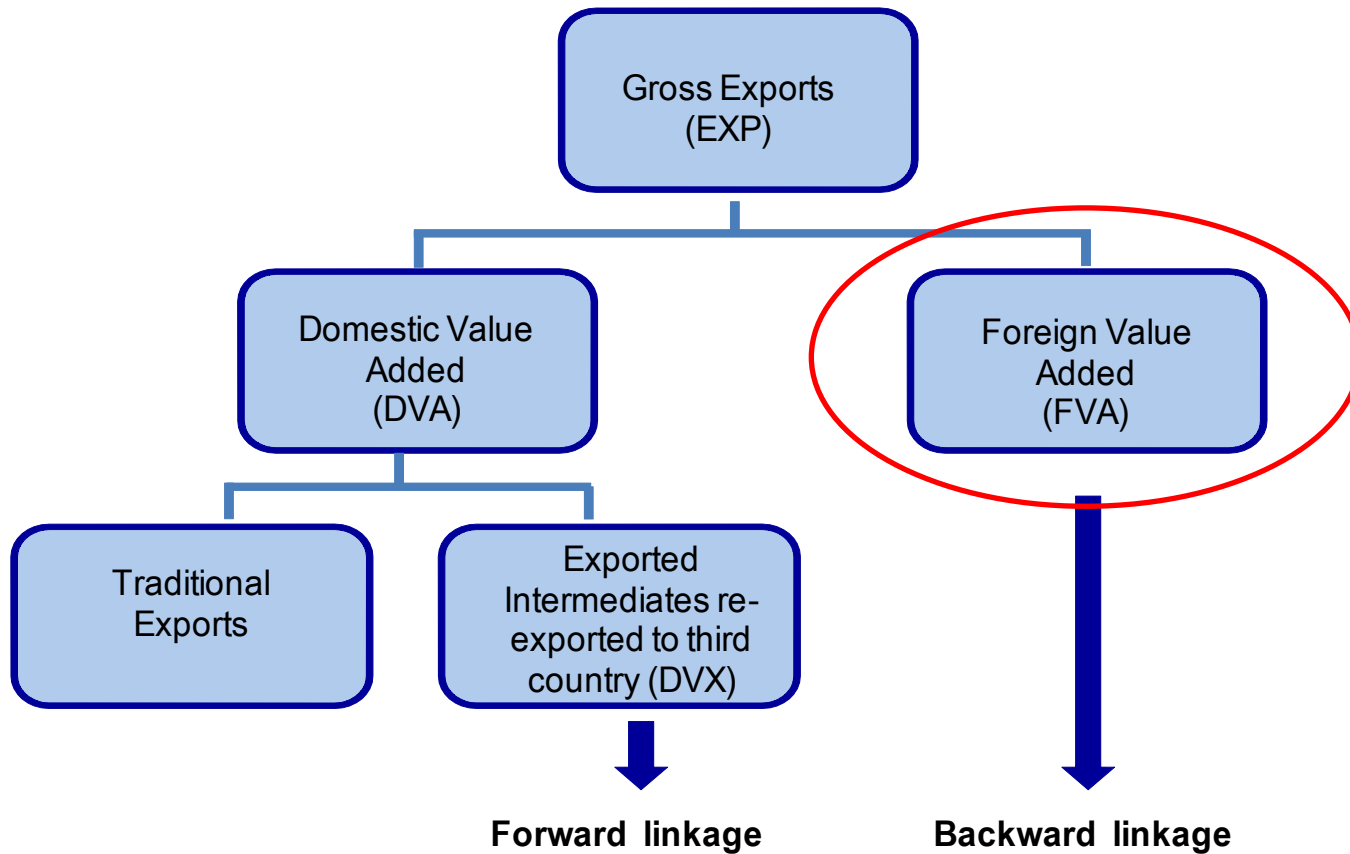
Outline

➢ Sub-Saharan Africa in the Global Trade Network

➢ **Global Value Chain Integration**

➢ Policy Options to Integrate into Global Value Chains

Breakdown of Gross Exports

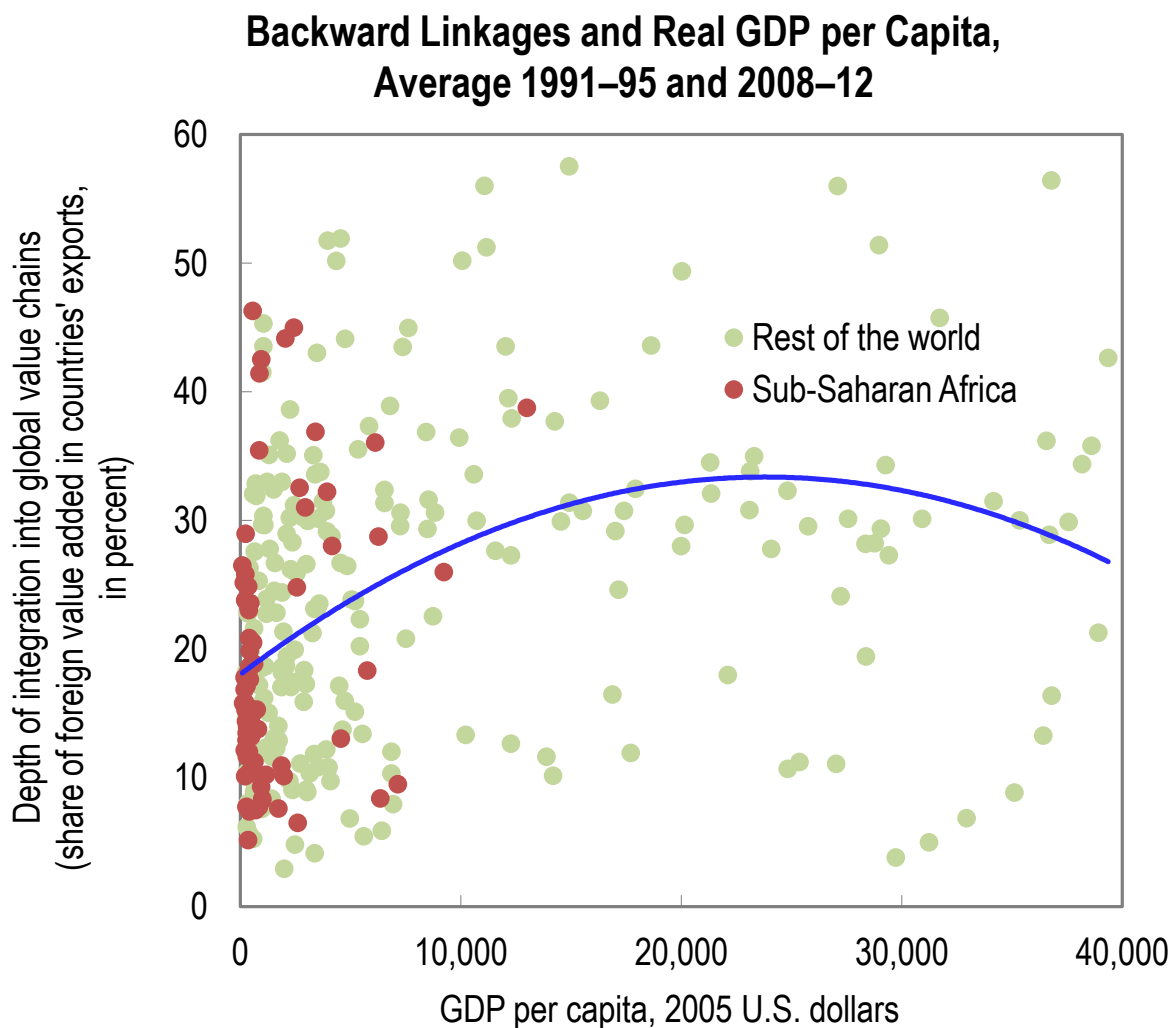Figure 1. Decomposition of Gross Exports

Source: Koopman et al. (2010)

Data

- Eora Multi-Region Input-Output tables

- Covers 188 countries between 1990 – 2012

- 26 common sector data

- Follow Koopman et al. (2010) approach

Integration in Global Value Chains (GVC)

Backward Linkages and Real GDP per Capita, Average 1991–95 and 2008–12

Depth of integration into global value chains (share of foreign value added in countries' exports, in percent)

- Rest of the world
- Sub-Saharan Africa

GDP per capita, 2005 U.S. dollars

Sub-Saharan Africa as a whole still has some way to go to integrate in GVCs…

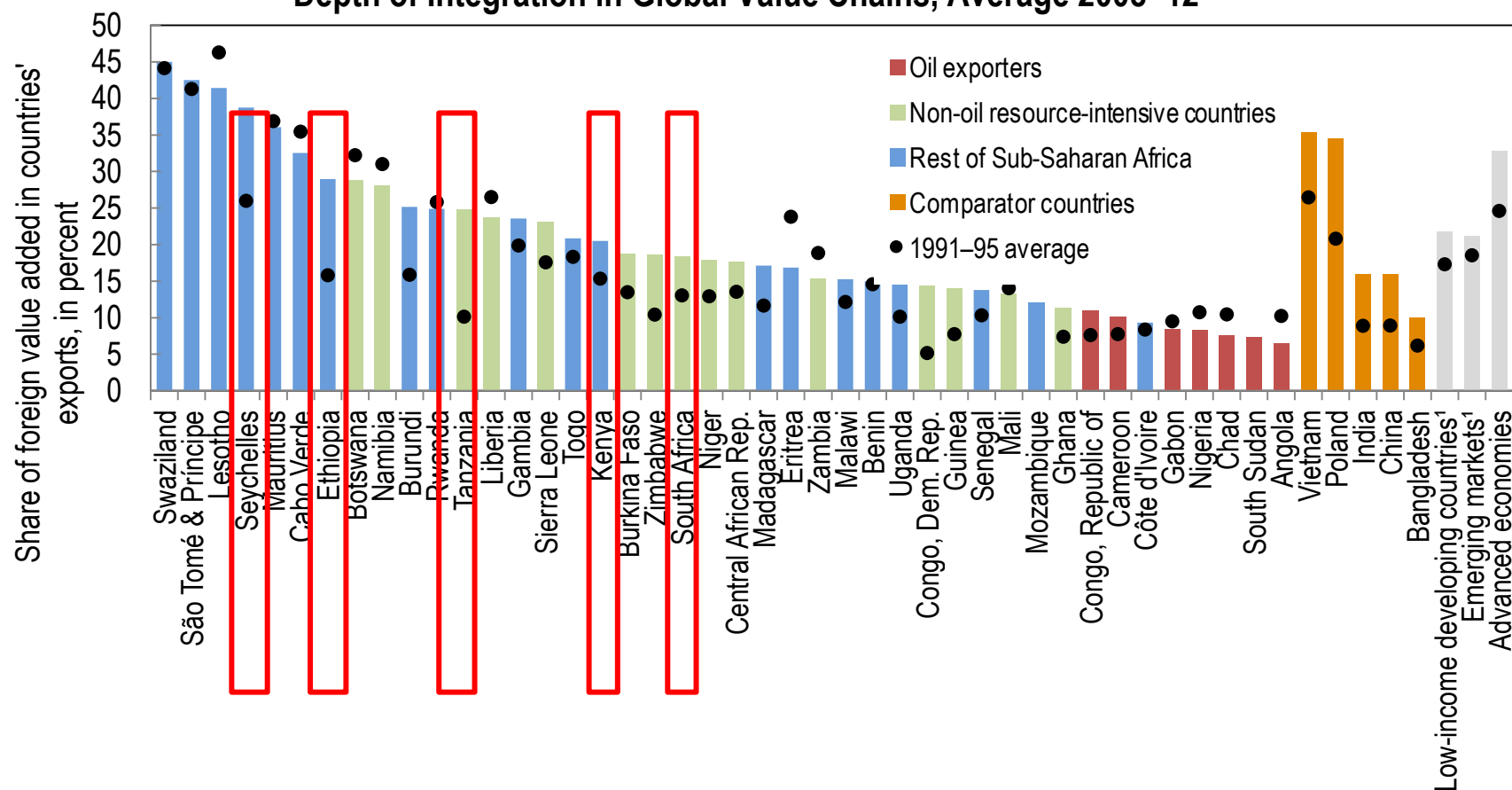**Sub-Saharan Africa: Global Value Chains Participation, Average 1991–95 and 2008–12**
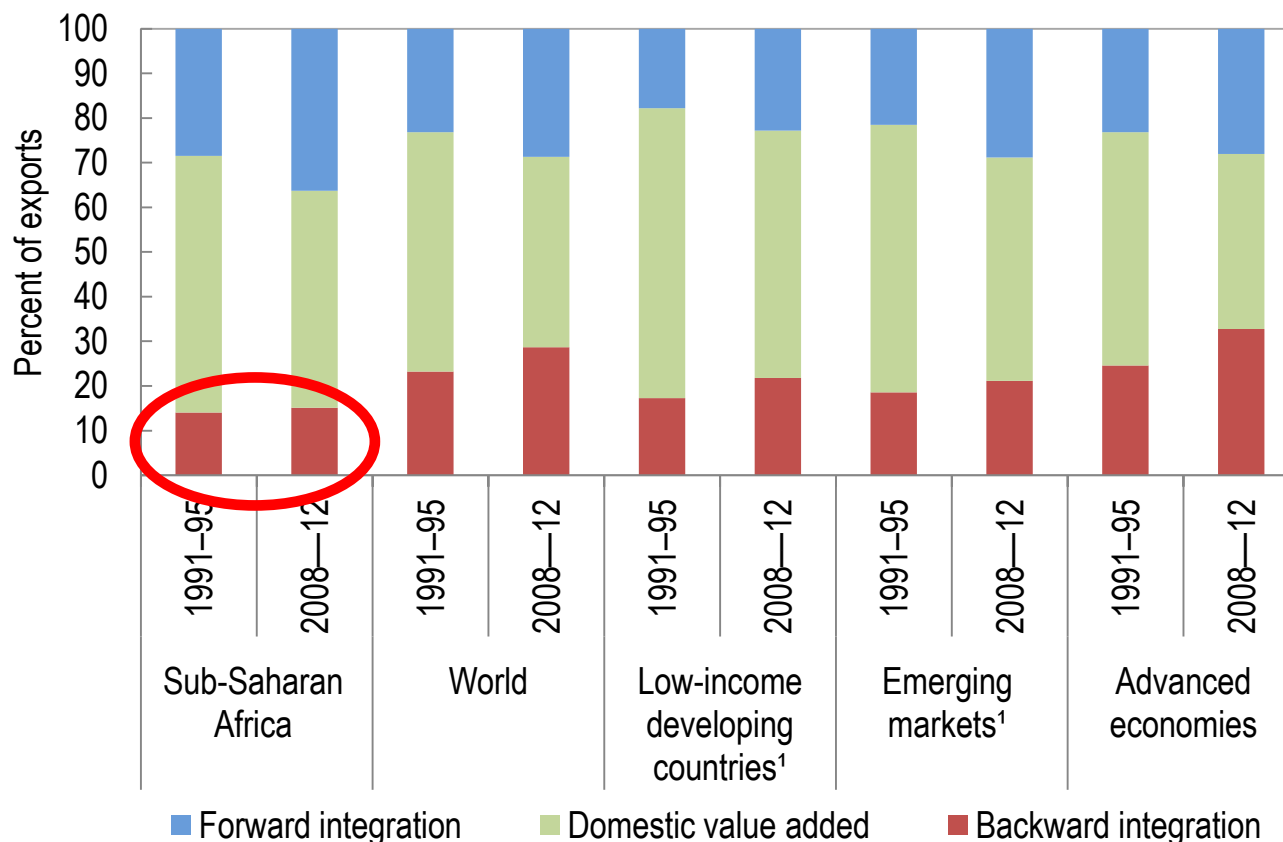
■ Forward integration   ■ Domestic value added   ■ Backward integration

[1] Excluding sub-Saharan African countries.

Sub-Saharan Africa and Comparator Countries:
Depth of Integration in Global Value Chains, Average 2008–12
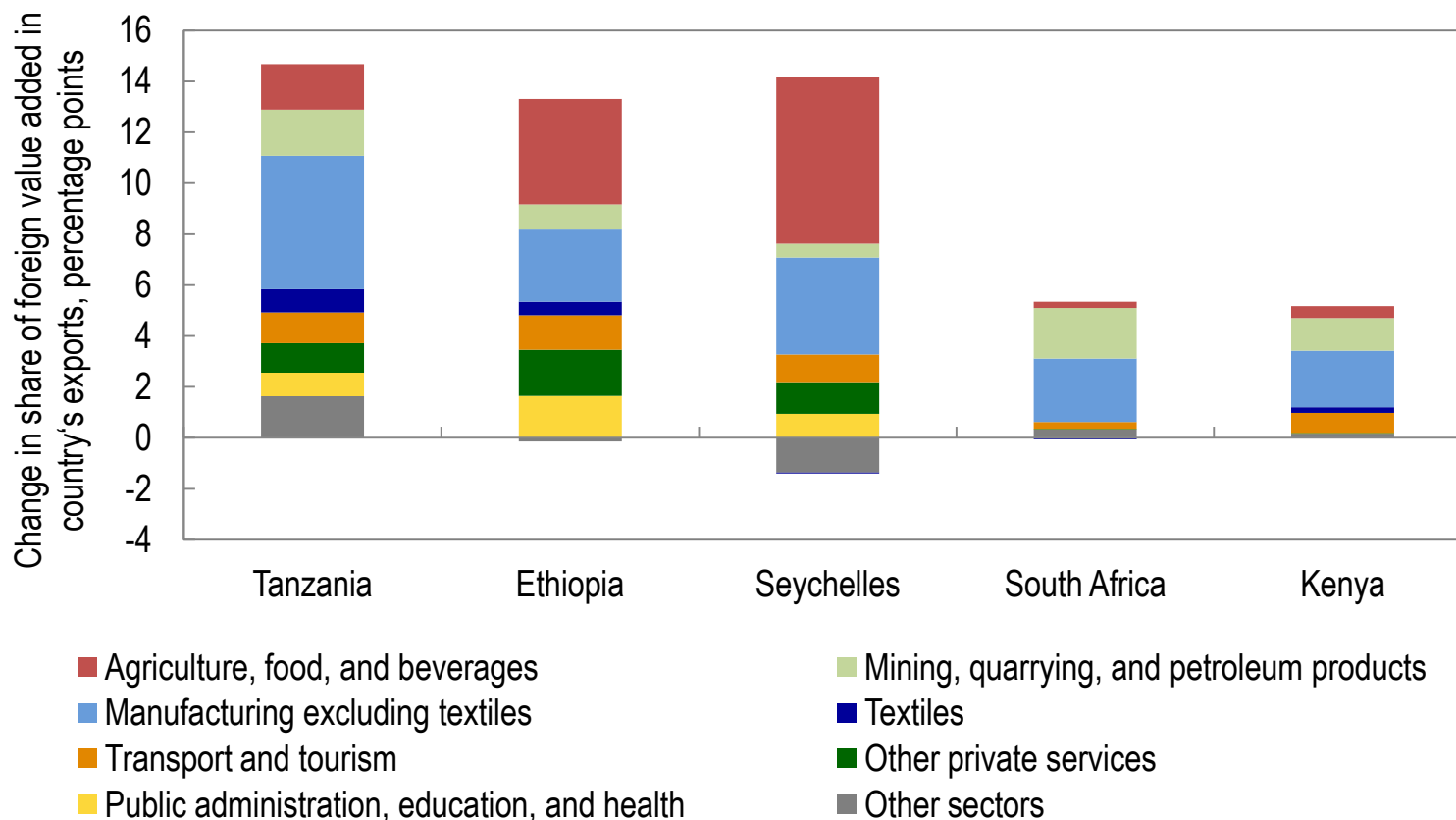
[1] Excluding sub-Saharan African countries.

Some countries have made substantial progress

Selected Sub-Saharan African Countries:
Sectoral Contributions to Change in Share of Foreign Value in Exports
Added in Exports, 1991–95 to 2008–12

Legend:
- Agriculture, food, and beverages
- Manufacturing excluding textiles
- Transport and tourism
- Public administration, education, and health
- Mining, quarrying, and petroleum products
- Textiles
- Other private services
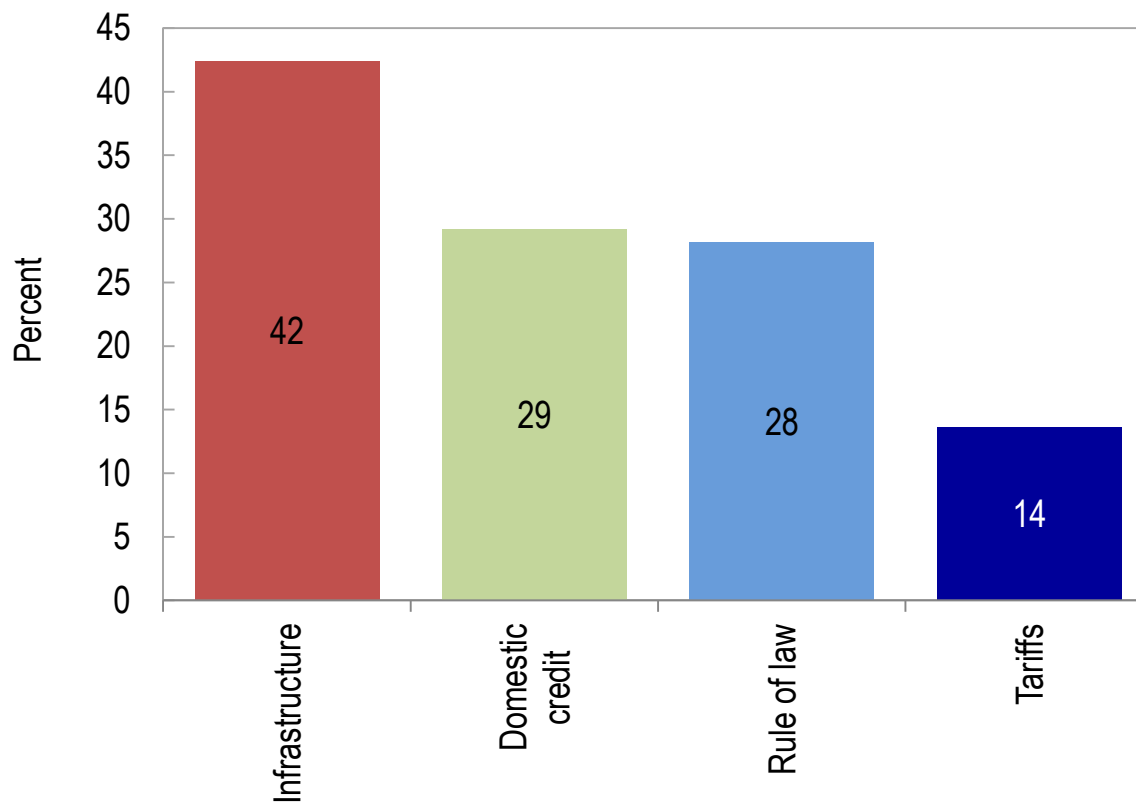- Other sectors

Outline

➤ Sub-Saharan Africa in the Global Trade Network

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➤ **Policy Options to Integrate into Global Value Chains**

Policy levers to facilitate further trade integration

Sub-Saharan Africa: Potential Increase in Trade

Note: Percent increase in sub-Saharan Africa's trade if the variable moves from the average for sub-Saharan Africa to the average for the rest of the world.

Bottom Line

➢ A formidable expansion in SSA's trade over the last 20 years, but still significant potential for further trade integration.

➢ Integration in Global Value Chains can provide that opportunity, and support economic diversification and structural transformation.

➢ Better infrastructure, lower tariffs and nontariff barriers, and improved access to credit, business climate and education outcomes key to that process.

Thank You!

The online edition of the
*Regional Economic Outlook
for sub-Saharan Africa*
is now available at
www.imf.org

Few facts on SSA's growth in trade and income 1995–2013

- cumulative nominal GDP growth was 350%

- increase for goods exports was **500**%

- global trade expanded by 260%

- export/GDP rose from 201.5% in 1995 to 27.5% in 2013; import/GPD increased from 19% to 23%