

# **UNCTAD**

## **Multi-Year Expert Meeting on Commodities and Development 2013**

**Recent developments and new challenges in commodity markets, and policy options for commodity-based inclusive growth and sustainable development**

Room XXVI  
Palais des Nations  
Geneva, Switzerland

### **Using Commodity Dependence Indicators as Guidance for Development Interventions**

by

**Andrey Kuleshov  
The Common Fund for Commodities**

21 MARCH 2013

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# Using Commodity Dependence Indicators as Guidance for Development Interventions

Andrey Kuleshov

The Common Fund for Commodities



# Outline

- Who is commodity dependent
- Commodity dependence as symptom
- Measuring commodity dependence
- The way forward



# Is commodity dependence an issue?

- Historical: US, Nordic, Malaysia growth took off from natural endowments
- Current: Australia, Canada
- Commodity developers: Brazil, Argentina and Thailand
- Commodity-bound: we all know them



# CDDC or not CDDC?

- Share of exports above benchmark (e.g. Gibbon, 2006)
- CTOT explanation for differences (Cavalcantia et al. 2012)

Is it effective to target commodities?

- Few if any commodities (e.g. cocoa) are still dominated by exports from countries falling into the CDDC group (Burger, 2009)
- Development problems better explained by domestic political and institutional variables? (Acemoglu et al 2004, Robinson et al, 2006)



# Practical approach

EU-ACP: Commodity dependent if observe:

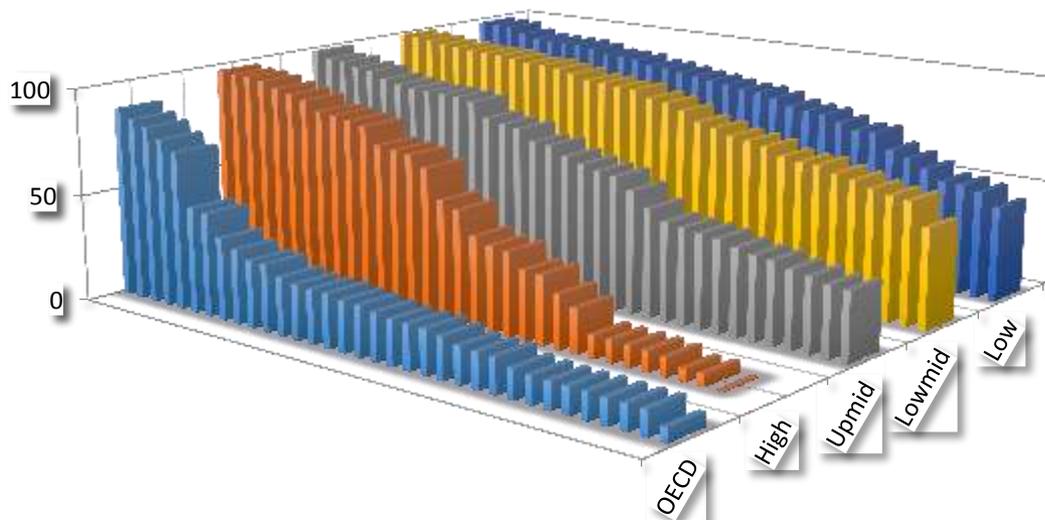
- concentration of economic activity in one or more agricultural commodities; and
- disproportionate share of population dependent on those sectors.

Assumption: targeting commodity dependence in this context an effective way of allocating development resources

EU: “...the term ‘CDDC’ is used for convenience [and] ... should not be taken to suggest that a specific definition exists, or indeed should exist”



# Visualizing the question

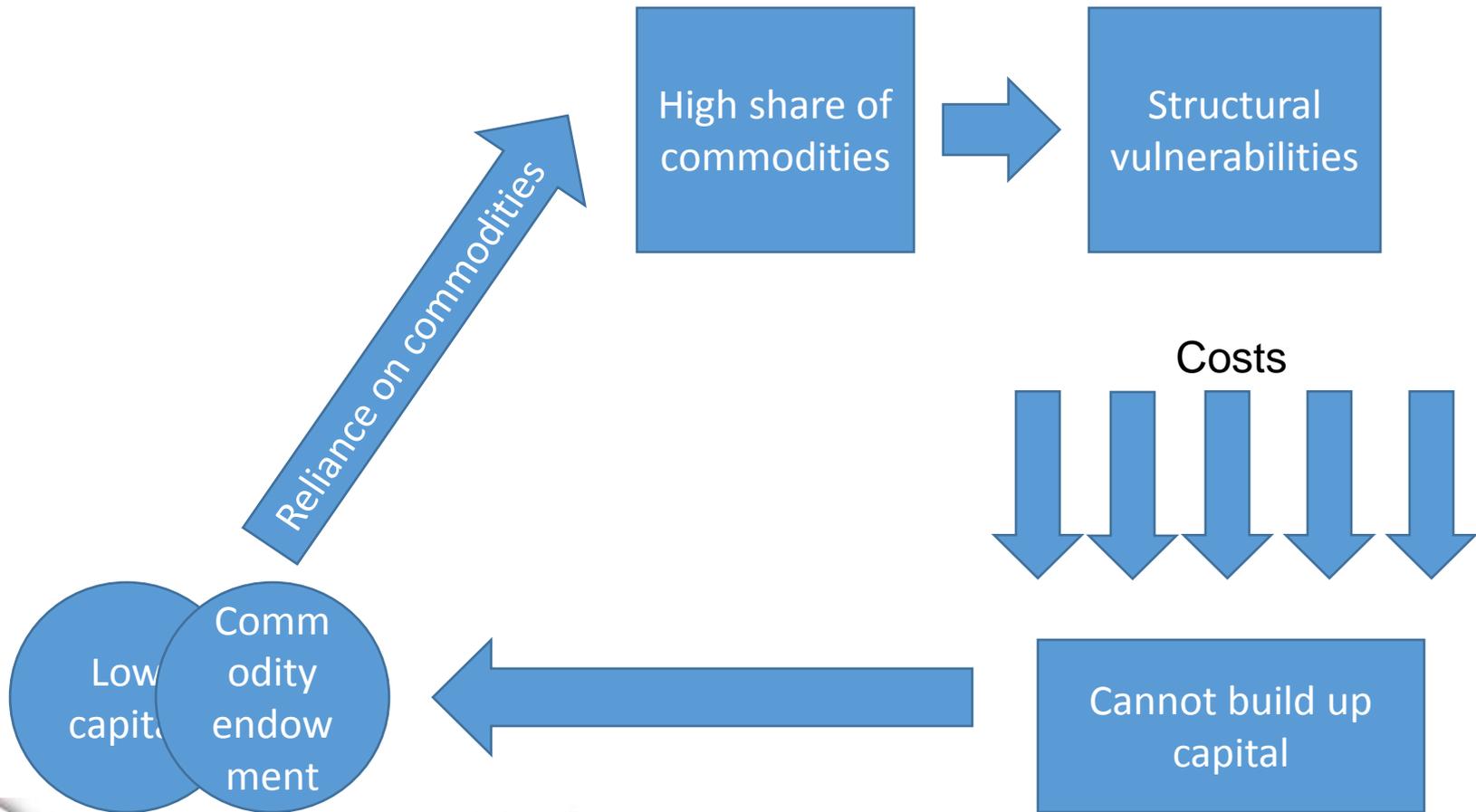


At the high level of productivity an exceptional commodity endowment is required to be competitive.

The higher the productivity, the more difficult for commodity sector to retain a dominant place



# Commodity persistence



# Reliance on commodities and vulnerability

- Reliance on commodities to participate in global trade – rational economic choice if low stock of capital
- Reliance on commodities brings a range of vulnerabilities:
  - Distorted investment
  - Macroeconomic instabilities
  - Governance difficulties
  - Institutional problems
  - etc
- Gains from commodity production and trade offset by costs due to vulnerabilities. Cannot build capital base, stuck with low productivity.

Persistent high share of commodities



# Commodity dependence

- Commodity dependence is condition where a country is unable to convert its natural endowment into sustained economic development
- Commodity dependence is the **outcome and symptom** of failures in addressing economic vulnerabilities associated with commodity production and trade

If commodity dependence is a symptom, what are the underlying issues?



# Identify common determinants of growth *given* high share of commodities

Analysis by Lee Robinson, leerobinsonuk@yahoo.co.uk

- Panel study, 184 countries, 34 variables, average 1995 to 2009
- Principal component analysis of countries at different levels of commodity exports: >50%, >60%, >70% etc
- Test if raising cutoff level changes first 4 PCs; found little change above 70%
- Interpret 4 PCs at >70% and combine into index



# Commodity Vulnerability index

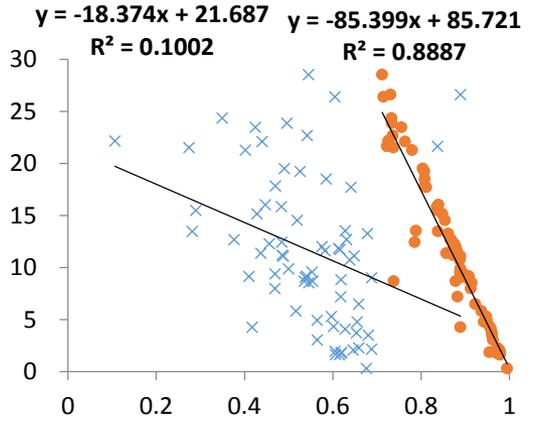
- Component 1: Institutional Strength (-)
  - Resilience factors are very strong, finance system is healthy, growth is sustained and poverty is low
- Component 2: Industrialised Fuel Exporting (-)
  - Poverty levels are low, growth and diversification patterns are occurring in manufacturing sectors and business sectors are strong, high fiscal reliance on commodities
- Component 3: Concentration of economic activity (+)
  - Growth, though high and sustained, is narrow and occurring alongside vulnerabilities. More likely to be short lived growth accelerations
- Component 4: Point Resource Growth, Vulnerability (+)
  - Low manufacturing exports, value added and vulnerabilities not offset by any resilience factors.



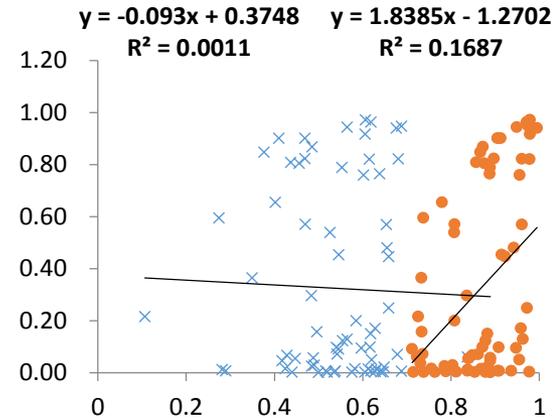


# Comparing the relationships

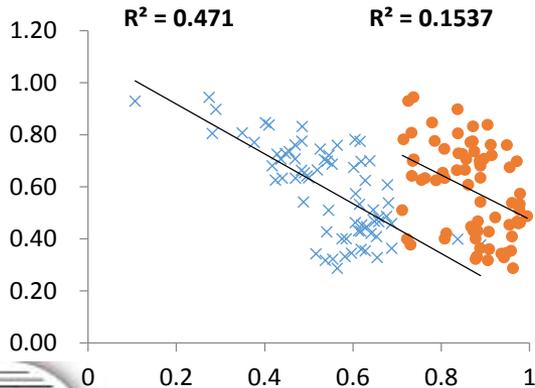
**Manufacturing Exports (% of Exports)**



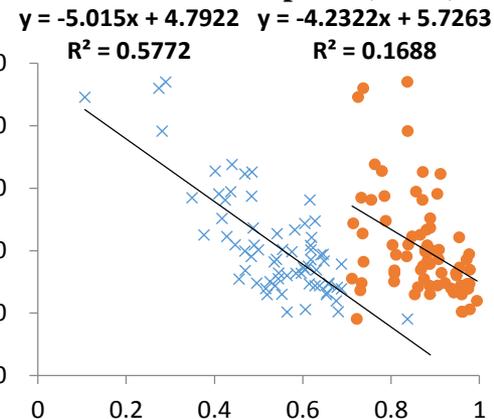
**Fuel Exports (proportion of total Exports)**



**UN's Human Development Index**



**Control of Corruption (index)**

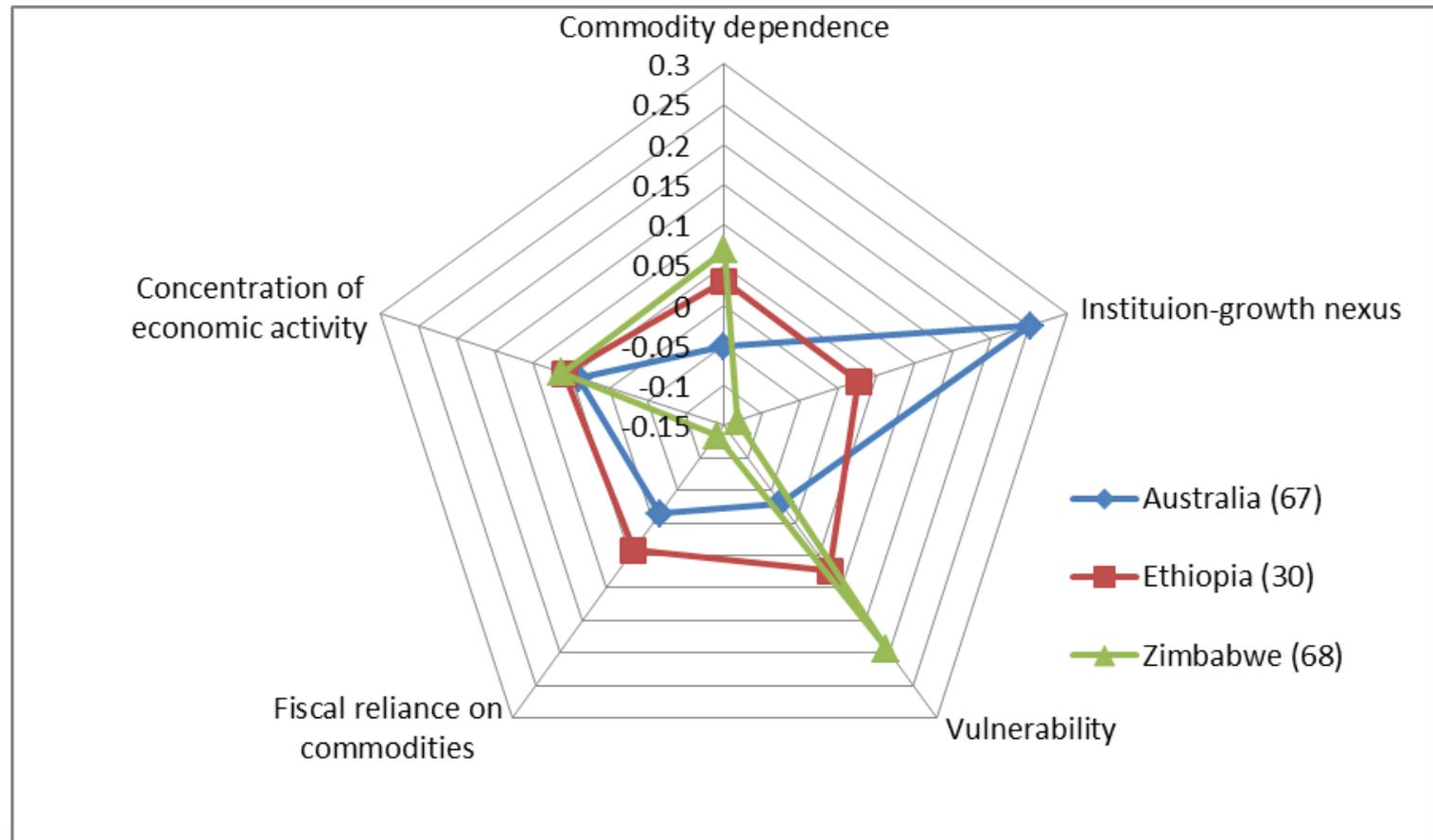


# Top 20 CV index

Rank	Country	Composite index of commodity dependence	Rank by commodity exports
1	Zimbabwe	0.0687	67
2	Gabon	0.0552	13
3	Côte d'Ivoire	0.0428	53
4	Burundi	0.0387	24
5	Nigeria	0.0366	6
6	Sudan	0.0349	10
7	Papua New Guinea	0.0318	7
8	Ethiopia	0.0299	30
9	Angola	0.0299	1
10	Afghanistan	0.0281	69
11	Congo DRC	0.0280	9
12	Libya	0.0274	15
13	Guinea-Bissau	0.0273	12
14	Congo	0.0273	4
15	Algeria	0.0253	8
16	Yemen	0.0238	2
17	Turkmenistan	0.0235	31
18	Cameroon	0.0232	19
19	Tajikistan	0.0227	44
20	Guinea	0.0204	16



# Visualizing the differences



# Conclusions

- Simple measures of commodity dependence as % share uninformative for practical purposes
- Vulnerabilities create a feedback which eats up gains from commodity production and trade
- A few vectors explain large part of differences in performance of countries with high share of commodities
- Can construct an index using these vectors to capture country's capacity to overcome commodity related vulnerabilities

Thank you!

