



Public and private standards, global supply chains and development

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Introduction

- Increasing public and private food standards in agri-food trade
 - Need to distinguish and understand the differences & complex relations between public and private standard
- ⇒ implications for developing countries?
 - Implications for trade?
 - Do standards diminish developing countries' export opportunities?
 - Are private standards more restrictive than public standards?
 - Implications for development?
 - Do standards reduce the gains from trade for (small & poor) suppliers/producers in developing countries?

Public and Private Standards

- Often no clear distinction between public and private standards in scientific literature and policy discourse
 - Public standards mandatory standards
 technical regulations
 - Private standards voluntary standards
 commercial standards
 market-driven standards
- Not very comprehensive as both public and private standards are varied with respect to who sets and adopts the standards, the issues they address and the way their implementation is controlled and enforced.

Public and Private Standards

- Distinction of standards according to who sets standards and how they are enforced

Figure 1: Public & private standards

	Public	Private
Mandatory	Regulations	Legally-mandated private standards
Voluntary	Public voluntary standards	Voluntary private standards

Source: Henson and Humphrey, 2008

Public and Private Standards

- Differentiation of standards
 - **Public mandatory standards:** standards set by public authorities and legally enforced (e.g. EU General Food Law)
 - **Public voluntary standards:** standards set by public authorities but not legally enforced – optional laws (e.g. Label Rouge)
 - **Legally-mandated private standards:** standards set by private entities and adopted and enforced by governments (e.g. certain ISO standards)
 - **Private voluntary standards:** standards set and controlled by private entities (e.g. GlobalGAP)



Public and Private Standards

- Various functions of the system of standards
(Henson, 2008; Henson & Humphrey, 2008)
 - **Standard-setting:** the development of a standard through the formulation of rules and procedures.
 - **Adoption:** a decision by an entity to adopt the standard. This can be the same entity that develops the standard, but does not have to be.
 - **Implementation:** implementation of the rules through the application procedures by another entity.
 - **Conformity assessment and enforcement:** systems of control and enforcement to provide assurances that the rule has been implemented as intended.

Public and Private Standards

- The involvement of private companies in different functions of the standard system varies

Figure 2: Functions associated with systems of standards

Function	Regulations	Public Voluntary Standards	Legally-Mandated Private Standards	Voluntary Private Standards
Standard-setting	Legislature and/or public regulator	Legislature and/or public regulator	Commercial or non-commercial private body	Commercial or non-commercial private body
Adoption	Legislature and/or public regulator	Legislature and/or public regulator Private firms or organisations	Legislature and/or public regulator	Private firms or organisations
Implementation	Private firms	Private firms	Private firms	Private firms
Conformity assessment	Official inspectorate	Public/private auditor	Private auditor	Private auditor
Enforcement	Criminal or administrative courts	Public/private certification body	Criminal or administrative courts	Private certification body

Source: Henson & Humphrey, 2008

Public and Private Standards

- Further differentiation of private voluntary standards:
 - According to the private actors who set the standards
 - According to the attributes they address
 - According to their roles and the motives of standard-setters & adopters
 -



Public and Private Standards

- Differentiation of private standards according to who sets the standards
 - Standards set by commercial (companies, industry associations, ...) or non-commercial (NGO's,...) entities
 - Collective versus chain-specific (or single-company) standards (Balsevich et al, 2003)
 - **Collective standards** set by a group or association of companies (e.g. GlobalGAP)
 - **Chain-specific standards** set by a single company (e.g. Tesco Nature's Choice and Filières Qualité Carrefour)



Public and Private Standards

- Differentiation of private standards according to who sets the standards
 - Standards ordered according to the degree of producer autonomy in driving the standard (Fulponi, 2006)
 - **Pure-producer standards:** set, adopted and implemented by producers, independently from downstream food companies
 - **Quasi-producer standards:** developed by retailers, processors or manufactures in cooperation/consultation with producers
 - **Pure buyer standards:** developed by retailers, processors or manufactures, independently of producers or with minimal consultation



Public and Private Standards

- Differentiation of private standards according to the standard attributes
 - Private standards have focused more on process attributes while public standards are often product standards (Humphrey and Henson, 2008)
 - **Product standards:** focus on characteristics of the product
 - **Process standards:** focus on the processes of production, handling, processing, transport, distribution, ...
 - Standards on different issues: food safety, quality, labor, ethical aspects, environmental aspects, animal welfare, ...



Public and Private Standards

- Differentiation of private standards according to the standard attributes
 - Standards to be implemented at different levels of the supply chain
 - *Farm-gate or agricultural standards* with a focus on primary production (e.g. GlobalGAP)
 - *Manufacturing and distribution standards* (e.g. BRC, HACCP, ...)
 - Visibility of standards (Fulponi, 2006)
 - ***Business-to-consumer standards (B2C)***: standards that are communicated to consumers, usually through a label
 - ***Business-to-business standards (B2B)***: standards that are invisible for consumers

Public and Private Standards

- Differentiation of private standards according to their role and motives of standard-setters & adopters (Aragrande et al, 2005; Humphrey and Henson, 2008; Humphrey and Smitz, 2001)
 - **Risk management standards**
 - To provide assurance that products and production processes comply with minimum requirements e.g. public regulations
 - Mitigation of reputational/commercial risk; increase consumer confidence
 - Mostly food safety standards
 - Mostly not communicated to consumers, B2B standards
 - Mostly collective standards
 - Closely related to public standards
 - E.g. GLOBALGAP, Safe Quality Food, BRC

Public and Private Standards

- Differentiation of private standards according to their role and motives of standard-setters & adopters (Aragrande et al, 2005; Humphrey and Henson, 2008; Humphrey and Smitz, 2001)
 - **Product differentiation standards**
 - Supply differentiated products (with differentiated product and process attributes) to distinguish from competitors
 - Improve market share through product differentiation
 - Mostly concerns issues that are not regulated by public standards
 - Mostly communicated to consumers through labels, B2C standards
 - Mostly individual company standards or non-commercial standards
 - Closely related to public standards
 - E.g. Organic standards, Freedom Food, Tesco Nature's Choice, ...

Public and Private Standards

- Evolution of private standards
(Fulponi, 2006; Humphrey and Henson, 2008)
 - Initial focus on food safety (& quality) aspects, increased focus on ethical, environmental, animal welfare aspects
 - Increased importance of pure buyer standards
 - Retailers' incentives to undermine or control producer standards and keep their leading position in supply chains
 - Increased importance of product differentiation standards
 - Product differentiation standards increasingly employed as the basis of market competition
 - Risk management standards
 - Increased harmonization to enjoy economies of scale (e.g. GLOBALGAP benchmark system)
 - Will public or private standard-setting prevail?

Public and Private Standards

- Evolution of private standards
(Fulponi, 2006; Humphrey and Henson, 2008)
 - OECD countries have been the main drivers of (public regulations &) private standards but this could change ...



Public and Private Standards

- Private standards in developing countries
 - The use of private standards spreads in developing countries through FDI in the food retail sector (Reardon et al, 2003)
 - Exporting companies increasingly adopt/implement private standards set by industrial country standard-setters
 - E.g. GlobalGAP, HACCP, BRC, ... increasingly implemented in developing countries
 - Increased participation of developing countries in private-standards setting
 - As market competition moves beyond price, towards product differentiation standards
 - E.g. KenyaGAP, ChileGAP, Origine Senegal,



Public and Private Standards

Table 1: Number of EurepGAP certified producers in different regions (2006)

Country	No. of certified suppliers
Europe	33,130
Latin America	2,979
Asia	2,369
Africa (including North Africa)	2,354
North America	289
Total	41,121

Source: Graffham , Karehu and MacGregor (2007)



Public and Private Standards

Table 2: Number of EurepGAP certified producers in Sub-Saharan Africa (2006)

Country	No. of certified suppliers
Cote d' Ivoire	19
Ghana	85
Kenya	386
Senegal	3
South Africa	1,448
Tanzania	20
Uganda	1
Zambia	4
Zimbabwe	14
Total	1,980

Source: Graffham , Karehu and MacGregor (2007)

Public and Private Standards

- Private standards
 - Varied 'landscape'
 - Dynamic 'landscape'
 - Complex relations with public standards
 - Increased participation of developing countries



Implications for developing countries

- Implications of increasing public and private standards for developing countries: two main concerns
 1. Public and private standards act as new **non-tariff barriers to trade**, diminishing the agri-food export opportunities of the poorest countries that face multiple constraints in complying with stringent standards
 2. Public and private standards **reduce the beneficial effect** of poor country participation in agri-food exports because
 - Small business and smallholder producers are excluded from high-standards supply chains because of their inability to comply with high standards; and
 - They are exploited in high-standards supply chains because of their low bargaining power vis-à-vis large international food companies that set and adopt high standards

Trade implications

- Standards-as-barriers to trade
 - Standards impede trade and diminish especially the export opportunities of developing countries who face multiple constraint in complying with standards
 - Type of barriers:
 - Standards as **protectionists tools**: discriminate and bar imports from developing countries
 - Standards as **technical barriers**: complexity of standards & high cost of compliance, in combination with a low capacity and multiple constraints in developing countries
 - Standards as **commercial barriers**: move the supply chain towards system of preferred suppliers and long-term trading relations, which impedes market penetration for developing countries
 - Standards as **administrative barriers**: conformity assessment causing delays and hold-ups

Trade implications

- Standards-as-catalysts to trade

(Henson and Jaffee, 2008, Jaffee and Henson, 2005; Henson and Humphrey, 2008)

- Standards **facilitate trade** between countries with diverging implicit norms and help to reduce transaction costs, promote consumer confidence, and increase developing countries access to markets
- Standards provide a bridge between producers in developing countries and consumer preferences in high-income markets and could be used as **catalysts for upgrading and modernization** of developing countries' food systems and improving their competitive capacity
- Standards have been used by **successful countries & sectors** to (re-)position themselves in competitive global markets



Trade implications

- Public versus private standards
 - Setting standards:
 - private standards often set higher rules than public standards
 - ⇒ private standards lead to higher compliance costs and technical barriers to trade (to the disadvantage of poor countries)
 - private standards are often process standards while public standards are often product standards
 - ⇒ private standards can act as catalysts to trade and provide producers the information to upgrade supply chains for conformity with public standards
 - Standard adoption:
 - Producers can choose to implement private standards or not because they are voluntary
 - Yet, private standards increasingly adopted by a large number of buyers in high-income markets ('de facto' mandatory)

Trade implications

- Public versus private standards
 - Conformity assessment:
 - Public standards: through inspection
 - ⇒ cost of inspection largely borne by standard-adopter
 - ⇒ border inspection creates administrative barriers
 - Cost of border detentions and delays can be very high
 - Private standards: through certification
 - ⇒ cost of conformity assessment largely borne by suppliers/producers
 - Certification costs can be very high, especially for small producers
 - Benchmarking, group certification systems, and the spread of accredited certification bodies reduce costs of private certification
 - ⇒ certification reduces administrative barriers



Trade Implications

- Evidence from Peruvian asparagus export sector
 - Peru: important supplier of fresh, frozen and canned asparagus to the EU and US
 - Public regulations largely aligned with EU and US requirements
 - Exports realized by large & medium producing-exporting companies and smallholder producers
 - Interviews with 7 large and medium producing-exporting companies (oct-nov 2009)



Trade Implications

- Evidence from Peruvian asparagus export sector
 - Interviews with 7 large and medium producing-exporting companies (oct-nov 2009)
 - exporters-producers hold several private certificates (GLOBALGAP, BRC, EFSIS, ...)
 - Cost of conformity assessment borne by the companies: for public audit (500 \$) and for private BRC audit (4500\$) + certification (7000 \$); yet these costs are not large in terms of overall costs (<1%)
 - Conformity assessment in importing countries:
 - Border inspections and delays are problematic and expensive
 - Frequency of border inspections and delays increases during certain seasons
 - Large variety of public standards is a problem; makes it impossible to try out working with different buyers

Trade Implications

- Evidence from Peruvian asparagus export sector
 - Interviews with 7 large and medium producing-exporting companies (oct-nov 2009)
 - Main benefit from private certification: improved market position (fear price competition from China)
 - Private standards and certification do not lead to higher prices!
 - On the contrary non conformity with standards used as an argument by buyers to pay lower prices



Trade implications

- Public versus private standards
 - Measuring trade implications of private versus public standards?
 - Difficult to distinguish between public and private standards
 - Need to look beyond the level of the rules in standards to analyse trade effects; also conformity assessment mechanisms and enforcement matter



Implications for developing countries

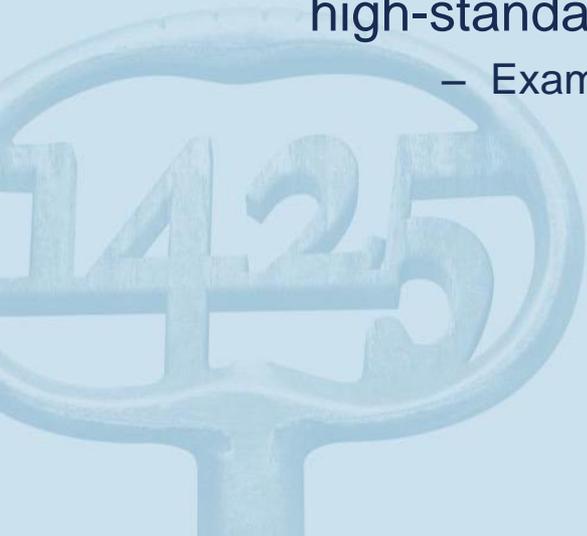
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Development implications

- **Exclusion of smallholders?**

- Private standards induce restructuring of supply chains towards more vertical coordination
 - This might result in a shift from smallholder contract-farming towards large-scale agro-industrial farming
 - This might result in tighter vertical coordination with contracted smallholder farmers
- Empirical evidence on the inclusion/exclusion of smallholders in high-standards export sectors is mixed
 - Examples from horticulture export sectors in Africa



Development Implications

Table 3: Smallholder involvement in horticulture export sectors in selected African countries

Country	Commodity (group)	Year of survey	Share of exports sourced from smallholders	Number of smallholder producers
Ghana	Pineapples	2006	45%	300 - 400
	Papaya	2006	10-15%	
	Vegetables	2002	95%	
Cote d'Ivoire	Mango	2002	< 30%	
	Banana	2002	100%	
Senegal	French beans	2005	52%	600 - 900
	Tomatoes	2006	0%	0
Kenya	Fresh fruit and vegetables	2002	± 50%	12,000 - 80,000
Madagascar	Fresh vegetables	2004	90-100%	9,000

Source: Maertens et al, 2009

Development implications

- **Exclusion of smallholders?**

- Examples: horticulture export sectors in Africa

- 1. Madagascar (Minten et al., 2009)

- 100% smallholder contract-farming including almost 10,000 small farmers with less than 1 ha of land
 - Extensive contract-farming systems
 - Input provision by the company, chemical application by the company, management assistance, technology assistance ...
 - Elaborate system of on-farm monitoring with 300 company extension agents
 - EurepGAP (type II) group certification
 - Support from COLE-ACP
 - Almost 1,200 certified farms (including very small farms) in 2007



Development implications

- **Exclusion of smallholders?**

- Examples: horticulture export sectors in Africa

- 2. Senegal (Maertens and Swinnen, 2009)

- Initially,

- Shift towards vertically integrated estate farming as strategy for EurepGAP certification by largest exporting companies

- Some large companies EurepGAP certified (type I)

- Supply chain restructuring: large decrease in smallholder contract-farming; increase in large-scale estate farming

- Later on,

- Other large and smaller companies started to implement EurepGAP

- Type II group certification

- Smallholders largely remained included



Development implications

Table 4: Smallholder procurement and EurepGAP certification in selected horticulture companies in Senegal

	product	volume of exports	Share of smallholder procurement			EurepGAP certification
			1999	2005	2008	
Miname	beans	730			5%	certified (type I)
	mango	800			75%	certified (type II)
Agronegoce	beans	200			100%	in process
	mango	700			100%	in process
Soleil Vert	beans	800	100%	20%		certified (type I)
Sepam	beans	883	100%	60%		in process
Agriconcept	beans	90		30%	98%	in process
Ets Diop	beans	70		100%	30%	in process
Agral Export	beans	80		100%	100%	in process
ANS interexport	beans	78		100%	100%	no
Master	beans	68	50%	40%		no
Baniang	beans	80	85%	85%		no
Pasen	beans	30	100%	60%		no
PDG	beans	173	100%	100%		no
Distribution plus	beans	350			30%	no

Development Implications

Table 5: Smallholders and EurepGAP certification in Kenya

Exporter	Number of SSGs involved at the introduction of EurepGAP	Number of SSGs involved in 2006	Number of EurepGAP certified SSGs	Number of SSGs dropped since EurepGAP introduction
1	750	750	750	0
2	1,180	300	40	880
3	400	14	0	386
4	360	360	0	0
5	107	33	33	74
6	605	237	126	368
7	500	170	18	400
8	4,000	2,000	200	2,000
9	1,200	73	0	1,127
10	240	0	20	240
TOTAL	9,342	3,937	1,187	5,475

Source: Graffham, Karehu and Mac Gregor (2007)

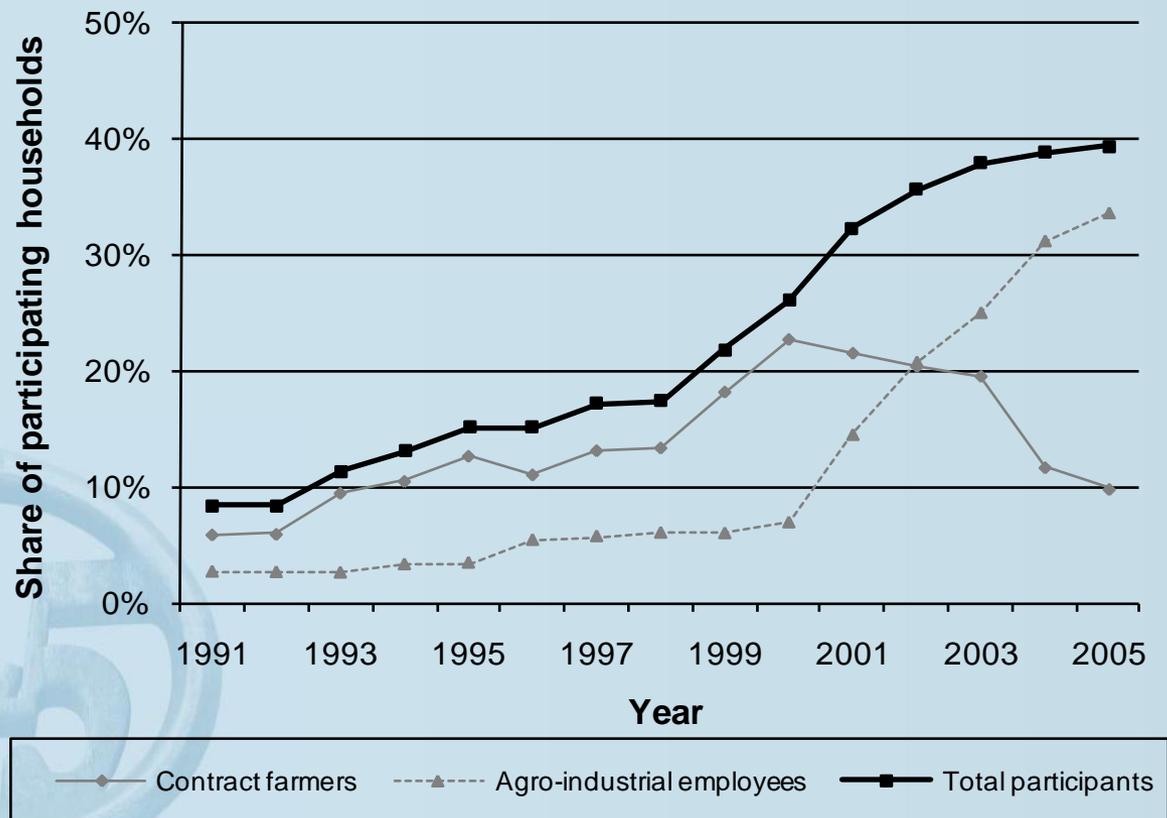
Development implications

- **Do smallholder producers benefit from high-standards trade?**
 - Evidence: Senegal (Maertens and Swinnen, 2009)
 - Private standards have (initially) led to supply chain restructuring towards large agro-industrial farming
 - Rural households increasingly benefit through employment in agro-industrial companies
 - Relatively richer farmers benefit through contract-farming
 - Relatively poorer households benefit through employment effects
 - **Sharp increase in rural incomes**
 - **Sharp reduction in rural poverty**



Development implications

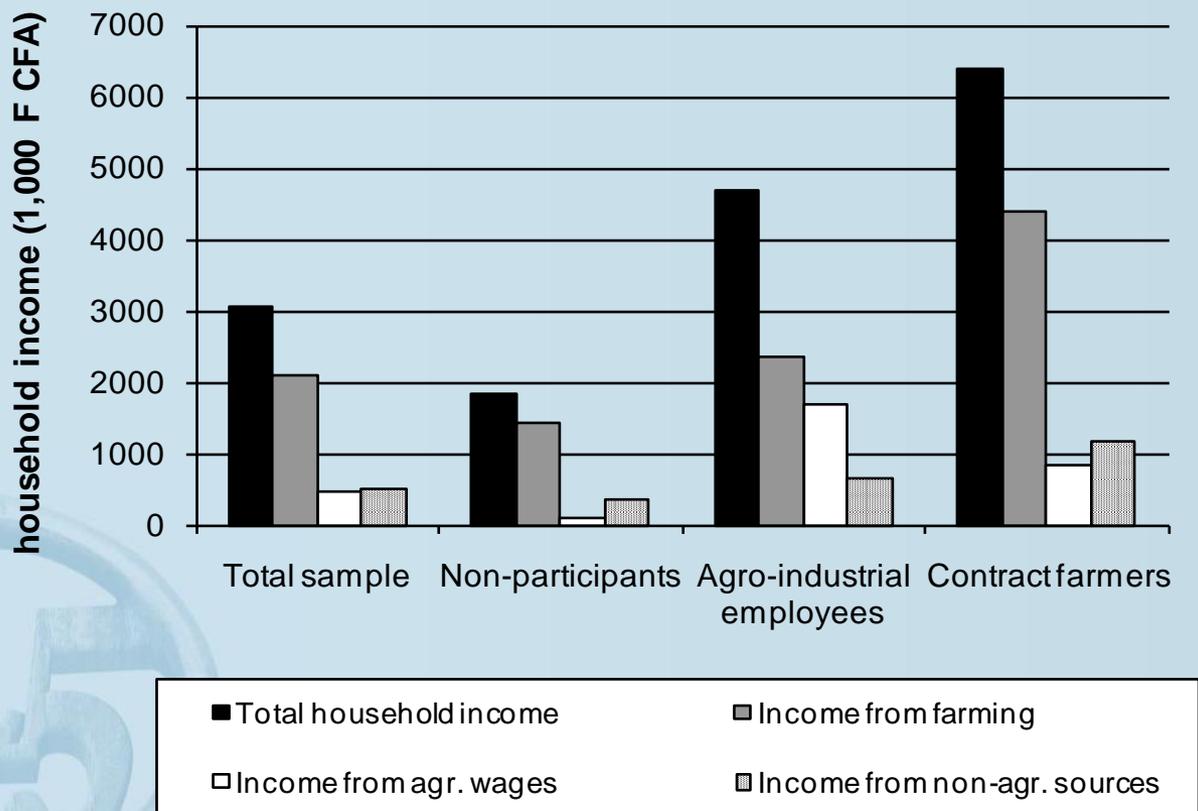
Figure: household participation in French bean export production in Senegal (2005)



Source: Maertens and Swinnen, 2009

Development implications

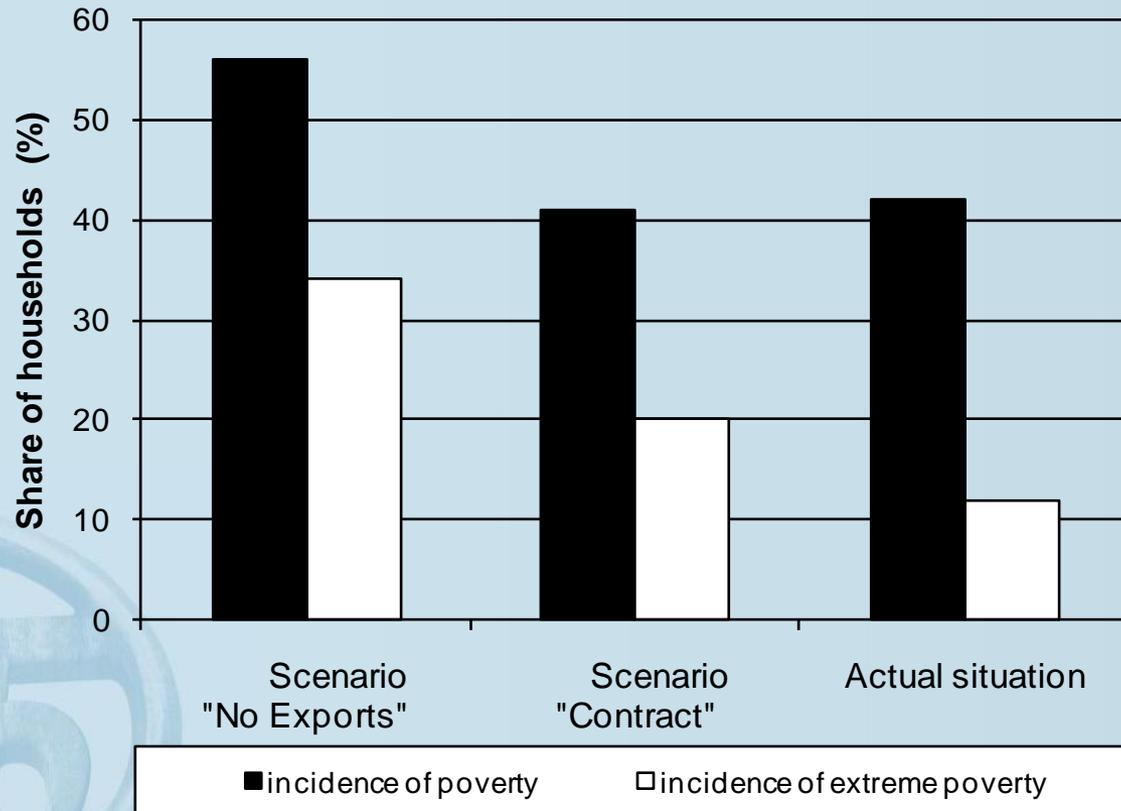
Figure: Income effects of bean exports in Senegal (2005)



Source: Maertens and Swinnen, 2009

Development implications

Figure: Poverty effects of bean exports in Senegal (2005)



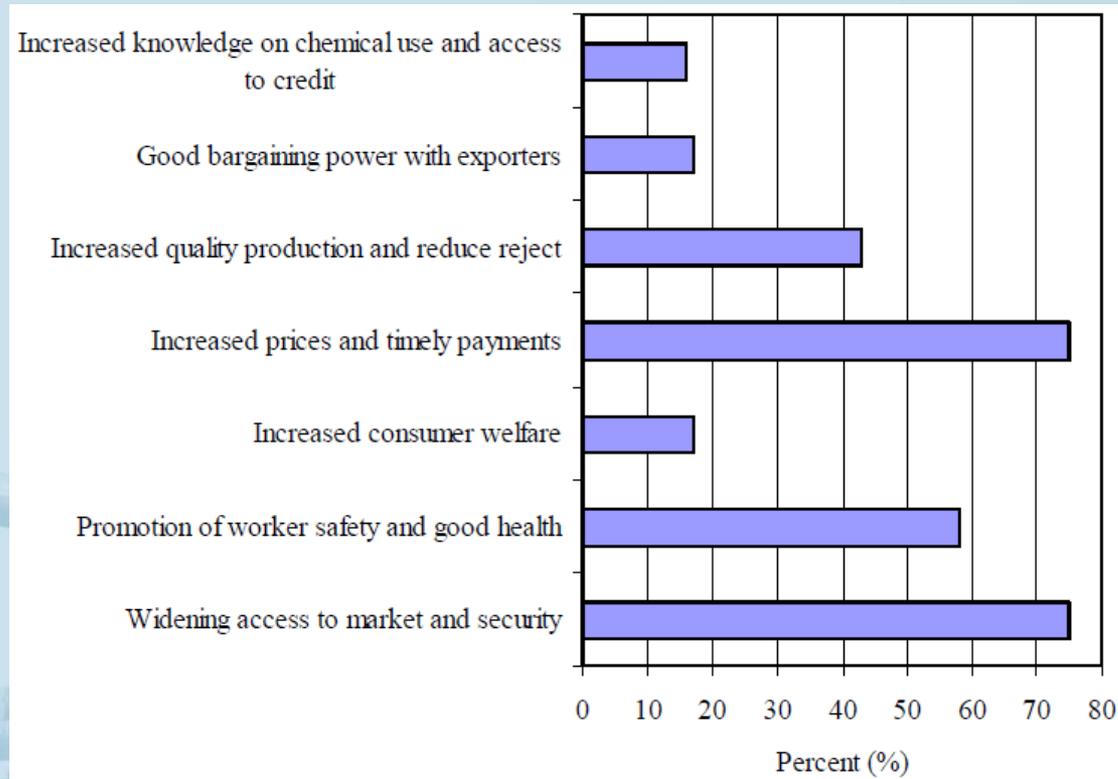
Source: Maertens and Swinnen, 2009

Development implications

- **Do smallholder producers benefit from high-standards trade?**
 - Evidence: Kenya (Asfaw, Mithoefer and Waibel, 2007)
 - EurepGAP certified smallholder producers (type II) versus non-certified smallholder producers
 - Cost for compliance: 37,000 KSh of which 6.700 KSh recurrent costs and 30,300 KSh non-recurrent costs
 - Benefits from EurepGAP certification:
 - Various perceived benefits by farmers
 - Significantly higher net incomes
 - Decreased use of pesticides in Hazard Category I & II
 - Improved health of farmers
 - But adoption of EurepGAP among smallholders too low to have a substantial poverty effect

Development implications

Figure: perceived benefits from EurepGAP certification for Kenyan farmers



Source: Asfaw, Mithoefer and Waibel, 2007

Conclusion

- Private standards are a diverse and dynamic landscape with complex links to public standards
- Private standards are becoming important in developing countries
- Different type of standards might have divergent effects on trade and development
- Development effects:
 - Standards can act as catalysts for development in poor countries
 - Standards induce changes in supply chain structures and some producers might be excluded and loose
 - Employment effects are important; especially for poverty reduction
- Need for research on divergent development effects of different types of private standards

