

# Efficient and inclusive agriculture in a smallholder world

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# Largeholders; **not** smallholders

- Large extents of land
- Well resourced and capable of investing to increase productivity
- Downstream purchasers of produce likely to be characterized by
  - Low transaction costs
    - Relative to transactions with smallholders
  - High levels of trust
    - High levels of engagement with a few buyers

# Smallholders

- Mostly small farms < 2ha and
  - Low asset base
  - Limited resources
    - Land, capital, skills and labour
  - Dependence on HH members for labour
- Downstream purchasers of produce likely to be characterized by
  - High transaction costs
  - Low levels of trust
    - Low levels of engagement with a many buyers

# Ground reality

- Largeholders
  - Long-term supply and purchase agreements for good quality produce at predictable prices
    - Benefit from higher value export supply chains
- Smallholders
  - Unreliable supply of limited produce of perceived lower quality at lower price with lower returns on investment
    - Integrated but on less favourable terms to export supply chains; end up supplying to low value domestic markets

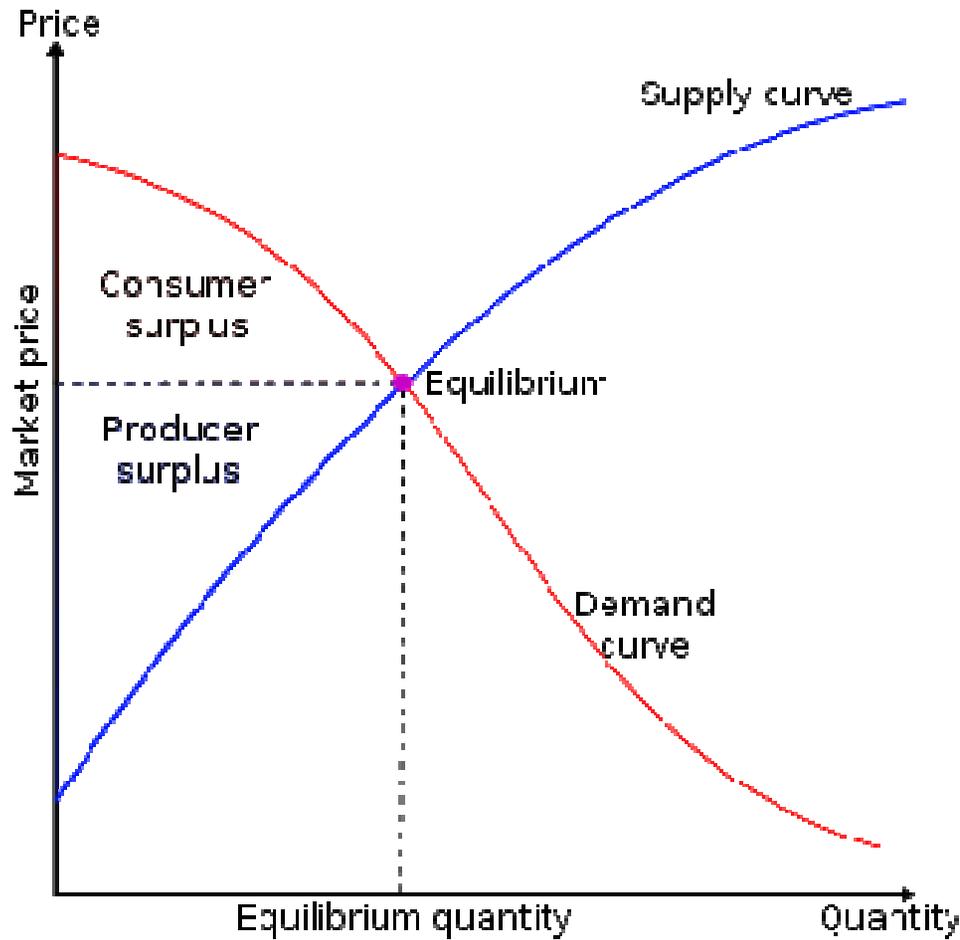
# Smallholder Challenge

- Overcome perception of lower quality to **integrate on more favourable terms**
  - Better market prices
  - Lower wastage
  - Higher returns
  - Stable supply and purchase agreements

# Smallholder Quality Penalty

- A **financial penalty** (discount on the market price or ‘insurance premium’) imposed on the smallholder by the first handler of his produce
  - to offset the perceived sub-standard quality of the produce
- This amount (difference between the price that should have been paid and the price actually paid) is **accumulated** by the first handler
  - to be used, in total or part, **if called upon by the second handler downstream** to offset perceived poor quality produce
- SQP can exist at every transaction throughout the supply chain down to the retailer

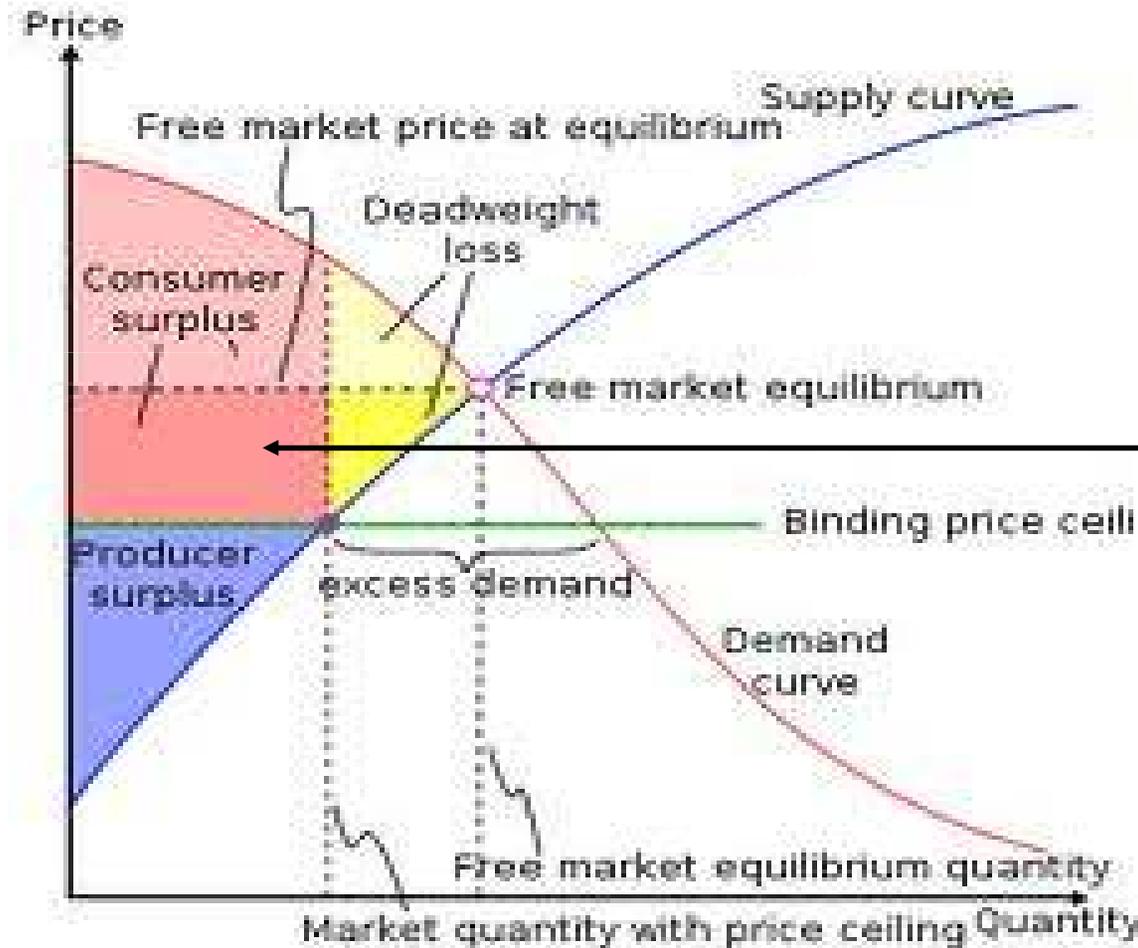
# SQP continued; **no SQP**



# SQP continued; SQP applied

- In technical terms; **binding price ceiling** imposed by the first handler (collector) to transfer part of the smallholder farmer (producer) surplus to the first handler (collector, here consumer)

# SQP continued; SQP transfers



Smallholder quality penalty is this amount that is transferred from the producer (farmer) to the consumer (collector)

# Perceived quality

- Quality (ISO): The totality of **attributes and characteristics** of a product of service that contributes to its ability to **satisfy specific or implicit requirements**
  - **Extrinsic and intrinsic**
    - external to produce; brand name, price, place of origin etc.
    - Internal to produce; taste, smell, tenderness etc. as well as size, shape etc. or perhaps tensile strength
  - **Search and experience**
    - learn about the quality prior to purchase; pesticides
    - the product has to be experienced, or consumed to learn about its quality; pineapples, potatoes
    - Both: Taste or juiciness for example, in agricultural produce is an experience characteristic while size or colour is a search characteristic

# Perceived quality continued

- **Credence**
  - Credibility of the seller vis-à-vis the buyer
  - Attributes might deal with, say
    - Traceability
    - Process certification; attributes that will be almost impossible to verify even after consumption (certification of organic produce)

# Reducing the subjectivity in perceived quality

- Standardization
  - Need to introduce and **implement standards and communicate downstream**
  - Neither easy nor cheap. Who will develop the standard? Will it be acceptable to all? Who will take the responsibility to ensure that the set standards are met? Who will certify the same and how? Will it be possible for smallholders to spend on obtaining standardization certificates?
- Trust
  - Two-way construct. Must be developed internally and grow over a **period of time**
    - Greater frequency of interaction between smallholder and collector; greater trust

# Using ICT to reduce SQP

- Build trust through more frequent, accurate and cost effective communication
  - Significant improvements in information and knowledge flows
- Traceability to implement standards
  - Farmers able to prove adherence to accepted guidelines
- Only possible now because of the ubiquitous mobile phone

# Within differing market structures

- Disaggregated smallholders
  - Atomistic market
- Out-grower or contract farming model
- Smallholder farmer association (structured format)

# Disaggregated smallholders

- Atomistic markets
  - Large number of smallholders; exogenous to the supply chain and collectors
    - In reality more of an oligopsony structure with limited number of buyers (first handlers)
  - Smallholders have **very little power, SQP applied** and **fully exposed to downside risk**
  - Very difficult to effectively communicate ‘better quality’

# Out-grower schemes (top-down)

- Purchasing entities down the supply chain create larger entities upstream
  - The **smallholder is endogenous**, or inclusive, and cannot be 'seen' from the outside
  - Authorized representative of the processor enters in to agreement with smallholder
    - Transactions **governed by rules by the upstream entity**
    - Participants along the supply chain are **protected, to the extent possible, from market risks** (shared)
  - Possible to communicate 'better quality', build trust and adherence to agreements and standards
    - **ICT solutions** are implementable along the administrative structure; traceability
    - Processor agent can keep smallholders in the system via **incentives**

# Smallholder farmer associations (bottom up)

- Maintaining individual ownership of assets but yield control of processes of production and marketing to the association
  - The **smallholder is endogenous** and cannot be ‘seen’ from the outside; it is the **collective that has to be dealt with**
    - Members are **bound by internal rules**, regulations on produce quality determined by the association; **binding quality benchmarks**
    - A common problem is of **free-riders**; those who benefit from being in the association but do not contribute to the common objectives
  - **Difficult to keep together**; politicization. Leadership.
  - Possible to communicate ‘better quality’, built trust and address the free-rider problem via ICT solutions
    - Also ‘binds the virtual organization together’

# Summary

- **Smallholder Quality Penalty** blocking the movement towards improved efficiency and greater inclusivity in smallholder agriculture
- Can use **ICT solutions to communicate adherence to accepted quality standards, to build trust** and avoid free-rider problems as market structures move from atomistic to out-grower and smallholder farmer association models
- Now possible with simple solutions on the **ubiquitous mobile phone**; even more efficient solutions with the adoption of mobile 2.0 MTV services with inexpensive smart phones (PDAs and the like)

For more information:

[www.lirneasia.net/projects/agriculture](http://www.lirneasia.net/projects/agriculture)

search term: Agriculture, KBE