

# **Export diversification: issues and indicators**

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Poverty Reduction and Economic Management

Africa Region

# Export Diversification: critical in any trade strategy for growth

- Few countries have developed quickly on the basis of exports of primary products alone
- A more diverse structure of exports reduces vulnerability to demand shocks and price swings in overseas markets
- Creates greater opportunities in regional as well as global markets
- But no magic recipe to promote export diversification
  - While some developing countries have been very successful in diversifying their exports, others have lagged behind

# Export Diversification: Overview

- Too much focus on simply adding new products to export portfolios, often points to use of industrial policies.
- While important, a more comprehensive view of diversification is required. Look for opportunities from
  - improving the **quality** of *existing* exports,
  - breaking into new geographic **markets**,
  - increasing **services** exports,
  - expand output of goods and services that are **inputs** into export production
- FDI can play important catalytic role: demand for upstream inputs as well as source of exports

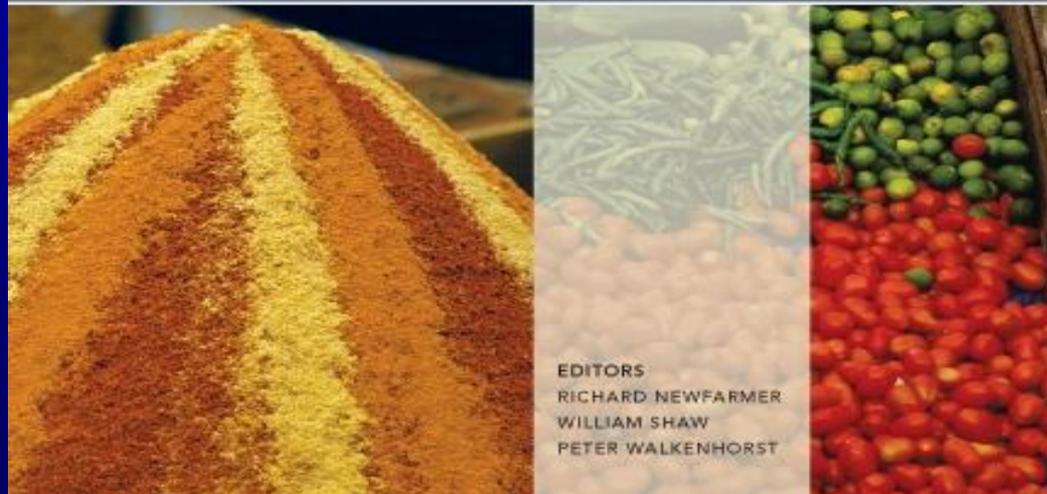


THE WORLD BANK



# BREAKING INTO NEW MARKETS

EMERGING LESSONS  
FOR EXPORT  
DIVERSIFICATION



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# A profile of export concentration from WTI

Indicators	Tanzania				SSA
	1995-1999	2000-2004	2005-2007	2006-2008 Latest	2006-2008 Latest
Merchandise share of total exports (%)	53.56	52.77	55.72	59.76	81.02
Services share of total exports (%)	46.44	47.23	44.28	40.24	18.99
Share of Top 5 Exports	83.52	83.52	56.83	52.34	72.87
Export Concentration index	25.76	32.60	35.52	35.27	52.68
Export Destination Index	25.80	26.51	23.82	24.88	43.24
No. of Products Exported	160	92	203.7	242	186.6

# Measures of export product concentration

## ■ The share of the top 5 merchandise exports

- At what level of the trade classification? - SITC 4 digit in WTI

$$H_j = \sum_i \left( \frac{X_{ij}}{\sum_i X_{ij}} \right)^2$$

## ■ HH index

- H declines as number of products increases and share of each product falls
- What level of trade classification - SITC 3 digit in WTI (for  $i > \$100k$  or 0.3% of total exports)

## ■ Number of products exported

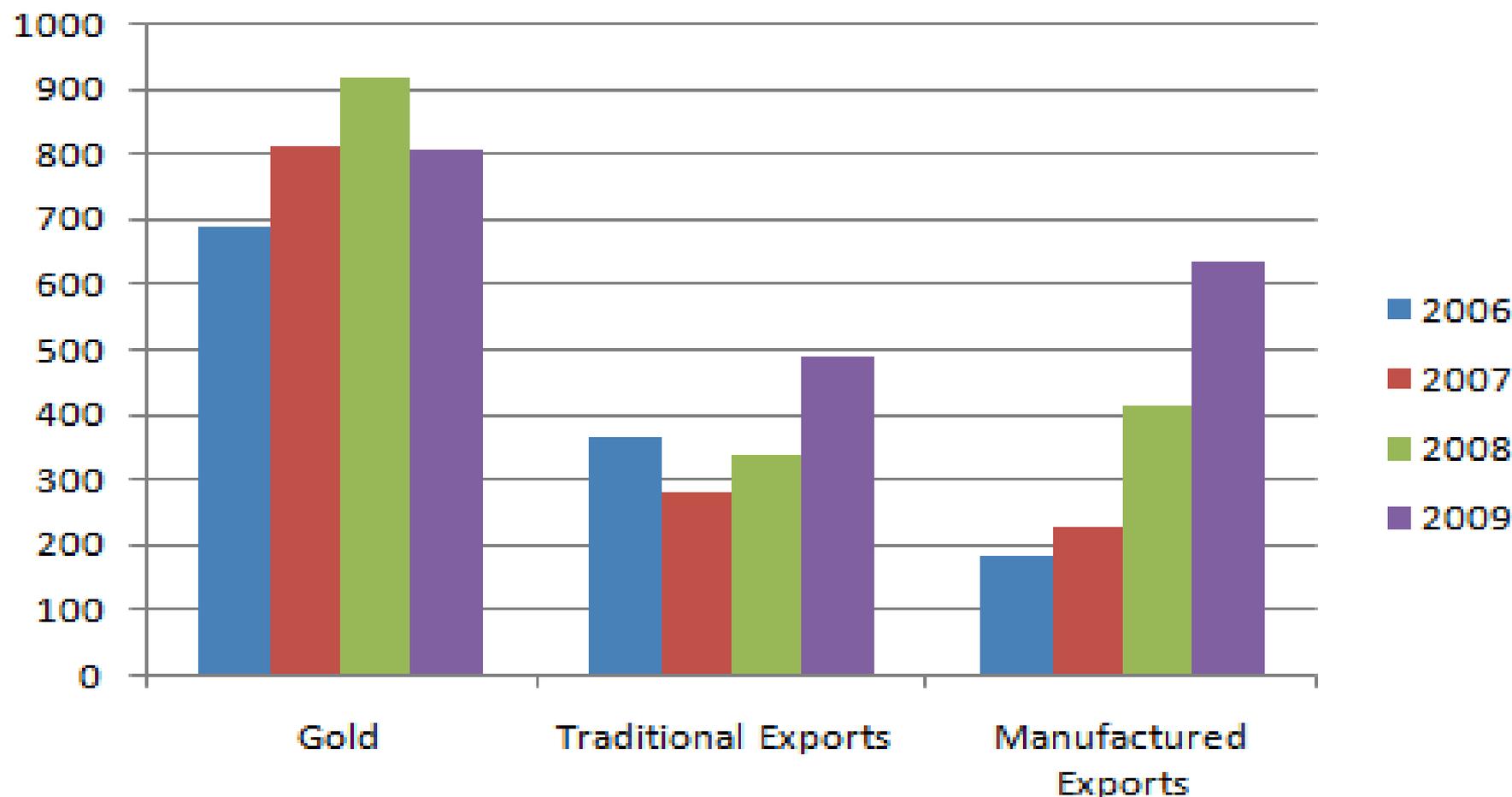
- SITC 3 digit in WTI (for products  $> \$100k$  or 0.3% of total exports)

# Export product diversification: into what?

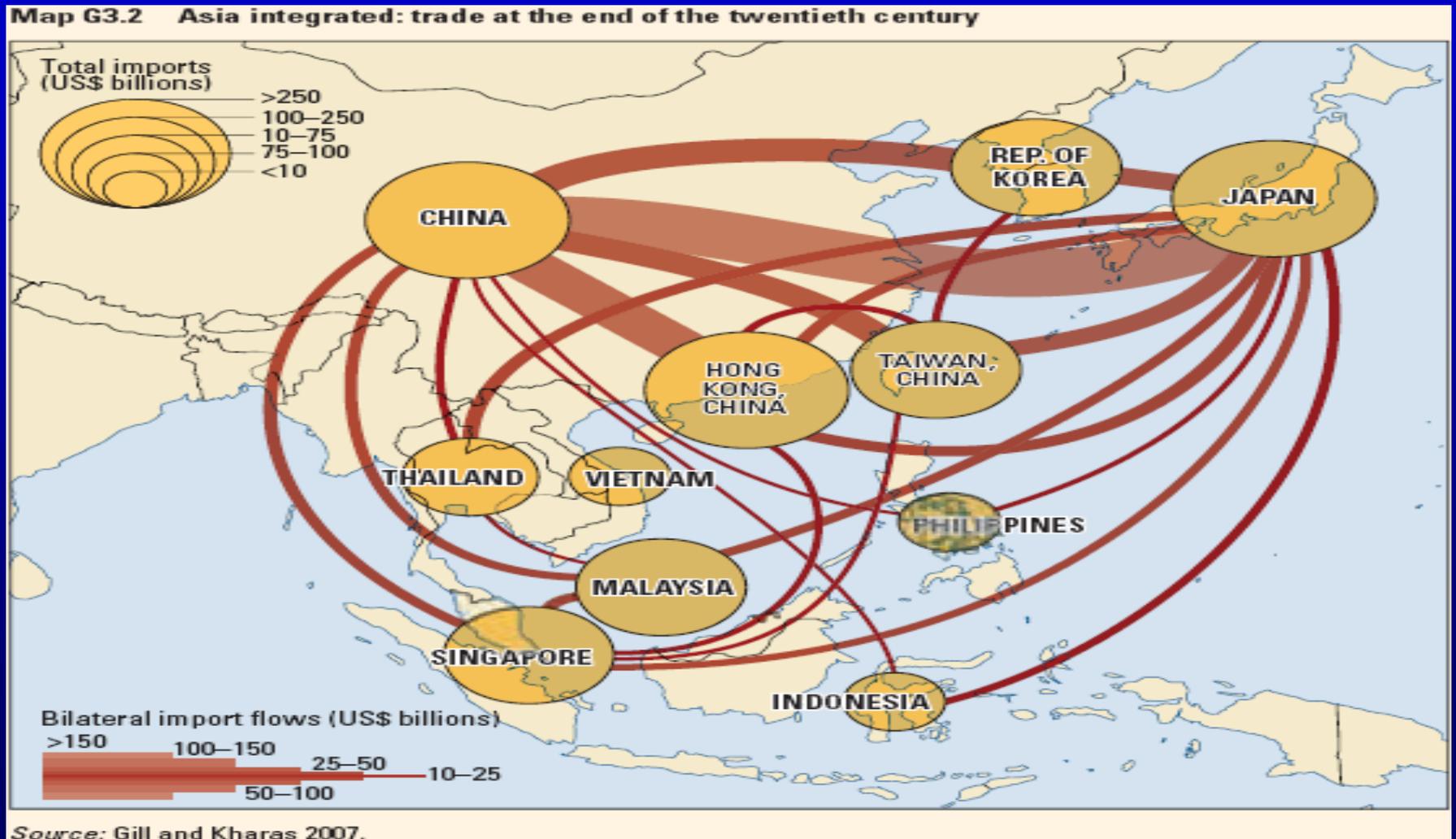
- Non-traditional relative to traditional export products
- Manufactures relative to agriculture and minerals
- Intra-industry versus inter-industry trade
- “high-productivity” goods relative to “low productivity” goods (Hausman et al)
  - high-productivity goods are those exported by rich countries (PRODY)
  - China exports products that are normally associated with countries that have per capita incomes three times higher than China and that this has contributed to strong Chinese growth
- Quality upgrading
  - It is not what a country produces but how it produces it that matters (Ferranti et al)

# Tanzania has seen some diversification into manufactures

Exports of Tanzania (\$US Mill) Year ending June



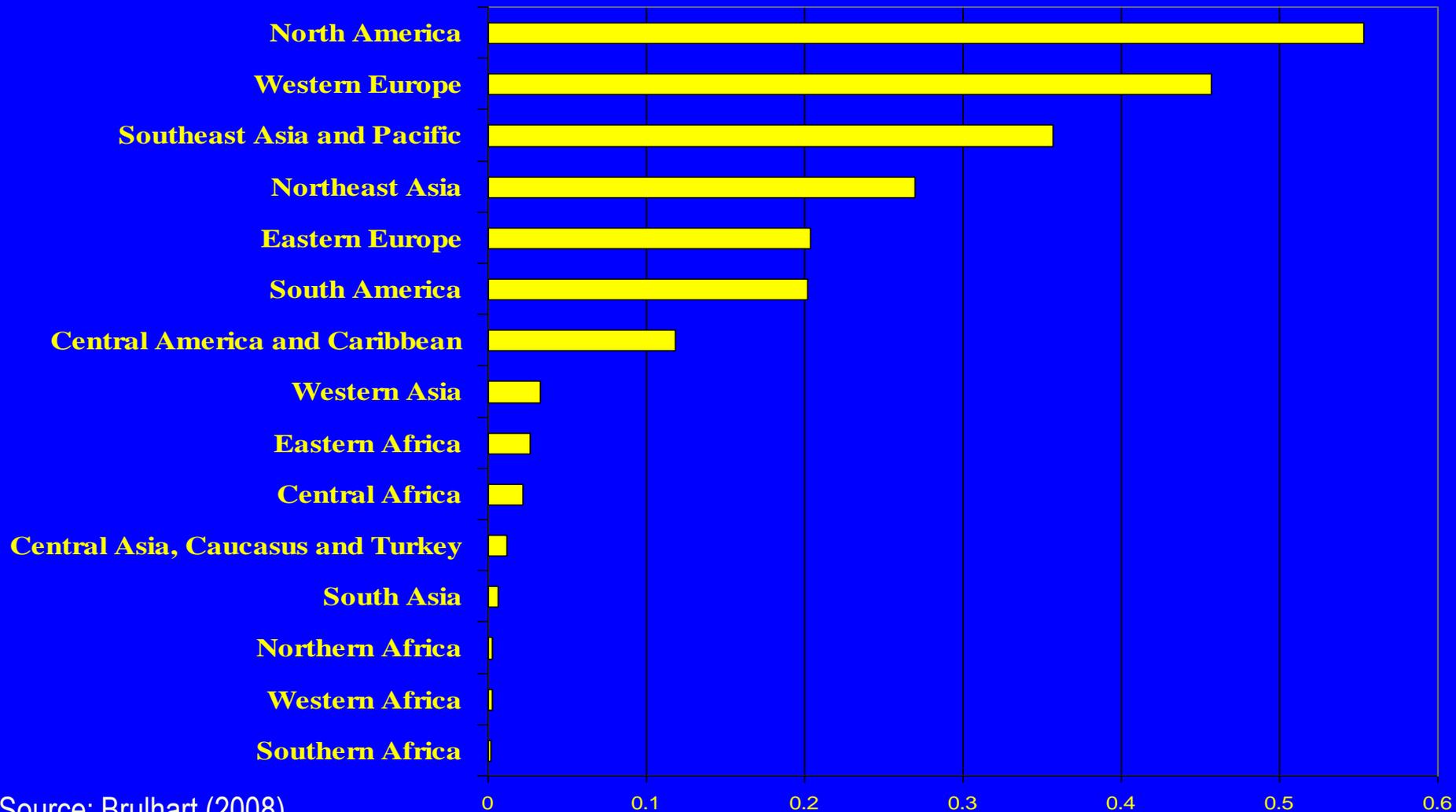
# Diversification can be driven by two-way trade within sectors, as in in East Asia



Source: Gill and Kharas 2007.

# Intra-regional intra-industry trade is lowest in Southern Africa

Grubel-Lloyd intra-regional trade index 2006



# Intra-industry trade within SACU has not taken off

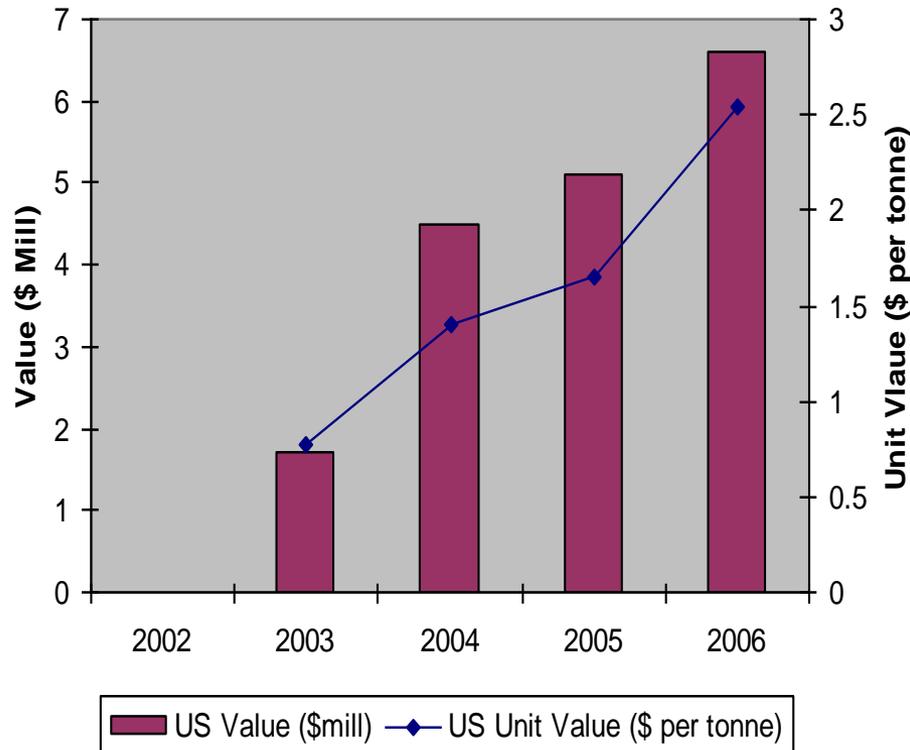
■ South Africa-Botswana	0.0047
■ South Africa-Lesotho	0.0000
■ South Africa-Namibia	0.0004
■ South Africa-Swaziland	0.0002
■ Malaysia-Indonesia	0.1698
■ Malaysia-Thailand	0.3987
■ Malaysia-Vietnam	0.1321

# How to promote export diversification: does export sophistication matter?

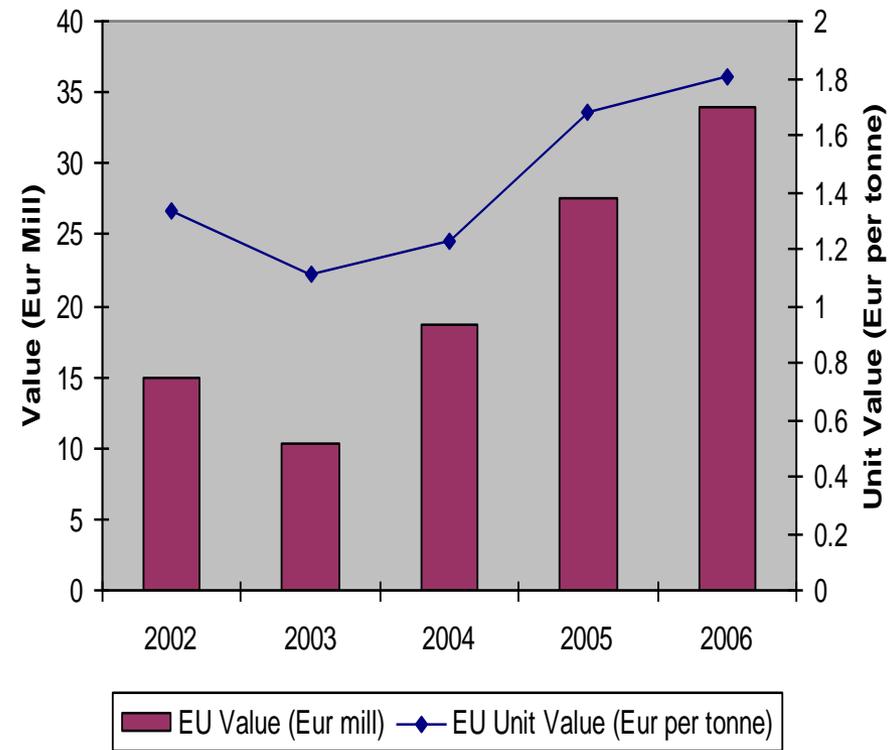
- Link between growth and export sophistication not robust to adjusting for quality (Minondo (2007))
- When adjusted for quality, the structure of China's exports appears consistent with its level of development (Xu (2006)).
- China and other successful developing economies typically contribute particular tasks to a production network. Hence FDI is often a key factor driving exports.
  - For example, whilst China exports a sophisticated electronic product (iPod) the value added in China is a fraction of the export value of the product.
- Raising the quality of existing exports (including agricultural) can drive export growth and diversification – even if these products are not exported by rich countries – eg Rwandan coffee

# Diversifying into higher quality can be a strong driver of export growth – e.g Rwandan coffee

## Rwandan exports of coffee to the US



## Rwandan exports of coffee to the EU



■ Ratio of import price from Rwanda to average import price of coffee increased from 0.58 to 1.16 in the US and from 1.10 to 1.14 in the EU

# The intensive/extensive margin of trade flows – another view of the diversification process

■ *Change in total exports =*

*(Increase in exports of existing products to current markets* **Intensive Margin**  
*- decrease in exports of existing products to current markets*  
*- extinction of exports of existing products to current markets)*

**+**

*(new exports of existing products to new markets* **Extensive Margin**  
*+ new exports of new products to existing markets*  
*+ new exports of new products to new markets)*

# Recent research findings

- Export growth has been driven more by the intensive (existing export flows) than the extensive margin (new export flows)
- Low income countries have low survival rates of new flows
- Within the extensive margin the export of existing products to new markets has accounted for a greater share of export growth than the export of new products
  - Markets matter!

# A profile of export concentration from WTI

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# Measures of export market concentration/penetration

- The share of the top 5 markets
- Herfindahl index
- Index of export market penetration

$$IEMP_j = \frac{\sum_{i \in I_{ij}} \sum_k Y_{ijk}}{\sum_{i \in I_{ij}} \sum_k Z_{ik}}$$

$Y_{ijk} = 1$  for  $X_{ijk} > 0$  else  $Y_{ijk} = 0$

$Z_{ik} = 1$  for  $M_{ik} > 0$  else  $Z_{ik} = 0$

$X_{ijk}$  is the value of exports of product  $i$  from exporter  $j$  to importer  $k$ ,

$M_{ik}$  is the value of imports of product  $i$  by importer  $k$

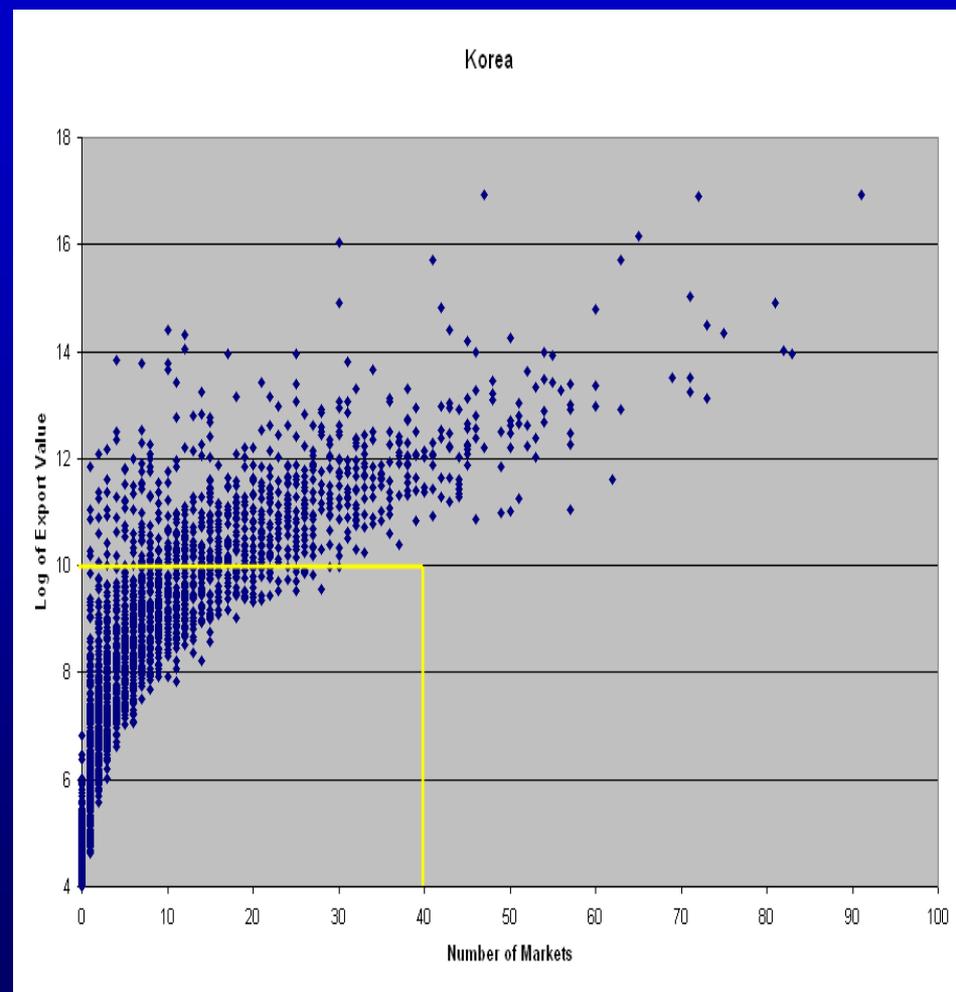
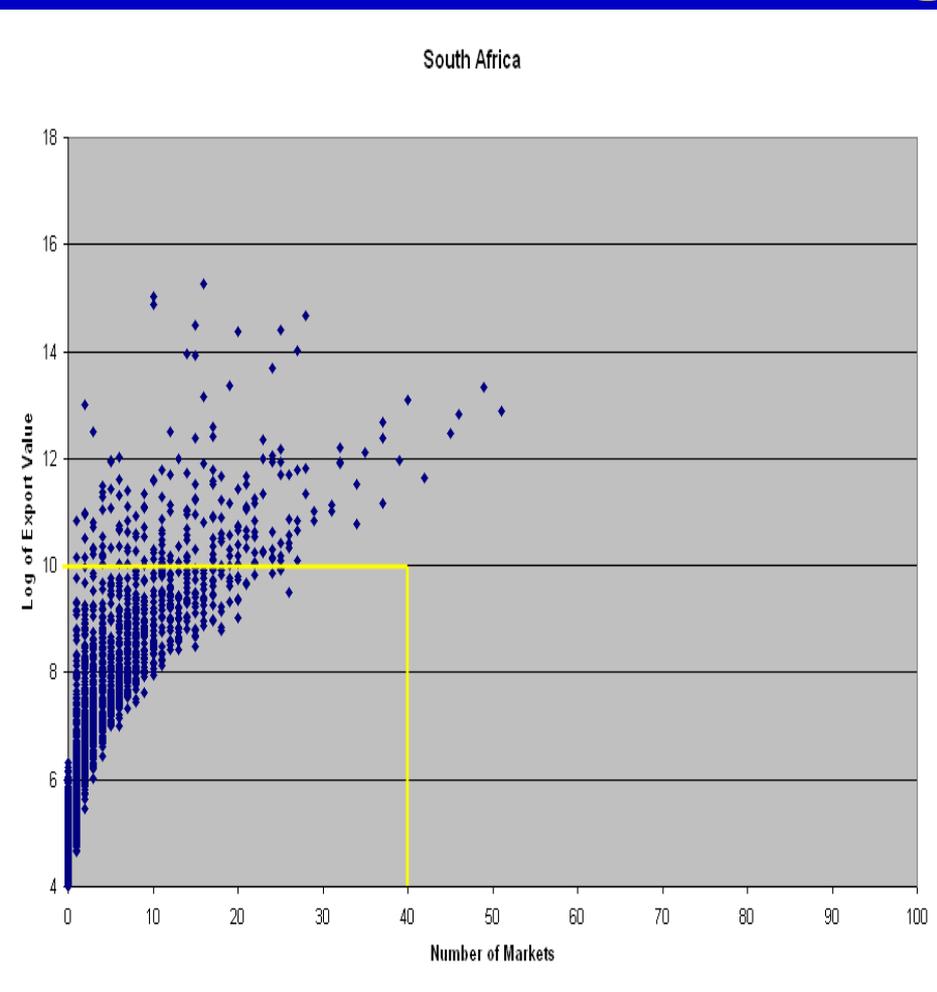
$I_{ij}$  is the set of products in which positive exports are observed

# Low income countries exploit few export market opportunities

<b>Export market penetration in 2004</b>				
	Number of products exported	Actual number of export relationships	Potential number of export relationships	Export market penetration
Madagascar	705	2450	66873	3.66
Malawi	553	1020	53069	1.92
Mozambique	751	1372	71190	1.93
S.Africa	2929	43946	262827	16.72
Zambia	852	1656	80441	2.06
Korea	2930	74171	261619	28.35
Germany	3037	168392	268260	62.77
Switzerland	2915	89062	261904	34.01

■ Source: Calculated from WITS using data at the 5 digit level of SITC

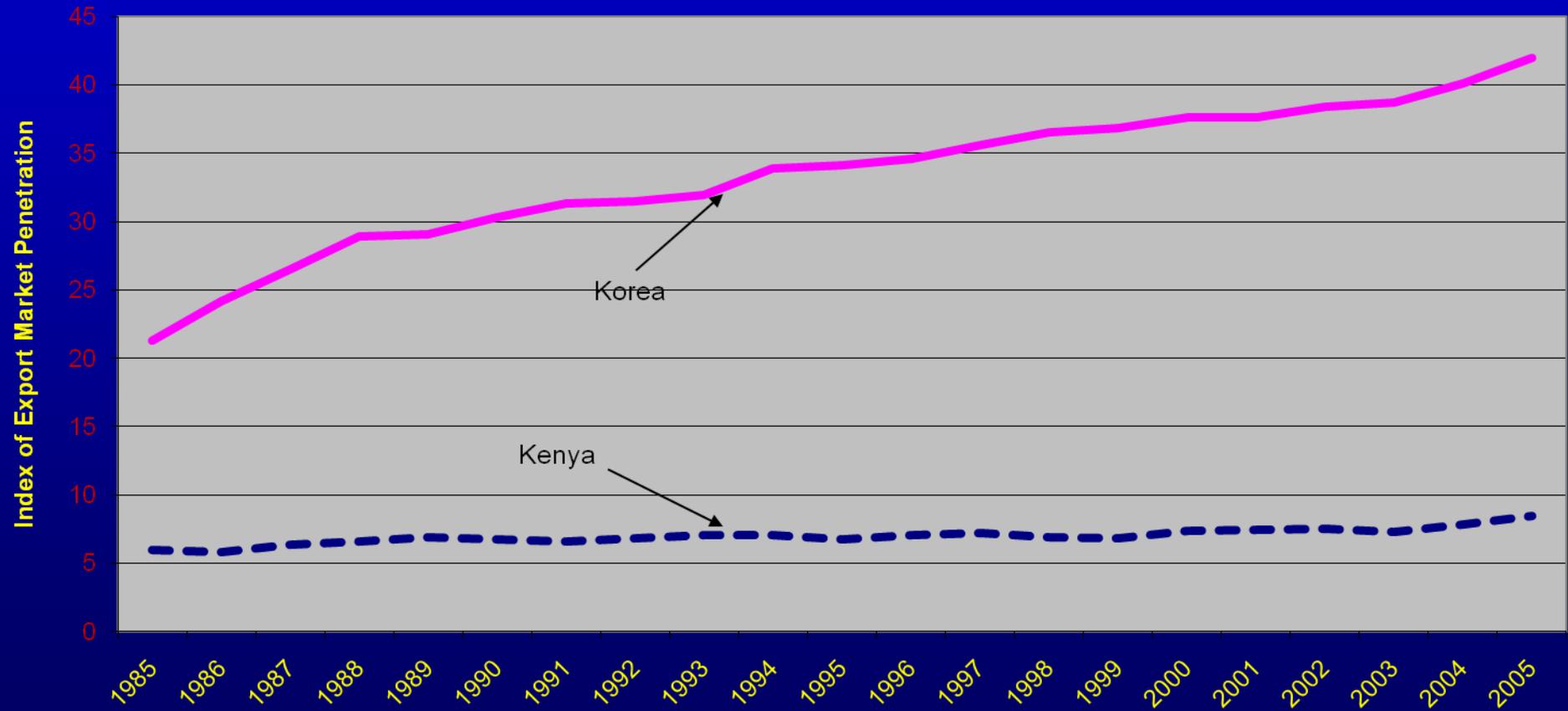
# While diversified, South African products are lower value and go to fewer markets



■ Source: Calculated from WITS using data at the 5 digit level of SITC

# Successful countries have performed well in increasing their export penetration of overseas markets

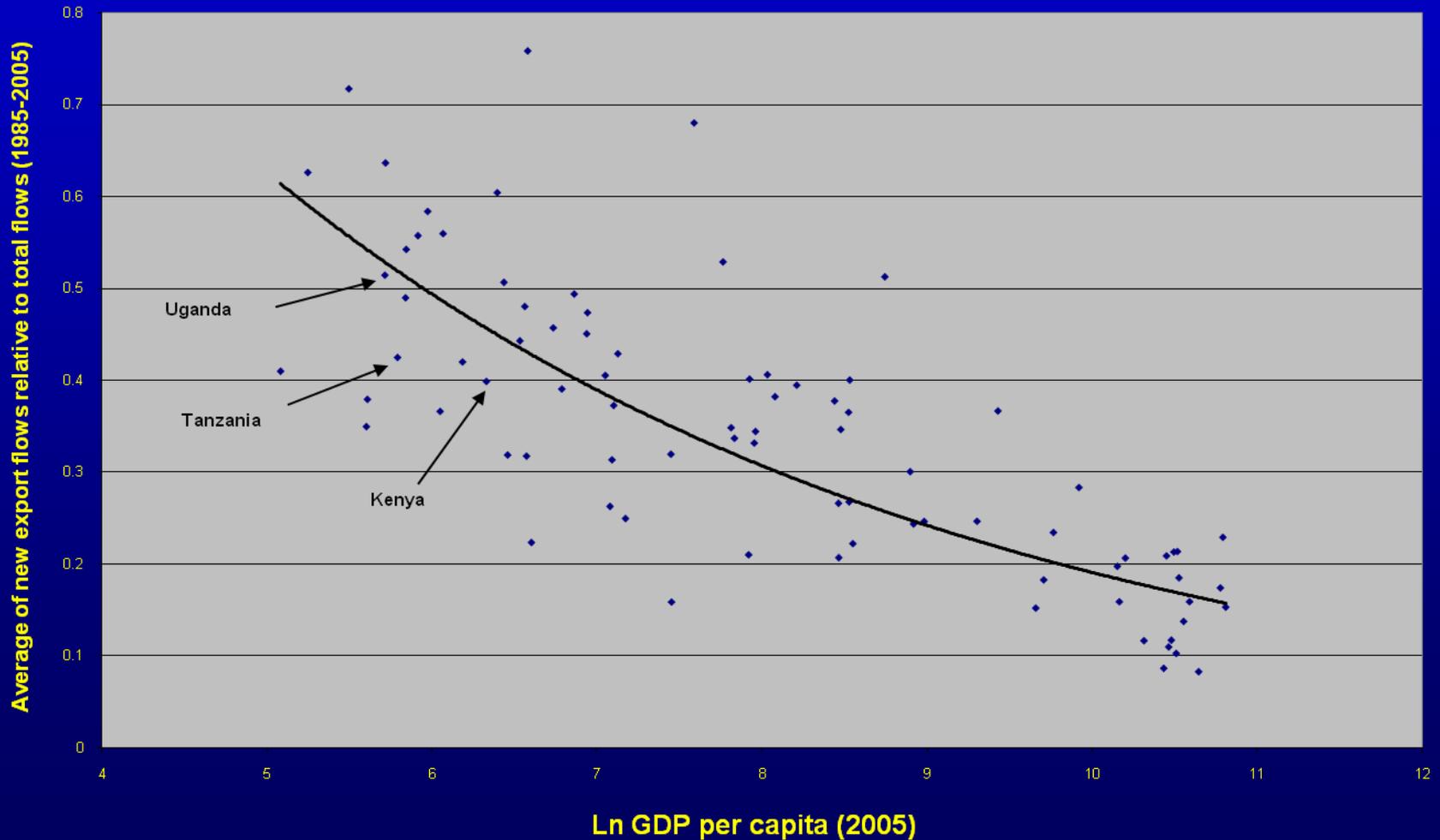
## Export Market Penetration 1985 to 2005: Kenya and Korea



■ Source: Calculated from WITS at 4 digit SITC– note need a consistent panel of overseas markets and products

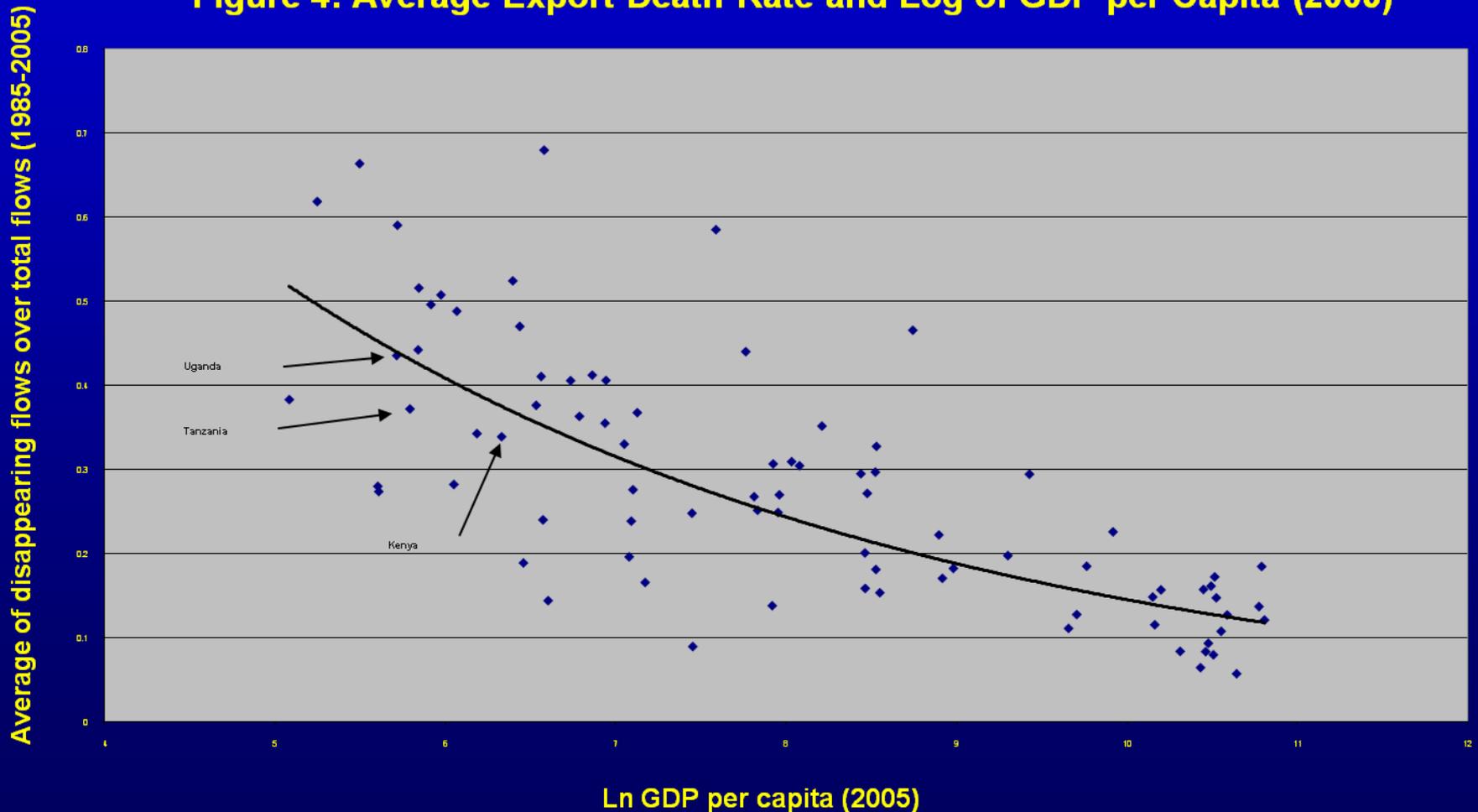
# Low income countries perform well in introducing new export flows.....

Figure 3: Average Export Birth Rate and Log of GDP per Capita (2005)



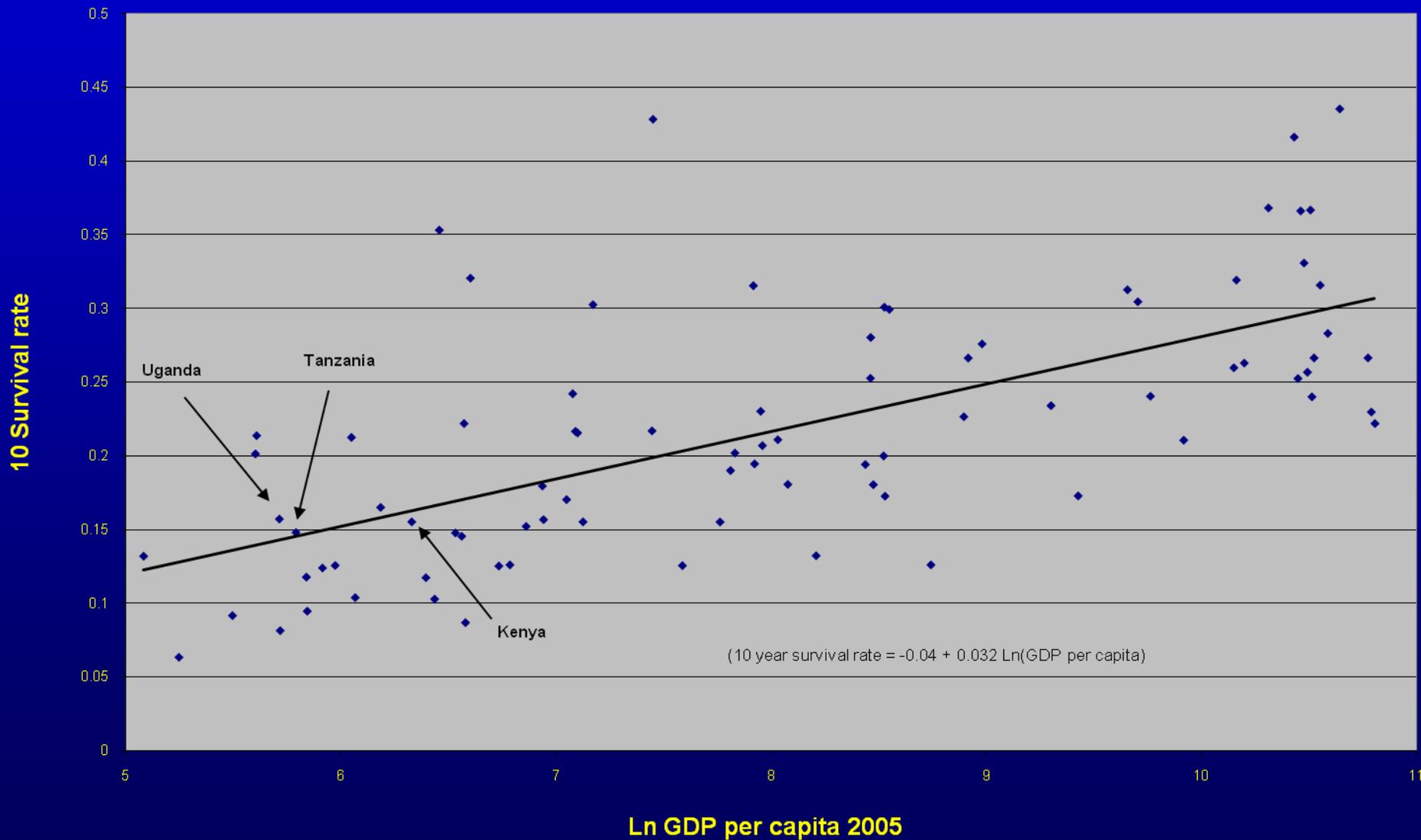
...but experience higher death rates of export flows.....

Figure 4: Average Export Death Rate and Log of GDP per Capita (2005)



# ...as a result of much lower survival rates....

## Estimated 10 Survival Rate and Log of GDP per capita (2005)



## **.... Hence survival matters as much as entry**

- **“the key element to achieving higher aggregate export growth are longer relationships and hence higher relationship survival rates” (Besedes and Prusa (2006))**
- **Hence, successful export diversification requires not only entry into new export markets but also survival and growth**
- **What are the factors that undermine the ability of exporters to survive and then thrive – how to support the acceleration phase?**

# Firms matter: Multi-market, multi-product exporters dominate in exporting

	Share of exports from firms selling in 6 or more markets	Share of exports from firms selling 6 or more products
<b>Albania</b>	12%	62%
<b>Chile</b>	86%	70%
<b>France</b>	92%	89%

- NB: We would love to do similar analysis in other countries

# Services can contribute a lot to export diversification

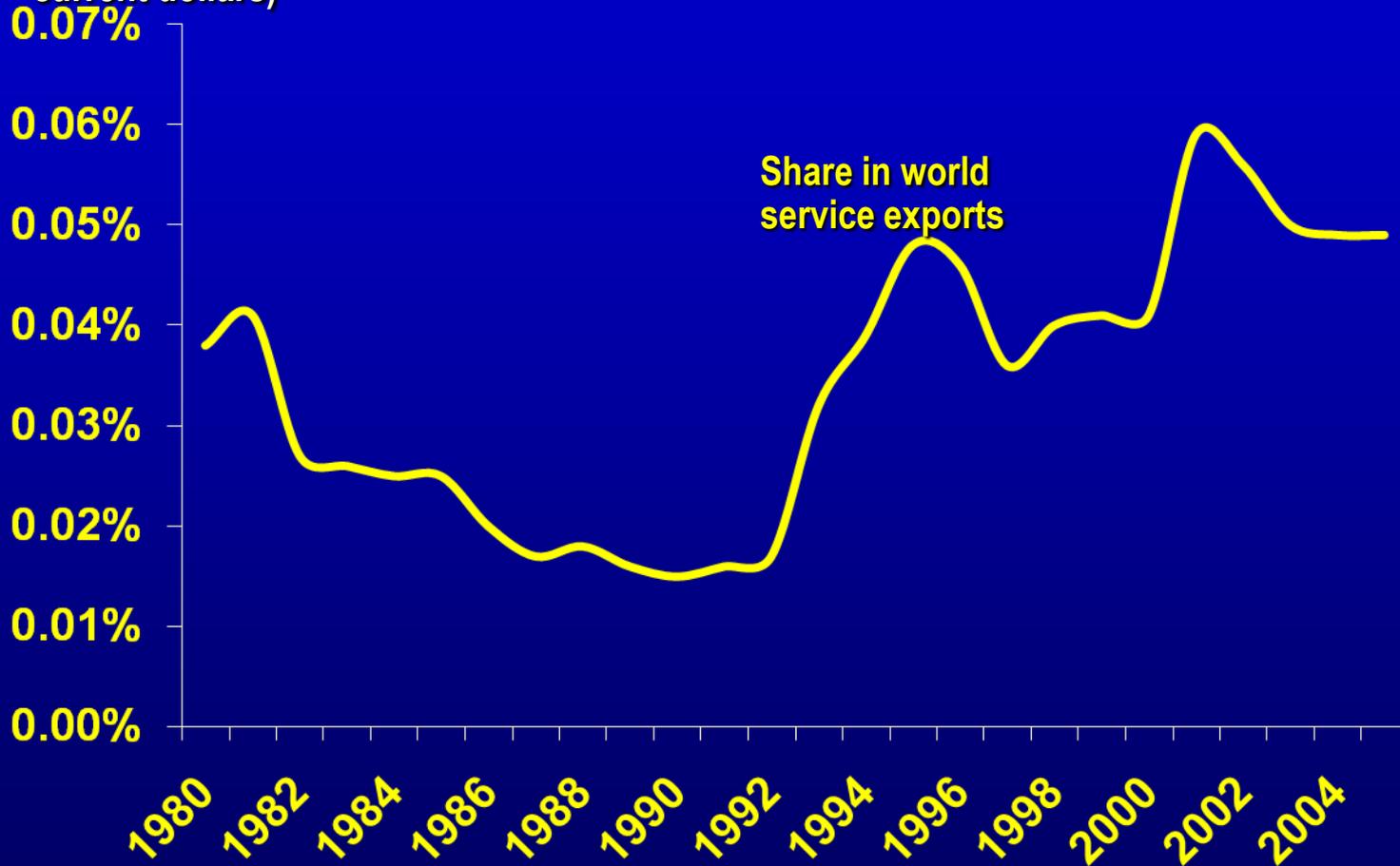
- Discussion of export diversification too often ignores opportunities in services
- Conquering new markets for export services (e.g. offshoring)
- Expanding services relative to dominant merchandise exports (e.g. tourism)
- Catalyzing diversification in other sectors (e.g. demonstration effects of tourism to foster export good discovery)
- Services are part of the solution to export diversification constraints – information, consulting, etc.

# Services are an important element in Tanzania's exports... and tourism is the most dynamic part of it



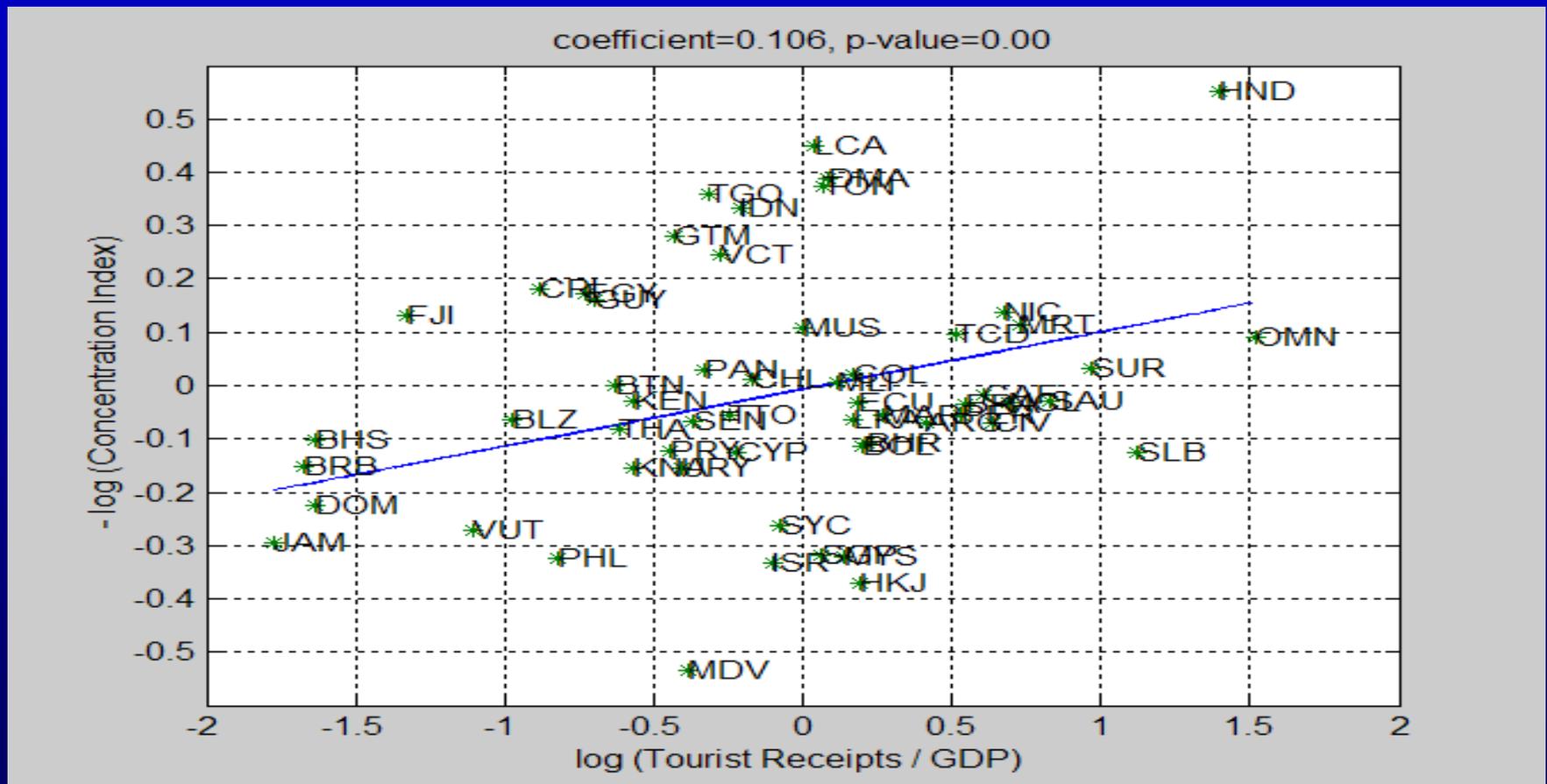
# Tanzania has increased its share in world service trade

Tanzania's exports of services as share of world services trade (% of US current dollars)



# Tourism specialization is positively associated with export diversification

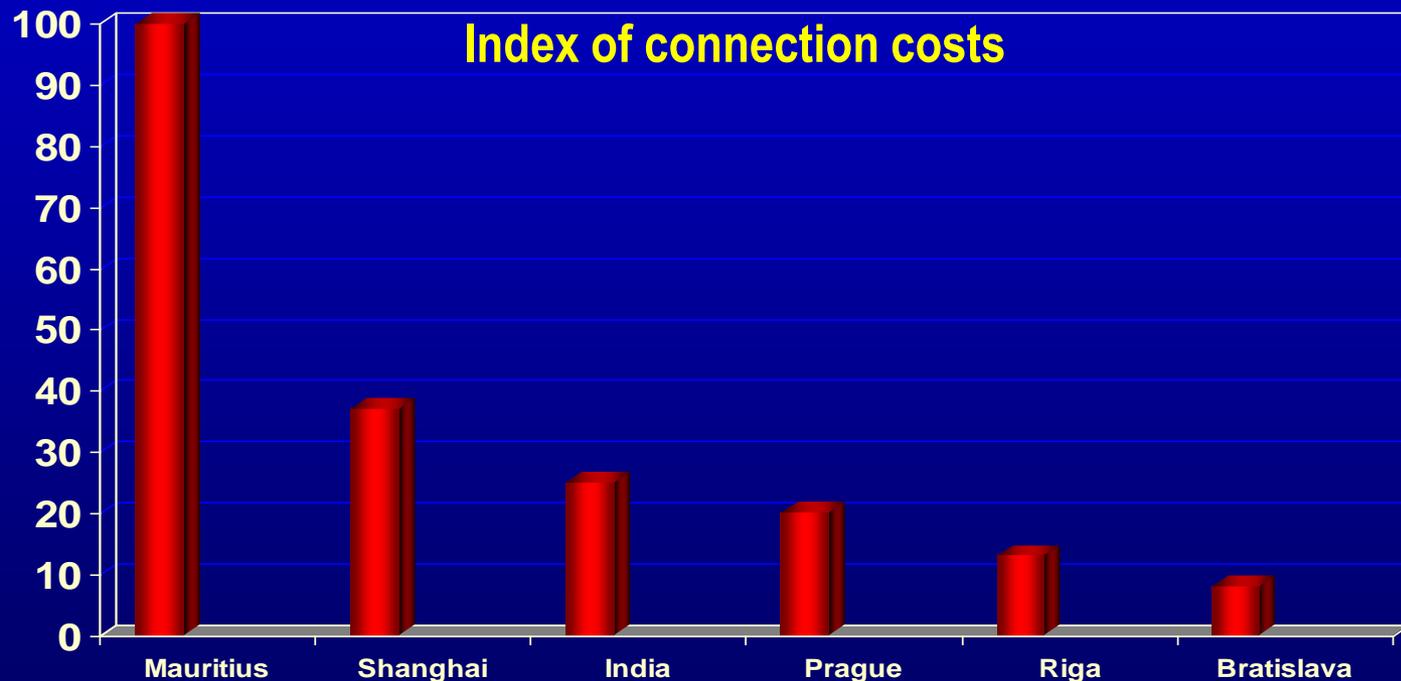
(Herfindahl index, Data for 1993-2003)



■ Source: Lejarraga and Walkenhorst (2009) in Newfarmer et al 'Breaking into New Markets'

# Information on relative cost of backbone services can identify constraints

Telecoms constrains ICT and other services exports in Mauritius



Source: Private firm purchasing same service in all sites

**Backbone services are a critical problem in Tanzania. For example, electricity supply is costly and unreliable...**

Rank (out of 126)	country	Electrical outages (days)
1	Korea	0.04
44	Chile	3.73
53	South Africa	5.45
75	Pakistan	11.47
83	Egypt	13.91
<b>111</b>	<b>Tanzania</b>	<b>60.64</b>
125	Albania	194.23
126	Bangladesh	248.96

Source: World Bank, Investment Climate Assessment

# A comprehensive policy framework for competitiveness and diversification

## ■ *Getting incentives right*

- Policy neutrality; lower costs of doing business

## ■ *Efficient backbone and producer services*

- Competition and contestable market structures
- Regional cooperation

## ■ *Pro-active support of export expansion*

- Identify shortcomings in the marketplace and tailor interventions to target those problems (e.g. export promotion agencies and information deficiencies for accessing new markets)

## ■ *Effective policies to support adjustment*

Weighting and selection from this portfolio will depend on a country's level of income, initial policy framework, supply-side assets, and location

# Allowing new export superstars in goods *and* services to emerge

- Successful export diversification implies adjustment: resources must move from firms that have no long-term future to more efficient firms
- Workers typically get higher returns in new expanding activities, such as services
- But these activities often require different skills – adjustment costs may fall heavily on certain groups
- Some firms may be competitive in the global market but hampered by inappropriate technology and management practices

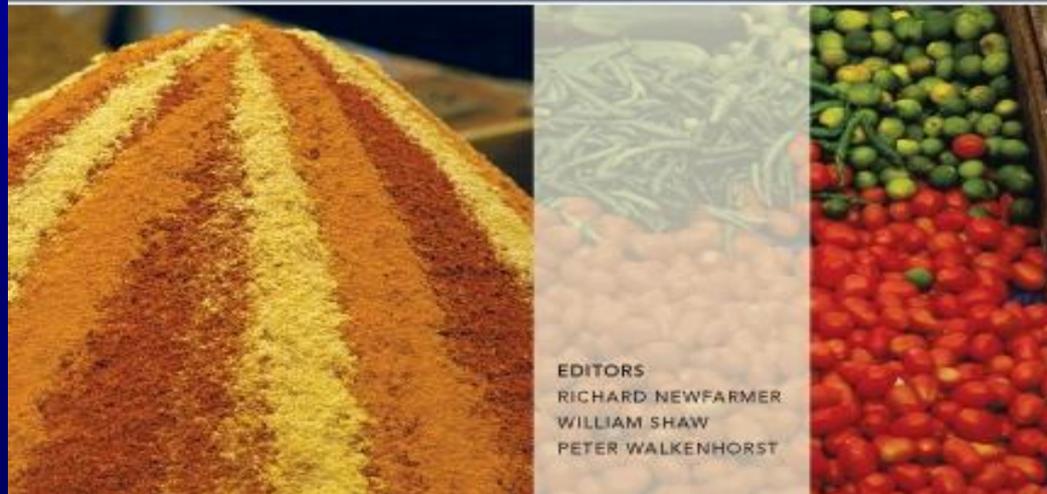


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