

How Food Standards and Global Value Chains are Transforming Agricultural Development

"Linking (Rich) Consumers to (Poor) Producers"

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Hamburg, May 2016

Standards and certification are nothing new. They exist since the beginning of **trade**.



Babylon Laws – 4000 years ago

***«If a wine-seller (...) makes the measure
for drink smaller than the measure for
corn,***

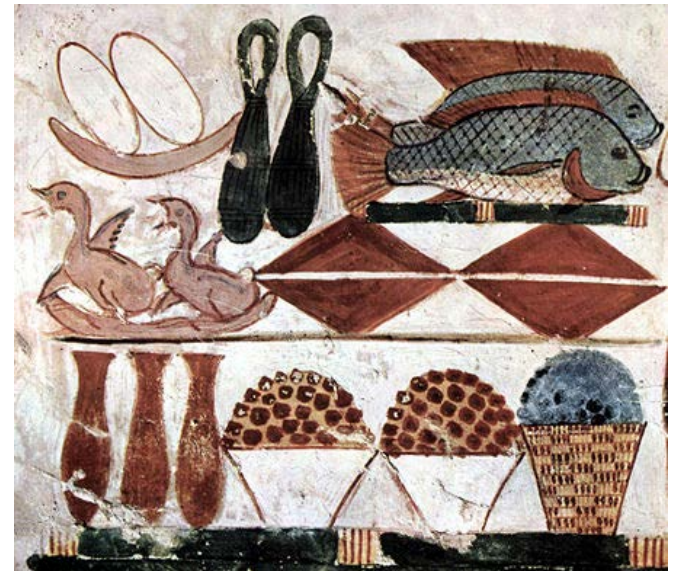
***they shall call that wine-seller to account,
and
they shall drown her in the water.»***

The Code of Hammurabi
Babylonian King, c. 1750 BCE



The Ten Commandments – 3500 years ago

« Do not use dishonest standards when measuring length, weight or quantity. Use honest scales and honest weights »



Holy Bible, Leviticus, Chap. 19,
verses 35–36 (c. 1500 BCE)

Greece – 2500 years ago

Laws in Thasos,
a Greek island reknown for its wine :

***prohibit the dilution of wine
with water***

and

***forbid that small quantities of
wine are sold in large
amphorae.***



Private Standards in the Middle Ages

France, 1292

«Whoever puts into beer ... bay, pimento, or resin is to be fined 20 francs . . .

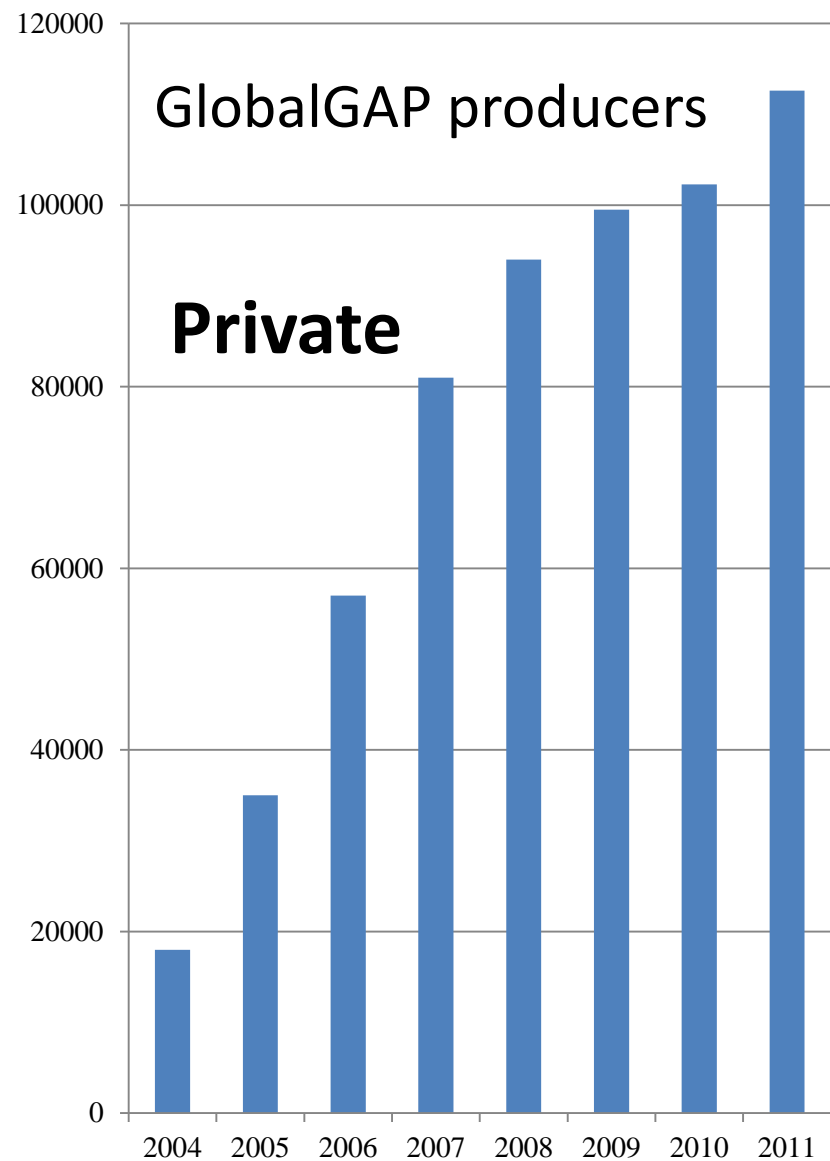
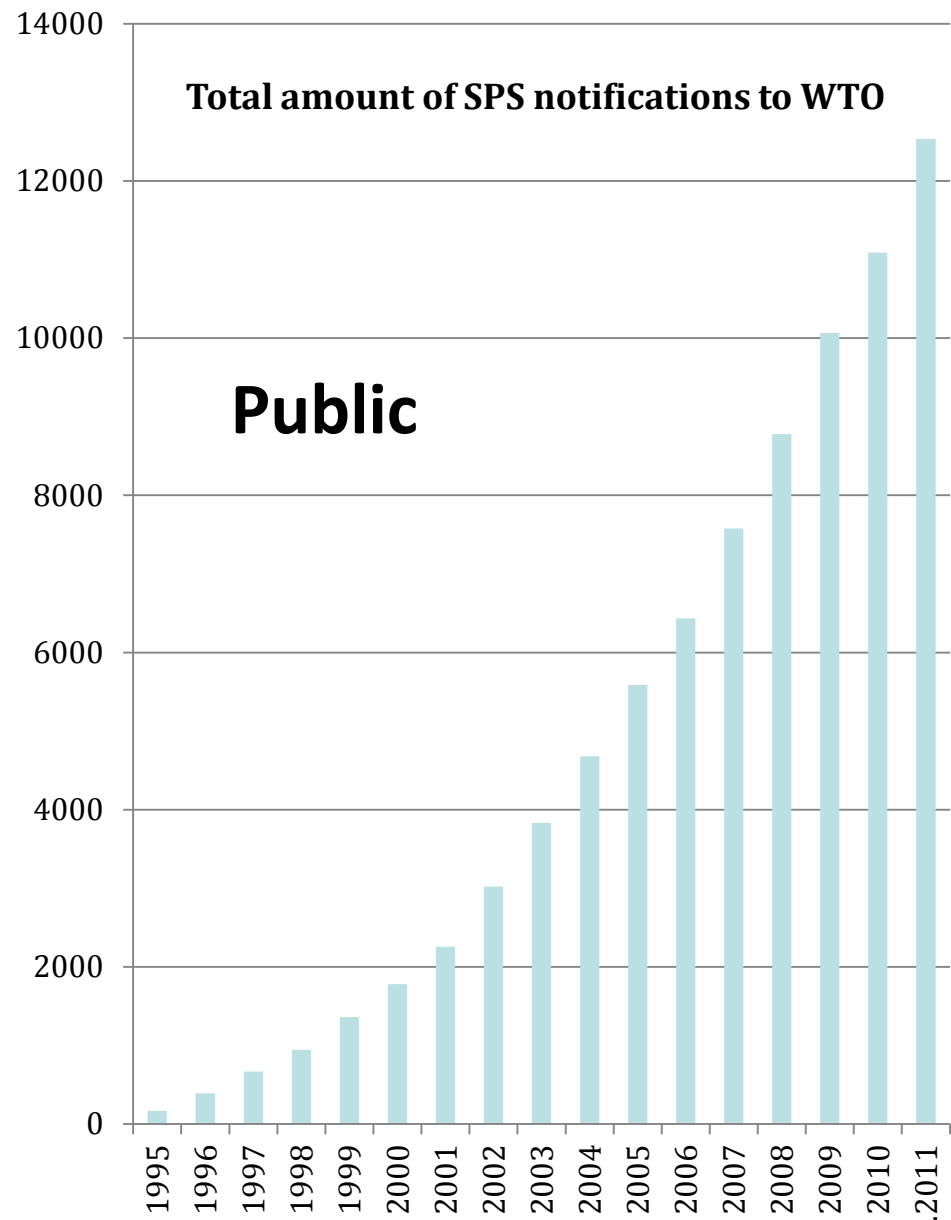
for such things are bad for the head and the body, for the healthy and the sick.»

Statute of the Paris Brewers, 1292



Recently:

More, More stringent, More widespread



Recent Transformation of Global Agri-food Value Chains

1. After WW II : State-controlled VC
2. 1980s and 1990s : Liberalization & privatization transformed value chains (with major disruptions in some countries)
3. Past 20 years : Rapid growth of private sector standards / certification and value chains

The Growth of Standards & Value Chains


(Domestical & international)

- **Drivers:**
 - Economic reforms
 - Income growth
 - Urbanization
 - Foreign investment (FDI)
 - Trade

- **Triggers : Crises and Scandals !**

One Example of Crises and Food Standards





De Standaard

www.standaard.be

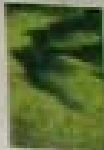
Retrospectieve Marcel Broodthaers 90 • Bartoli en Van Pelogen eerste winnaars 21-11

Proopje staat vier maanden tegen mond- en klauwzeer

Leven op platteland valt stil



VANDAAG IN WETENSCHAP



Het laatste woord...
De uitdaging van...
de wereldwijde...
vrijheid van...
de wereldwijde...

MORGEN IN E-LAND

Het belang van...
grond op het...
daarom...

HET LAATSTE NIEUWS

WET AL HET
NIEUWS UIT
LEUVEN

VRIJDAG 2 MAART 2001

50 FRANK

Ziekte leidt tot moord en zelfmoord

MOND- EN KLAUWZEER

• Auto's vanuit Dover naar vasteland ontsmet

• Engeland-reizigers gecontroleerd in luchthaven

• Eerste 1200 schapen vernietigd



“Country Life Comes to Standstill”

Foot and Mouth Disease (FMD)
UK in 1995-6

"Total Chaos"



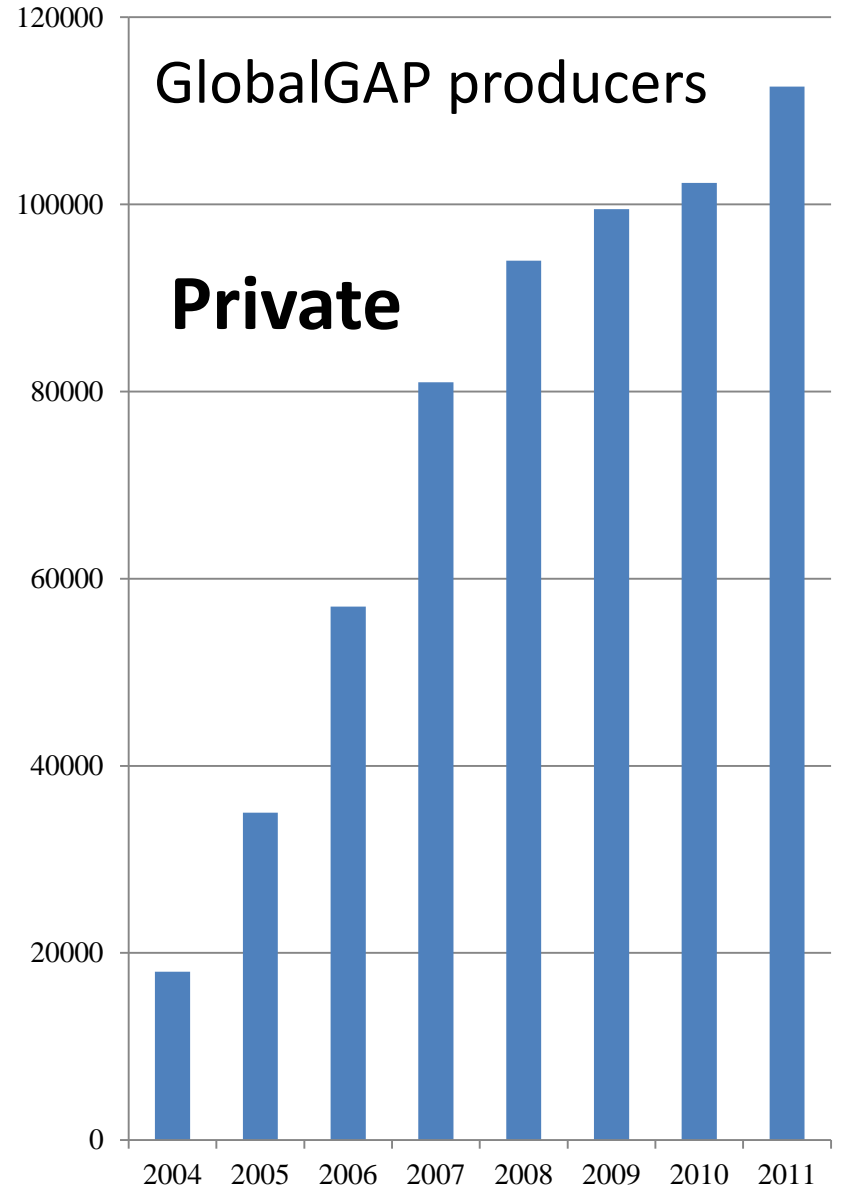
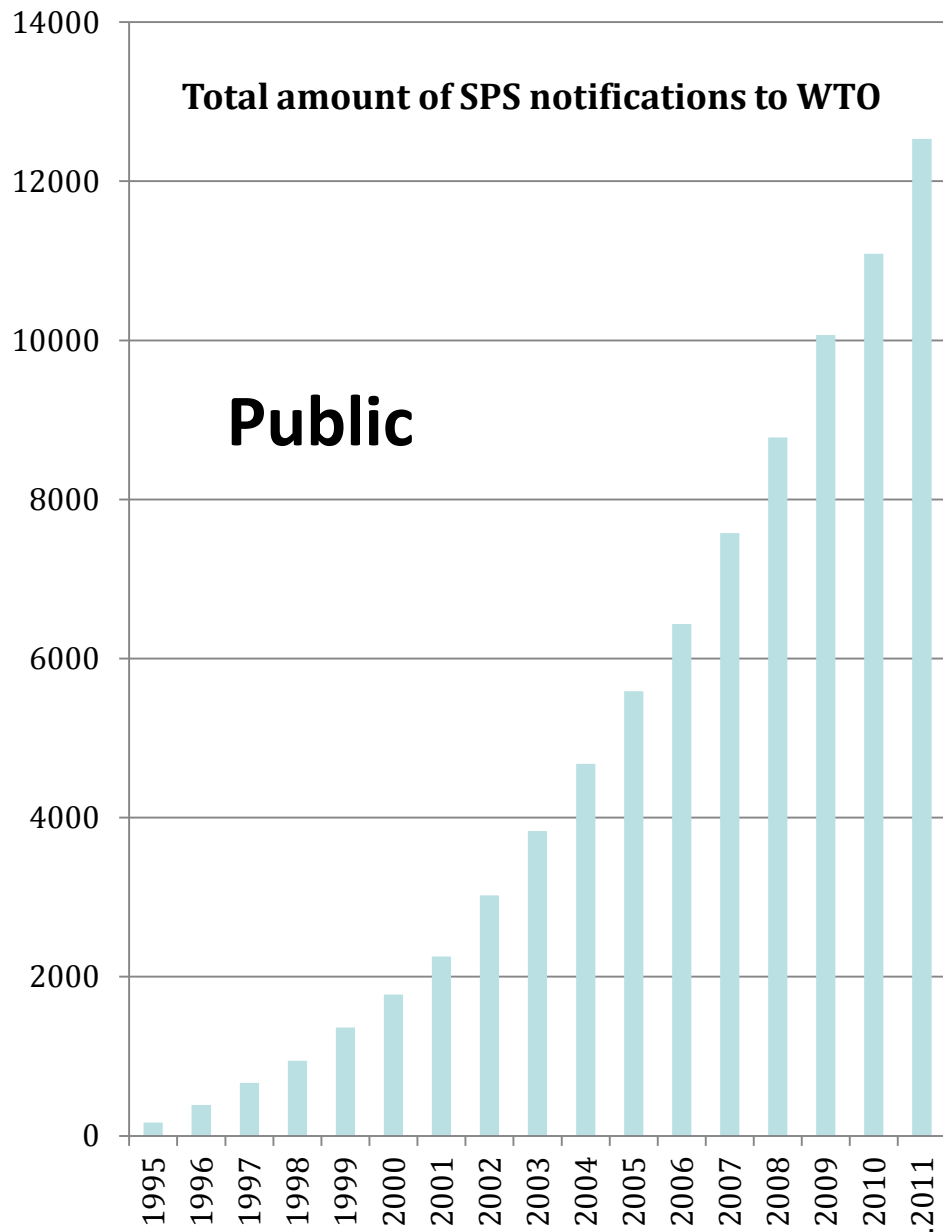
Belgium 1999
Dioxin crisis
"Up to 8.000 additional cancer deaths"



Food Safety Crises Transformed EU Food Standards (**and the world's**)

- 2002: Basic EU Food Law Regulation
- European Food Safety Authority (EFSA)
- **“From Farm to Fork”** approach: **traceability and certification requirements throughout the value chain**

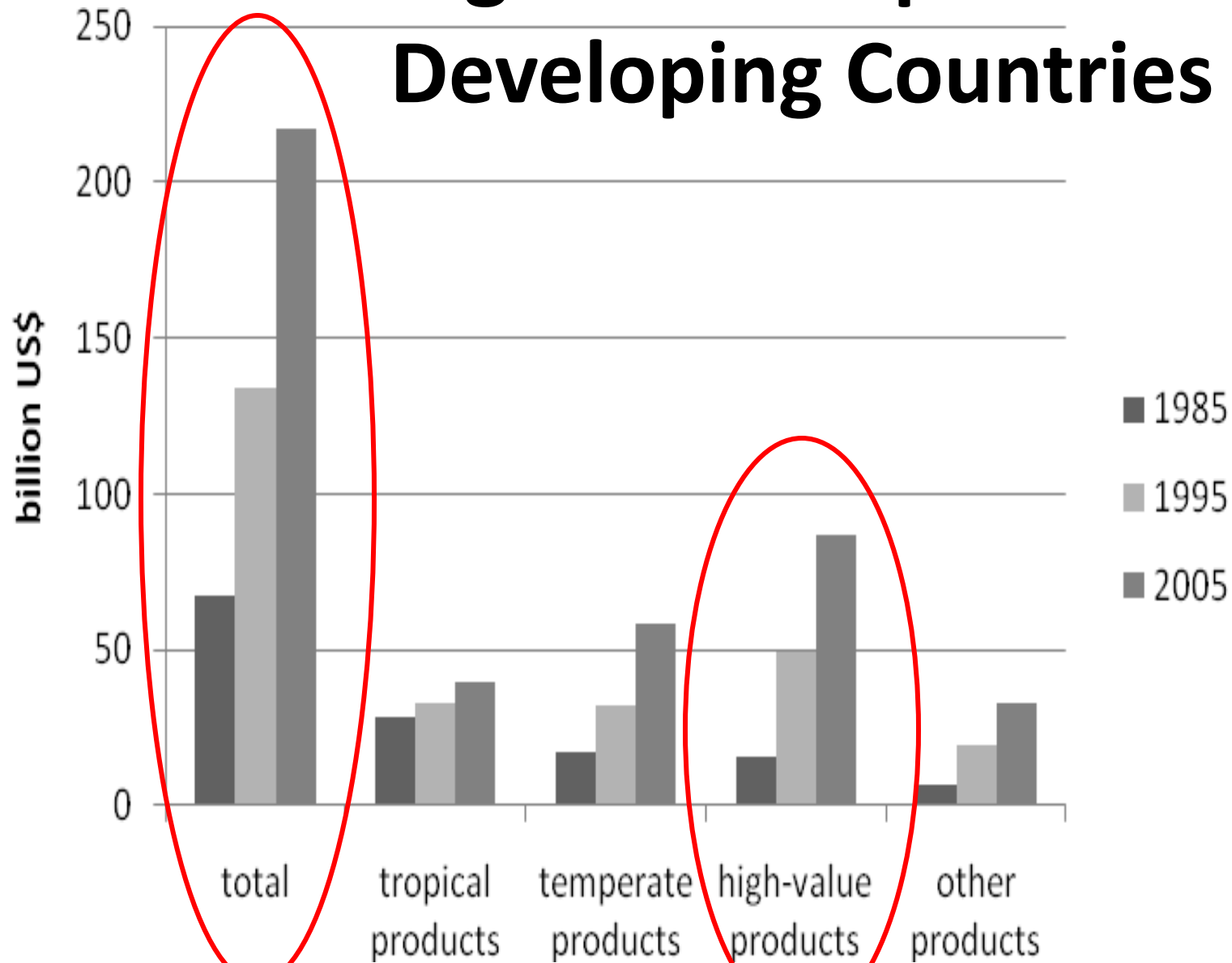
Rapid Growth of Food Standards



Impact of Standards for Development: The Role of Global Value Chains

- Even if there are no/low standards/certification requirements in poor countries, developing country farmers may still be affected by “high standards” **through global value chains**
- => ***“Linking Rich Consumers to Poor Producers”***
(Swinnen and Vandeplas, JGD, 2011)

Agri-Food Exports of Developing Countries

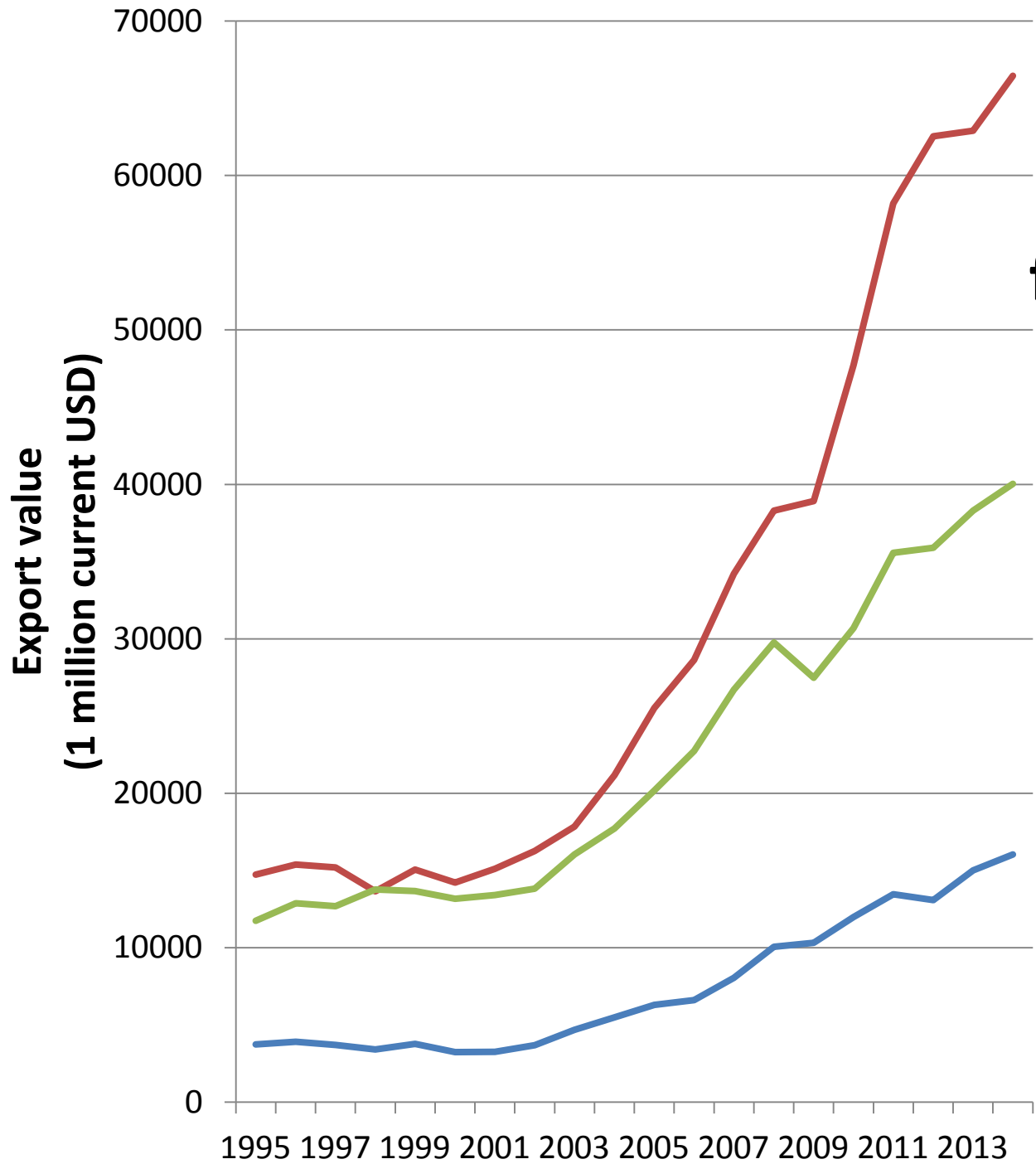


Changing structure of trade

Product Share in Agri-Food Exports from Developing Countries (%)

	1980	2010
<i>TROPICAL products</i> (Cocoa, tea, coffee, sugar, ...)	39.2	16.7
<i>TEMPERATE products</i> (Meat, milk, grains, ...)	28.8	27.0
<i>SEAFOOD, FRUIT & VEGs</i>	21.6	44.1
<i>Other PROCESSED</i> (tobacco, beverages, ...)	10.4	13.2
Total	100.0	100.0

Horticultural exports from developing countries



- Africa
- Asia
- America

Another Example of Scandals and Food Standards

- In 2000-01: British press report on child/slave labor in West African cocoa production → **Public outrage**
- Harkin-Engel Protocol (embodied within the ICI): **Cocoa-chocolate companies committed to “developing industry-wide standards of public certification that *cocoa has been grown without any of the worst forms of child labor*”.**

Rapid Changes: Certifications

Third party certifications:

- Rainforest Alliance, UTZ Certified, Fairtrade Labelling
- **25%** of annual cocoa crop **certified** in 2013
- Rainforest Alliance and Utz Certified more than **doubled** the volume certified **each year** since 2010



Sustainability and Social Standards

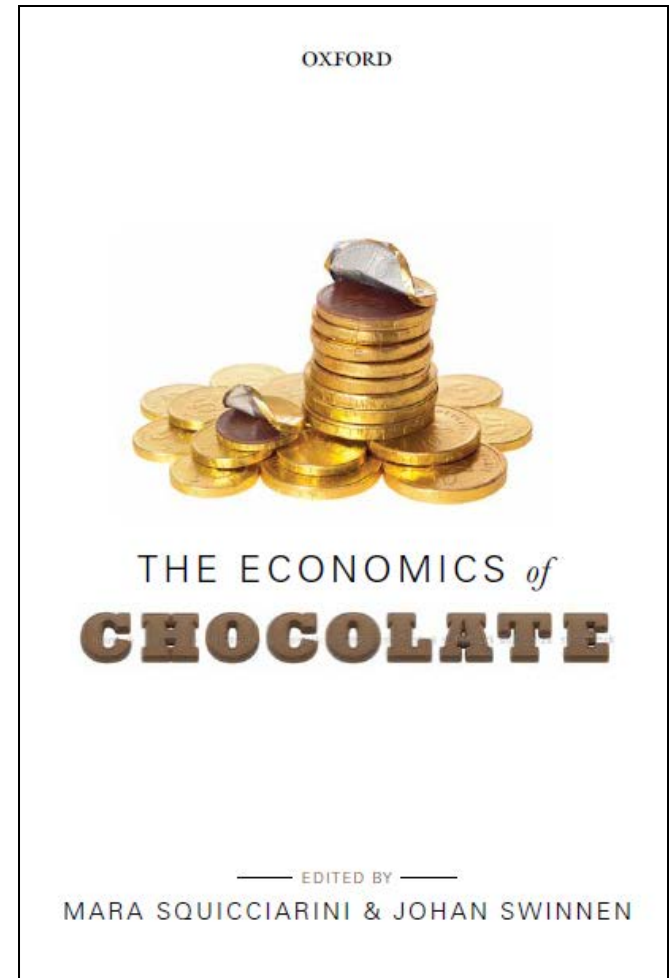
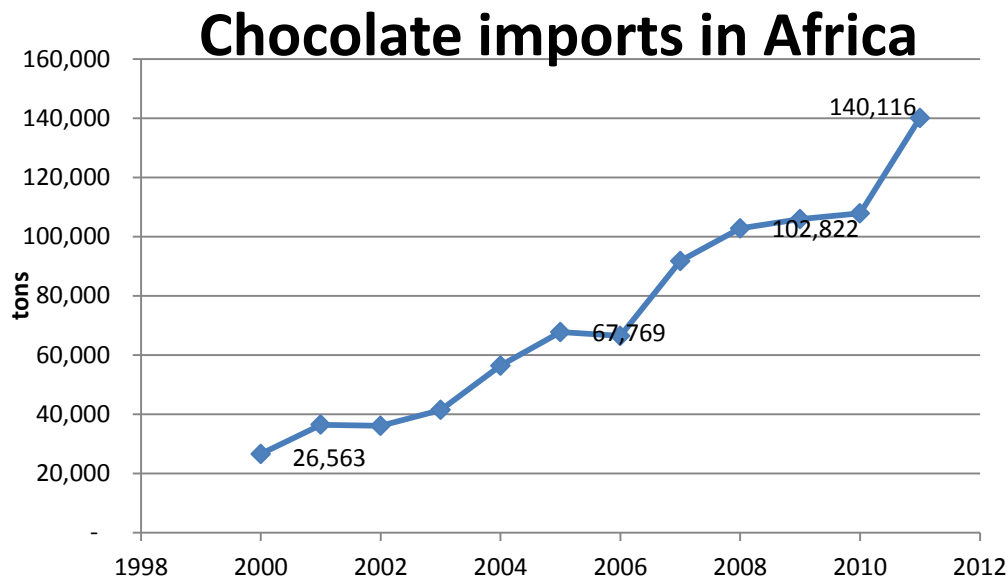
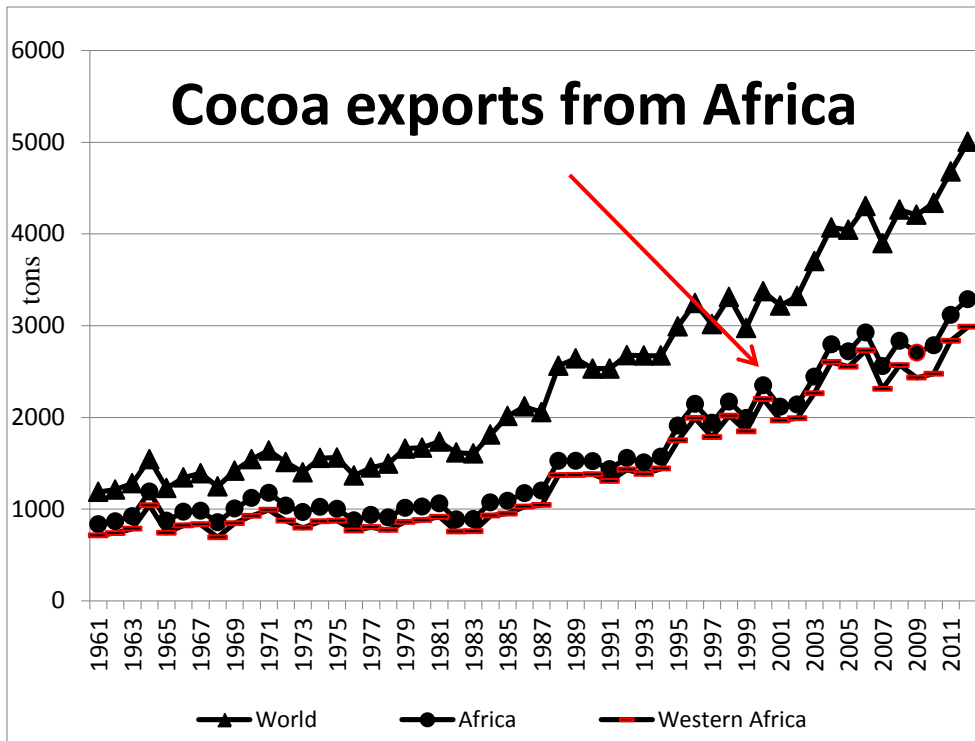
Combined effect of *ethical* and *commercial* concerns

→ Emergence of 'socially responsible' cocoa production



A Changing World of Agri-Food Value Chains

The Cocoa-Chocolate Trade between Africa and EU



In summary ...

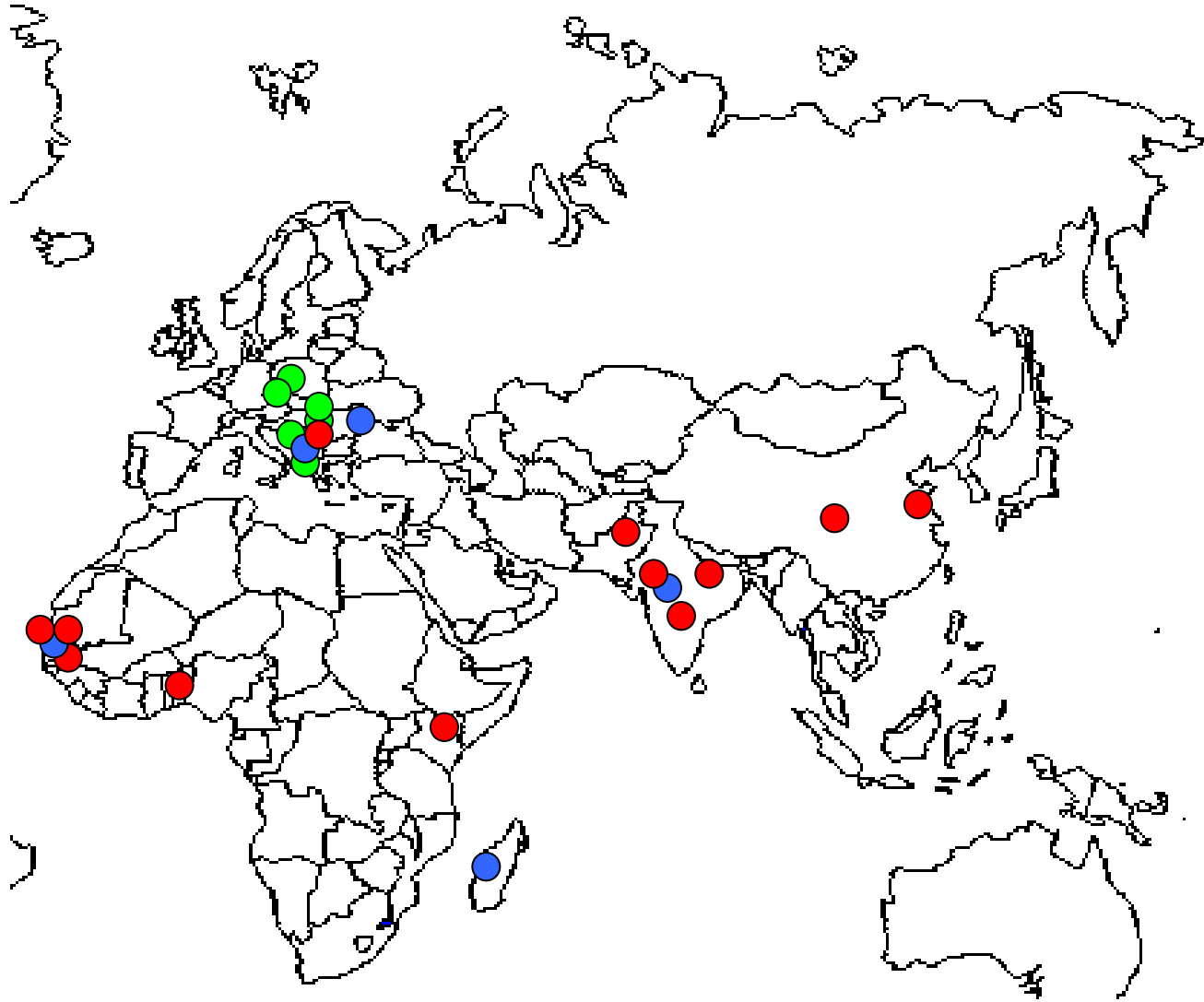
Rapid and dramatic changes

- in standards & certification
- in global value chains

Is this good or bad for developing countries & the poor ?

- Do modern standards & value chains marginalize poor farmers who cannot satisfy the requirements ?
- Do standards induce concentration in value chains and does this lead to rent extraction by agribusiness ?
- If not, does it have any impact ?

Standards & Value Chain Studies



Empirical evidence *

1. Smallholder **inclusion** is **mixed**
(much more than typically argued)
2. Smallholders **can** have **significant benefits** if included, even with **concentrated** supply chains
3. Benefits from **employment** are **ignored**
4. Benefits from **certification** per se are **unclear**

** See reviews by Maertens and Swinnen (JDS, 2012; WTO 2014; ARRE 2015)*

Standards/Certification
& Commodity Characteristics



Governance and Organization
of Value Chain



Surplus Creation & Surplus
Distribution
along the Value Chain

(Impact on Farmers)

**Quality Standards,
Value Chains,
and International
Development**

*Economic and
Political Theory*

JOHAN SWINNEN,
KOEN DECONINCK,
THIJS VANDEMOORTELE,
ANNELEEN VANDEPLAS

Standards & Vertical Coordination in Value Chains

- **Standards** imposed by “**rich consumers**” require specific **investments/inputs** by “**poor producers**”
- Farmer investments are difficult because of various constraints and market imperfections
- This induces **vertical coordination & complex contracting** in the value chains

Implications for farmers & rural households

- **Vertical coordination can imply:**
 - **Transfer** of technology, inputs, know-how, ... to poor
 - (arguably more important than many government technology programs)
 - Efficiency **premia** for poor suppliers
 - **Employment** opportunities for poor households
- **Potentially major implications for farm productivity and poverty (employment)**

Comparative Analysis:

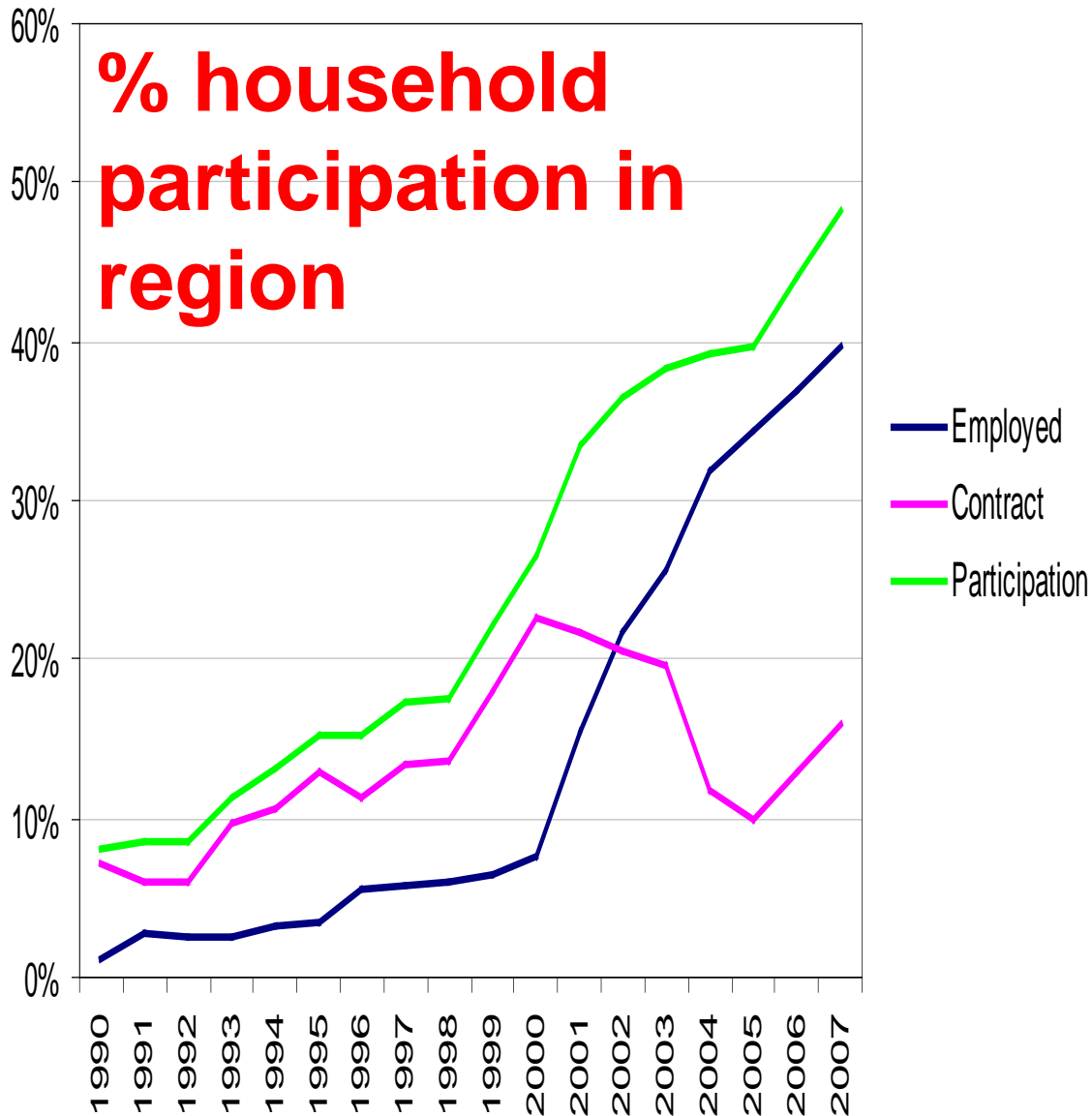
3 Cases of Value Chain Development

	Small-holders	Industry structure	High value exports to EU
Madagascar green beans	100% contract	Monopoly	yes
Senegal green beans	Mixed & changing	Competition	yes
Senegal cherry tomatoes	0%	Monopoly	yes

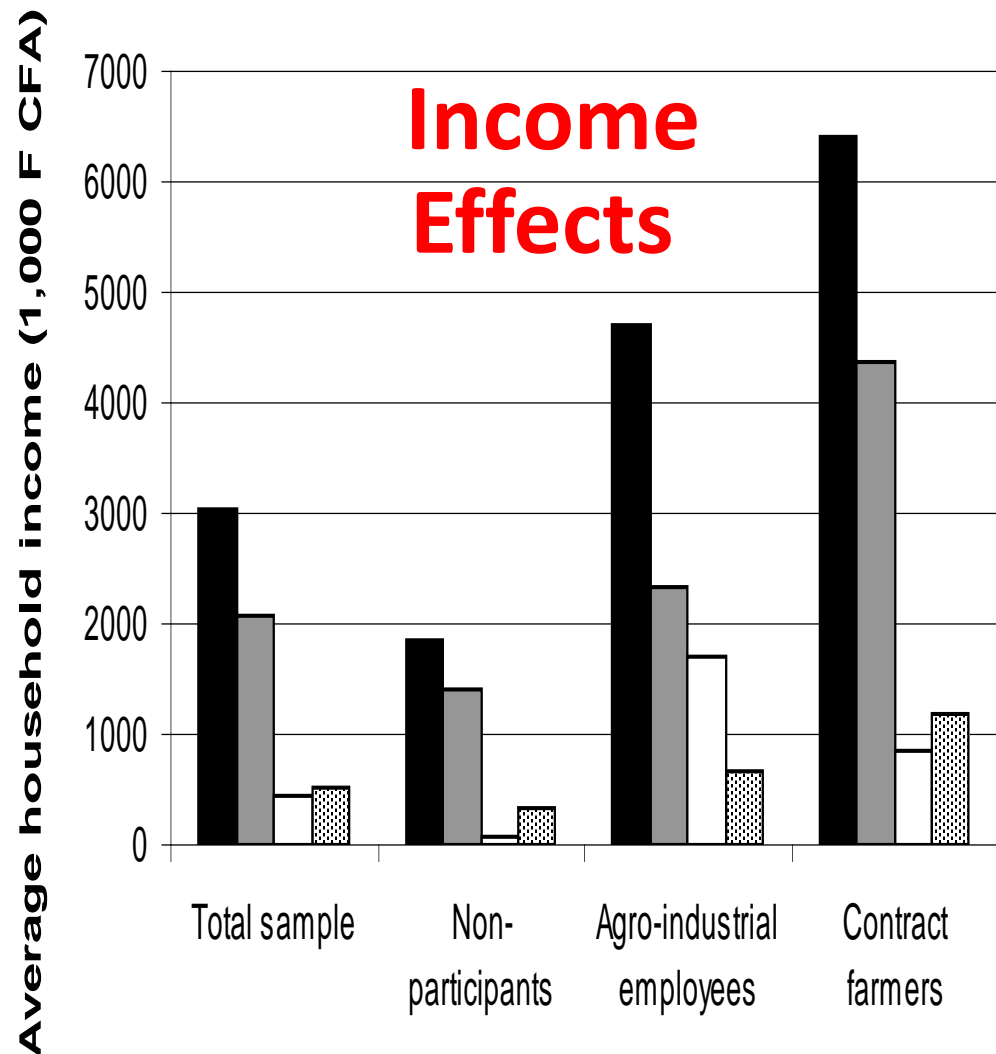
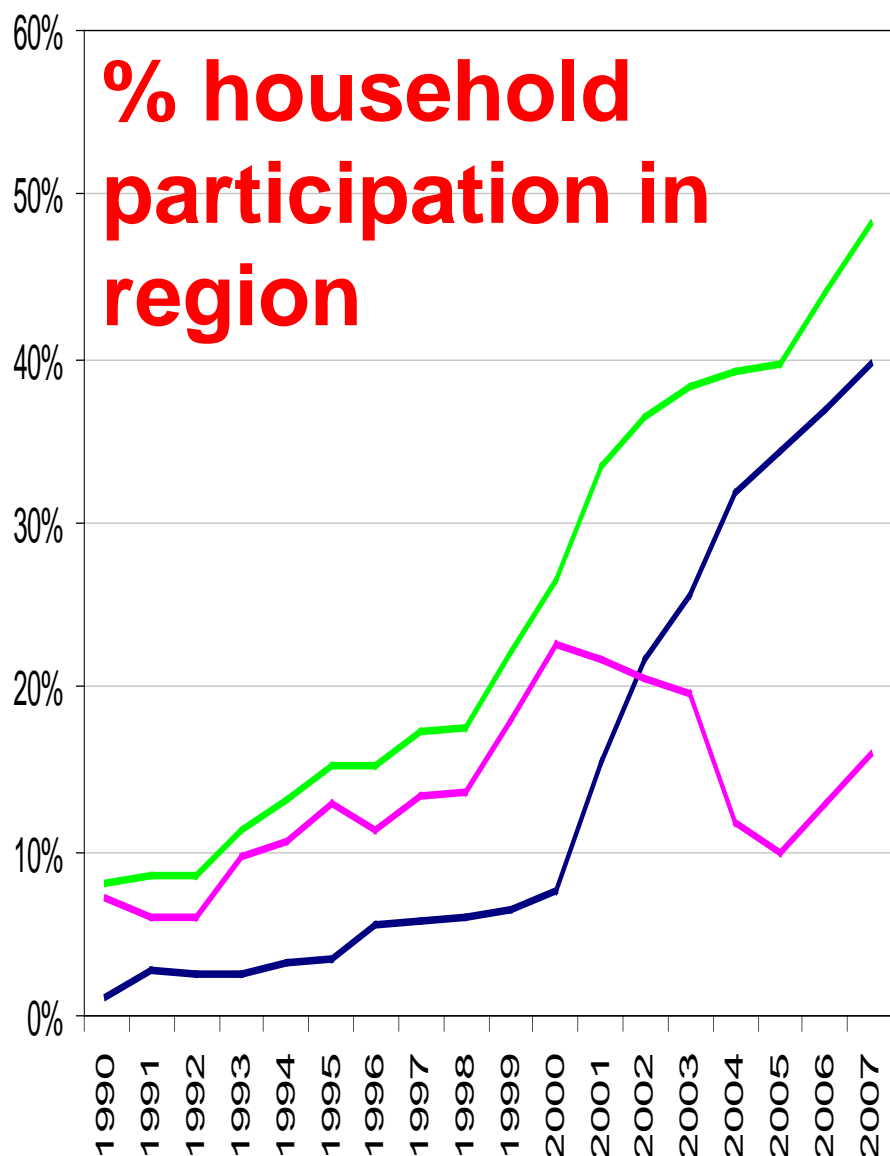
1. Green Bean Exports in Madagascar (to EU)

- **Strict EU standards**, but contracting with very **poor and illiterate local farmers**
- **Rapid growth**
 - 100 farmers in 1990
 - 10,000 small farmers on contract in 2005
- Major **technology** (fertilizer) adoption effects
- Important **productivity spillovers**
 - Rice **productivity** increased by 70%
 - Length of **lean periods** falls by 2.5 months
(with contract: 1.7; without contract: 4.3 months)

2. Green Bean Exports in Senegal



2. Green Bean VCs in Senegal



3. Vertical Integration

Worst Case Scenario ?

Tomato export chain in Senegal

1. Very **stringent standards**
2. Poor country
3. Complete **exclusion of smallholders**
4. Extreme consolidation
5. Foreign owned multinational

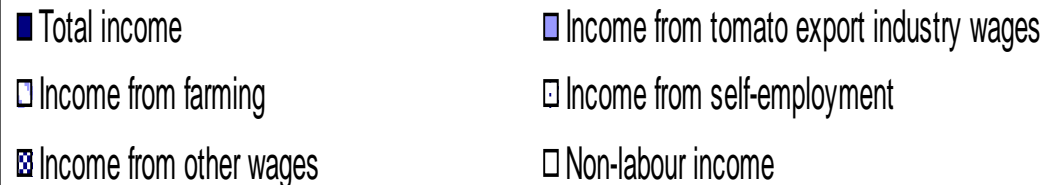
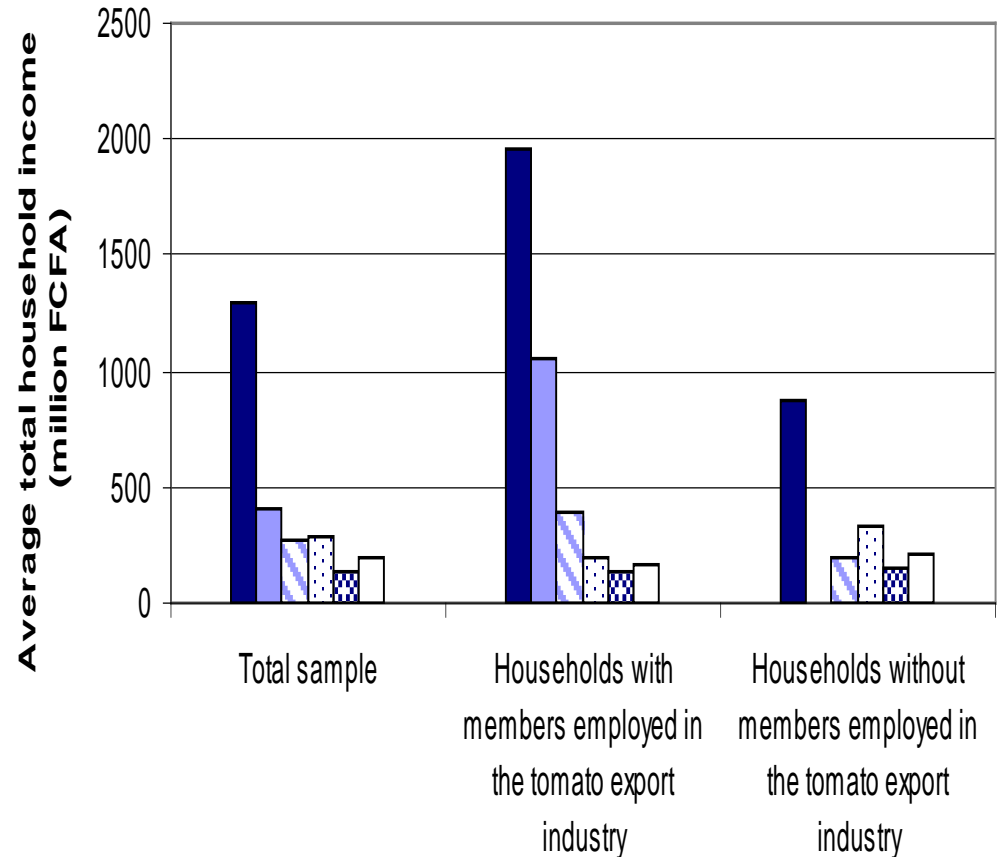
(Maertens, Colen and Swinnen 2011 ERAE)



Standards, Value Chain Employment & Incomes of Poor

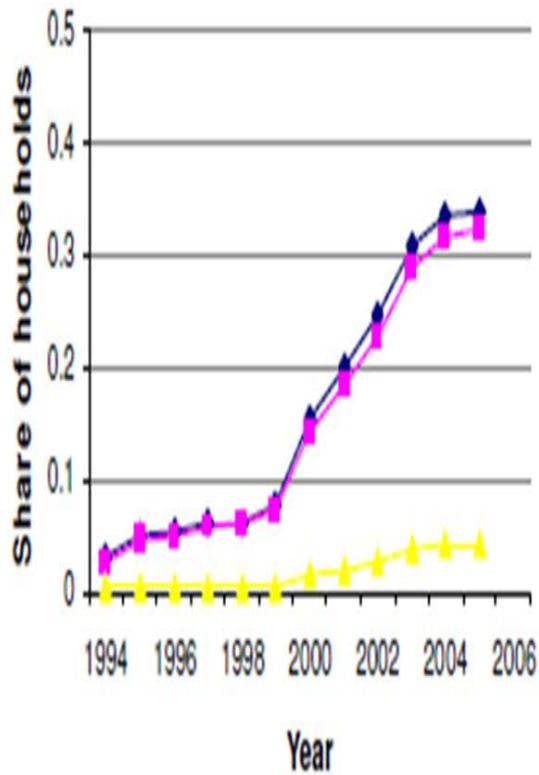
Worst Case Scenario ?

- Strong employment growth: **40% of households** in the region **employed**
- **HH incomes double:** strong income and anti-poverty effects

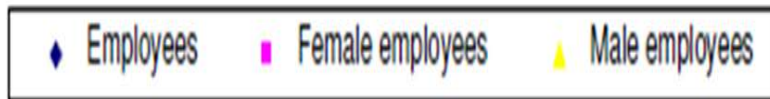
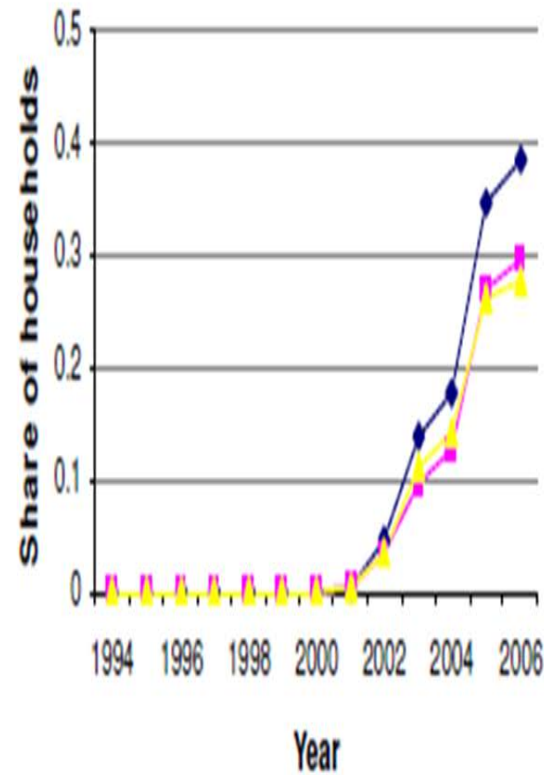


Gender Effects

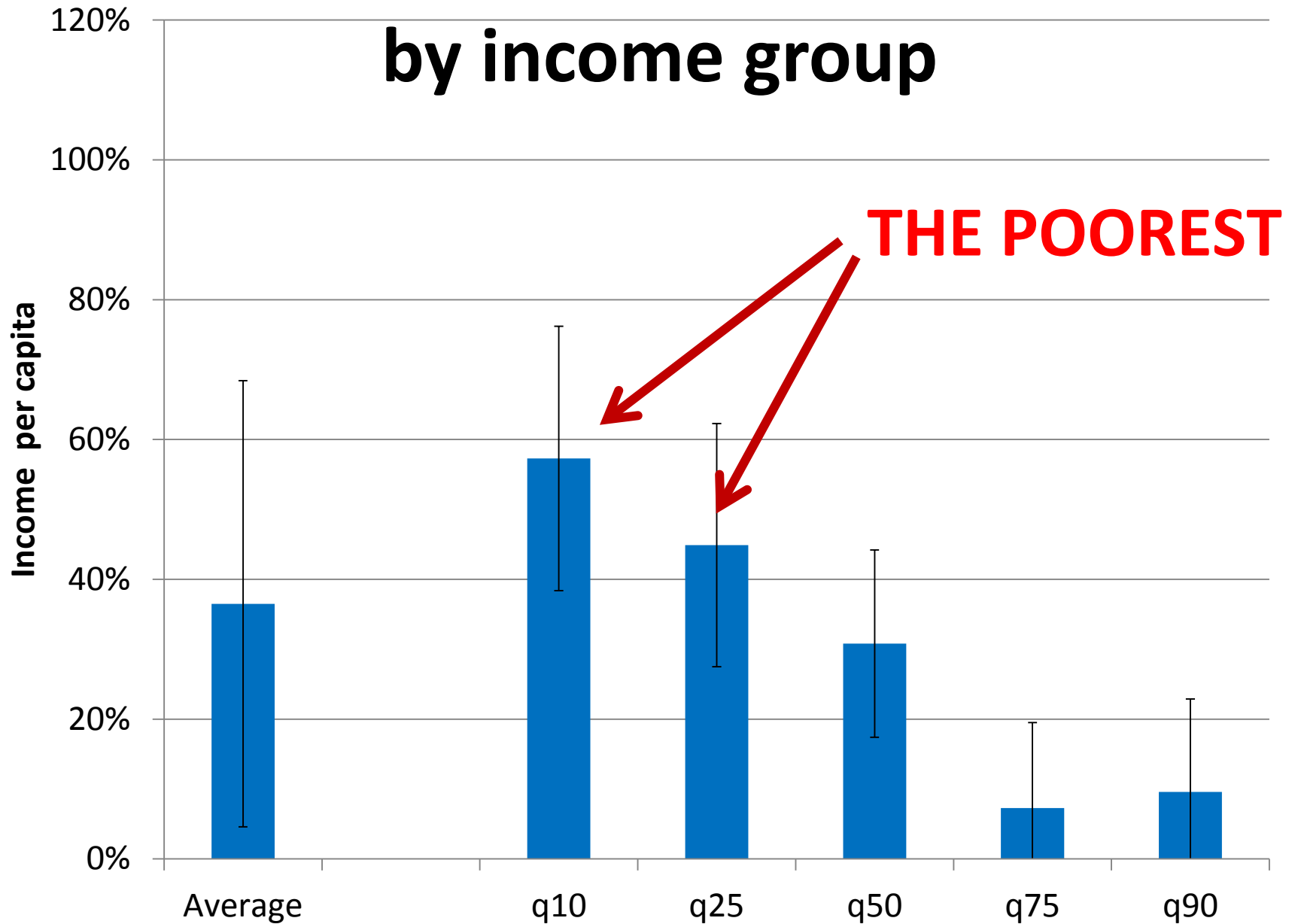
Case-study "Les Niaves"



Case-study "Senegal River Delta"



Income effect of employment by income group



Employment effects

- Especially important for the **poorest** and for **women**
- Our hypothesis:
 - ... ***women and the poor may benefit more and more directly from employment in large-scale production and agro-industrial processing, than from smallholder contract-farming.***
 - (Maertens & Swinnen , 2012 JDS)
- Note that in this perspective **indicators that look only at “participation of small farmers” may be (double) misleading** in terms of welfare and poverty effects

Impact of Certification: The case of Voluntary Sustainability Standards (VSS) (incl. FairTrade etc) in coffee in Ethiopia

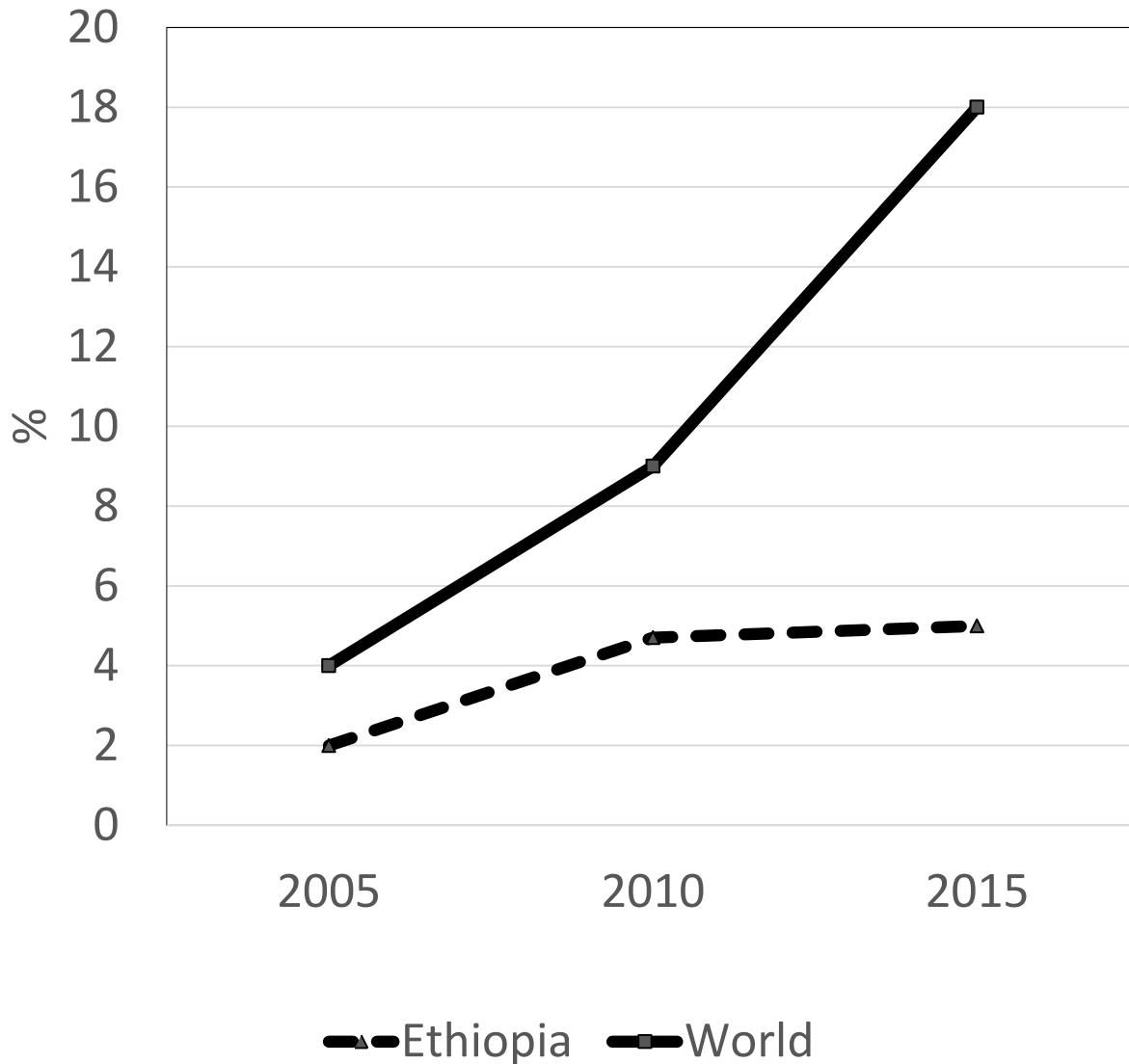


Joint study of Bart Minten
and colleagues from IFPRI
& LICOS



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VSS Certification in Coffee



Globally:

- VSS rapidly taking off (4% in 2005, now 20%)
- Coffee leading agricultural commodity in VSS

In Ethiopia:

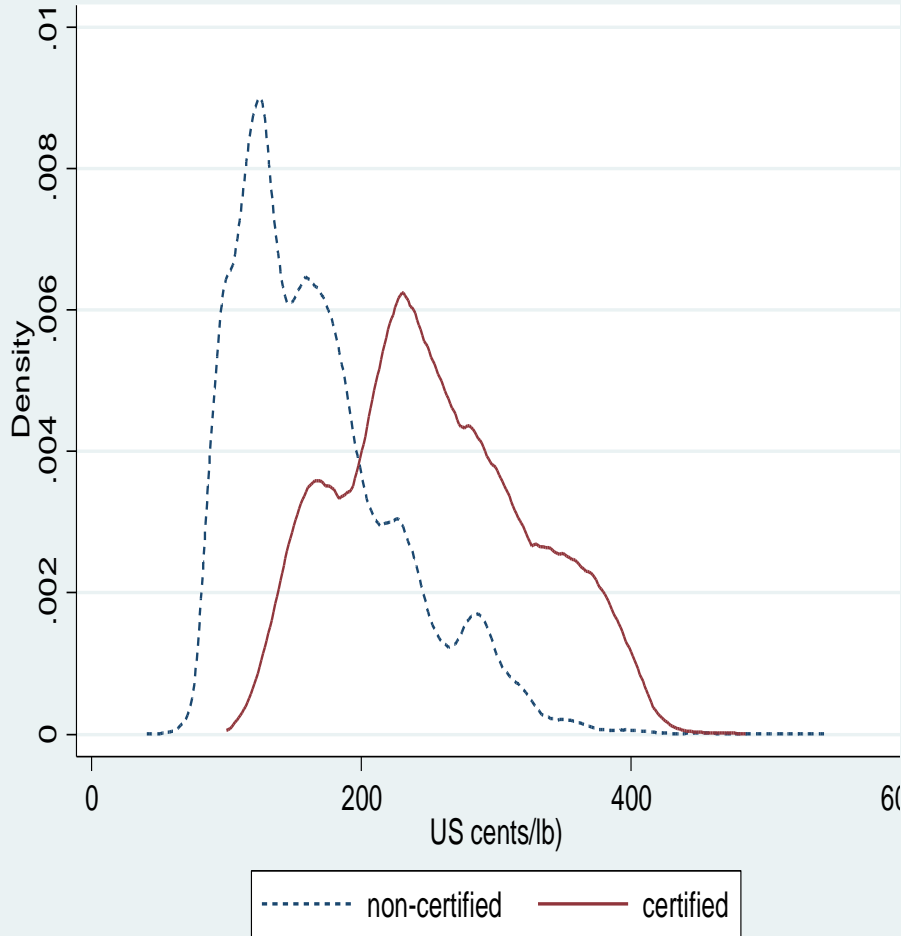
- VSS low and slow
- Coffee most important export product : 25% of its forex earnings
- 4 million coffee farmers

Previous VSS certification impact studies

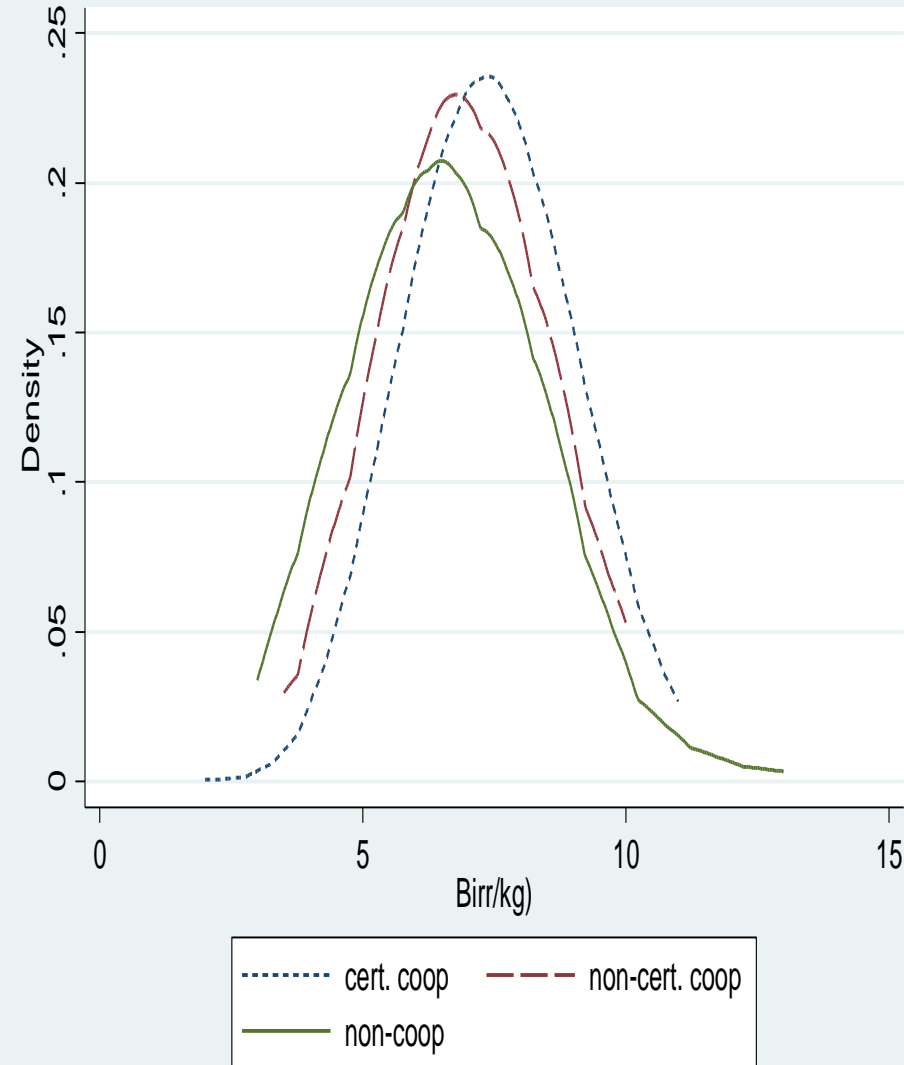
- **Relatively few studies, mixed findings:** some positive, some no effect
- Impact of VSS on coffee producers :
Few studies, Mixed findings:
 - some positive (Ruben and Fort; 2012; Wollni and Zeller, 2007);
 - some no effect (Jena et al., 2012; Cramer et al., 2014)

Quality premiums VSS certification

Export level



Farm level



Quality premiums VSS certification

Transmission to farms = 1/3

- Where does the rest go ?
- Certification costs = +/- 20%
- Overhead and marketing costs of cooperatives and unions = +/- 30%

Why low uptake of VSS certification ?

- Average coffee farmer in Ethiopia, if all coffee certified: income increase with 7.5 USD (per year !)
 - With 100% premium transmission, increase of 20 USD per year...
- Impact of certification on coffee producers' welfare is small.
- Combined with implementation costs : low adoption of Fair Trade in Ethiopia

Conclusions

- Dramatic changes in standards and global value chains
- Potentially important implications for poor farmers
- Actual effects are mixed and nuanced
- There is much need for better empirical research to understand what the actual effects are (in contrast to the “stories”).

