

# Transaction Costs in Agriculture Markets

A case-study analysis of the production and sale of produce at the Dambulla Dedicated Economic Centre (DDEC)



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## Transaction Costs

Cost of information and/or cost of facilitating a transaction

- “The costs that arise when individuals exchange ownership rights for economic assets and enforce their exclusive rights” , Eggertson (1990: 15)
- Transaction costs can be classified into observable and unobservable or inhibitive transaction costs (Staal, Delgado and Nicholson, 1997 and Delgado, 1995).
  - Observable transaction costs - observable when a transaction takes place
    - Include marketing costs such as transport, handling, packaging, storage, spoilage etc.
  - Unobservable transaction costs - not observable when a transaction takes place
    - include cost of information search, bargaining, screening, monitoring, co-ordination, enforcement



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## Our focus

### Opportunity cost of information asymmetry (OCIA)

- i.e. costs that could have been avoided/reduced if accurate and timely information was available



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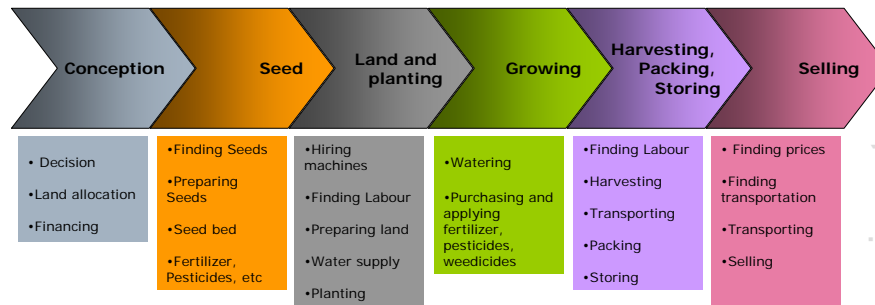
## What we did – quantify OCIA

- Estimate the opportunity cost of information asymmetry (OCIA) in agriculture markets via a case-study analysis of the production and sale of produce at the Dambulla Dedicated Economic Centre (DDEC)- largest whole-sale market for vegetables in Sri Lanka



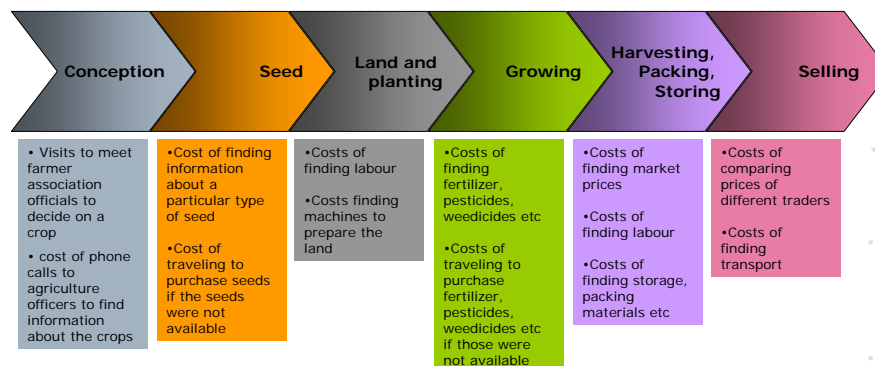
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## Stages of the farming process



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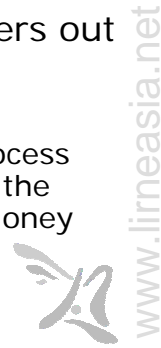
## Some examples of OCIA



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## How we did it – a sample survey

- ❑ Random Selection of 10 farmer associations out of 122 farmer associations in Matale District who sell their produce at Dambulla DDEC.
- ❑ 30 farmers from each farmer association
- ❑ Sampling Error – 5.41% (for 315 farmers out of approximately 8000 farmers)
- ❑ Use of a structured questionnaire
  - questions relating to the entire farming process starting from the point of decision to grow the crop to the point of selling and receiving money

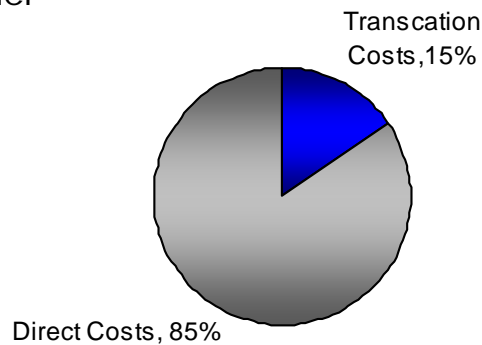


# Results



## Transaction costs are 15.18%

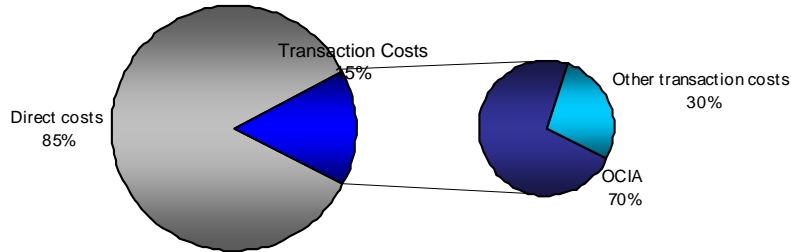
- 15.18% of the total cost incurred by the farmer



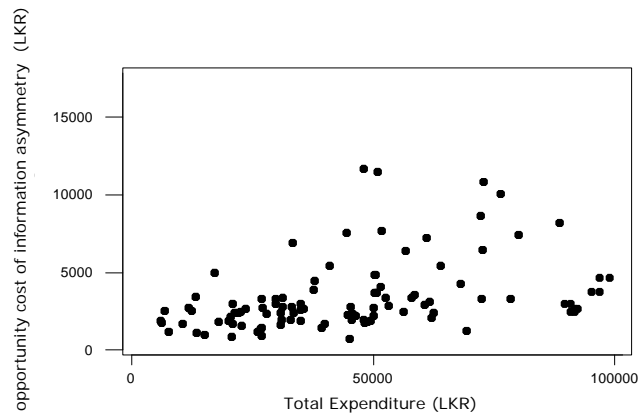
Opportunity cost of information asymmetry + Cost of facilitating the transaction

## OCIA is 11.04%

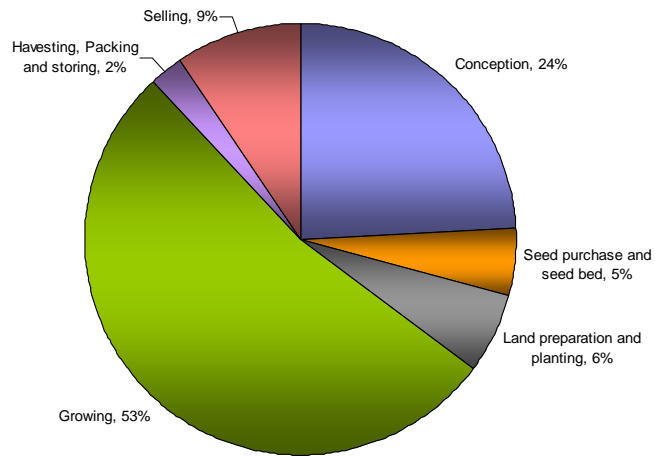
- 11.04% of the Total cost incurred by the farmer
- Or
- 69.77% of the Transaction cost



## Small farmers feel it more opportunity cost of information asymmetry is FIXED

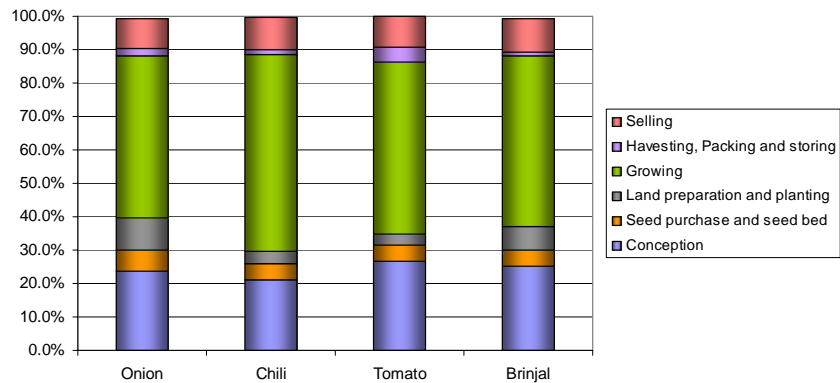


## Highest OCIA in growth phase

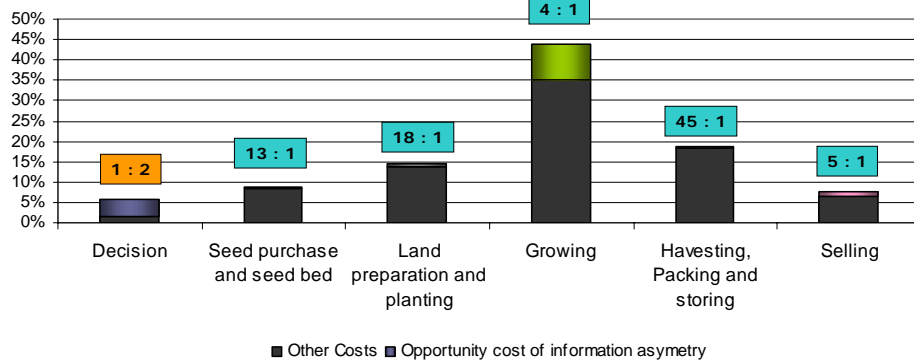


cost of getting subsidized fertilizer??

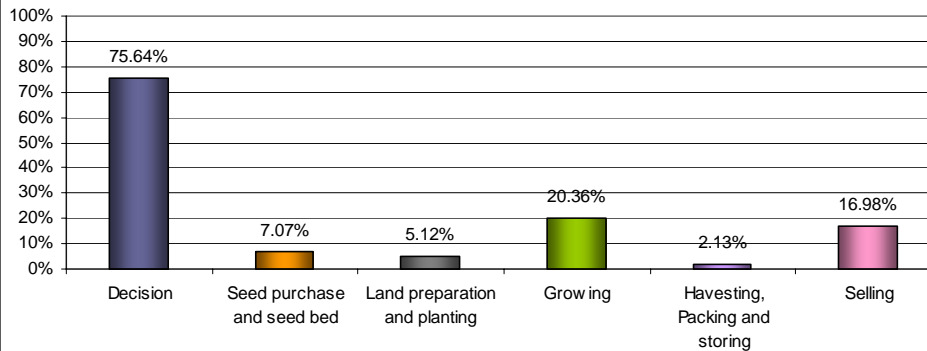
## For all crops



but.... Growth phase has 44% of total costs



Decision stage has highest relative percentage of OCIA





## Use of phones



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## Farmers hardly use phones to find information

- Cost of phone calls is only 0.21% of OCIA
- or they travel to find information
  - The average cost of traveling = LKR 195 per visit
  - Average number of visits = 24
  - Average cost of traveling = LKR 4,680



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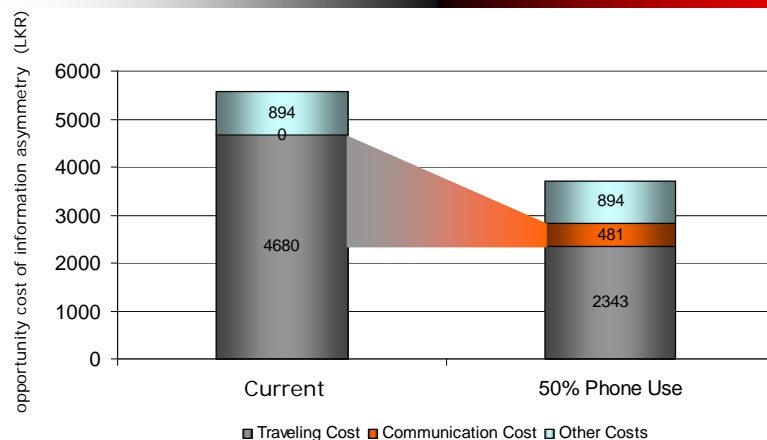
## What if they used the phone more?

- Current – almost 0% use of ICTs
  - Average Cost of traveling to the town – LKR 195
  - Total average transaction cost – LKR 4,680
  - ⇒ Number of visits = 24
  - Total average opportunity cost of information asymmetry – LKR 5,571
- If ICT use is increased to 50%
  - Assumption : Average cost of a phone call – LKR 40
  - 12 Phone calls & 12 visits
  - Total average opportunity cost of information asymmetry – LKR 3,714



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## 33% reduction in OCIA

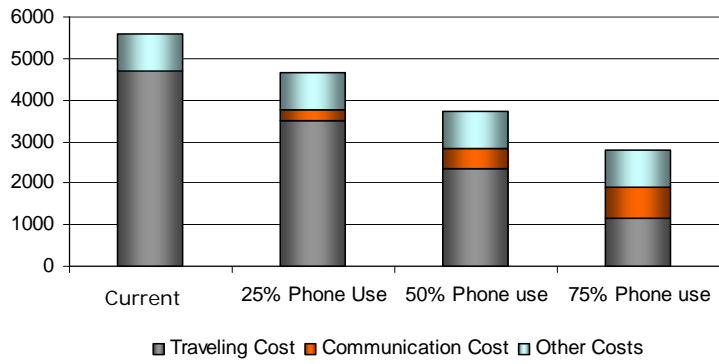


**33% reduction in OCIA and time saved !!**



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## More scenarios



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