Cost of Information in Agriculture Markets

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

Dimuthu Ratnadiwakara

LIRNEasia
www.lirneasia.net

Transaction Costs

- "The costs that arise when individuals exchange ownership rights for economic assets and enforce their exclusive rights" , Eggertson (1990:15)

Cost of information
and
cost of facilitating a transaction

  - Unobservable transaction costs - not observable when a transaction takes place
    - include cost of information search, bargaining, screening, monitoring, co-ordination, enforcement

Cost of information

- Costs that can be reduced if accurate and timely information is available
- Examples
  - Cost of travel that can be reduced if information was available through ICT
  - Cost of searching information

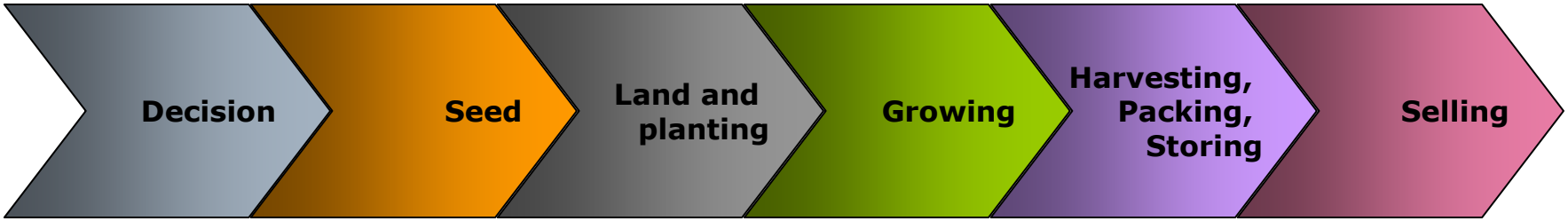
What we did – quantify cost of information

- Estimate the cost of information 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

How we did it – a sample survey

- Random Selection of 10 farmer associations out of 89 farmer associations in Dambulla Area who sell their produce at Dambulla DDEC.
- 30 farmers from each farmer association
- 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

Stages of the farming process



- Deciding
- Allocating Land
- Financing

- Finding Seeds
- Preparing Seeds
- Seed bed
- Applying Fertilizer, Pesticides, etc

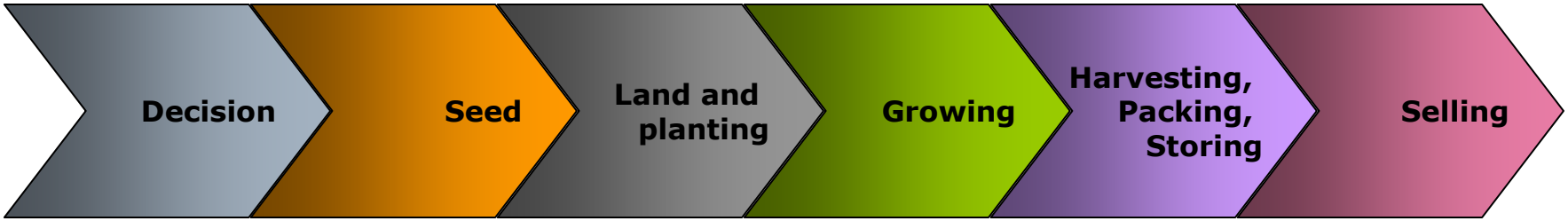
- Hiring machines
- Finding Labour
- Preparing land
- Water supply
- Planting

- Watering
- Purchasing and applying fertilizer, pesticides, weedicides

- Finding Labour
- Harvesting
- Transporting
- Packing
- Storing

- Finding prices
- Finding transportation
- Transporting
- Selling

Some examples of cost of information



Decision	Seed	Land and planting	Growing	Harvesting, Packing, Storing	Selling
• Visits to meet farmer association officials to decide on a crop • cost of phone calls to agriculture officers to find information about the crops	•Cost of finding information about a particular type of seed •Cost of traveling to purchase seeds if the seeds were not available	•Costs of finding labour •Costs finding machines to prepare the land	•Costs of finding fertilizer, pesticides, weedicides etc •Costs of traveling to purchase fertilizer, pesticides, weedicides etc if those were not available	•Costs of finding market prices •Costs of finding labour •Costs of finding storage, packing materials etc	•Costs of comparing prices of different traders •Costs of finding transport

Findings

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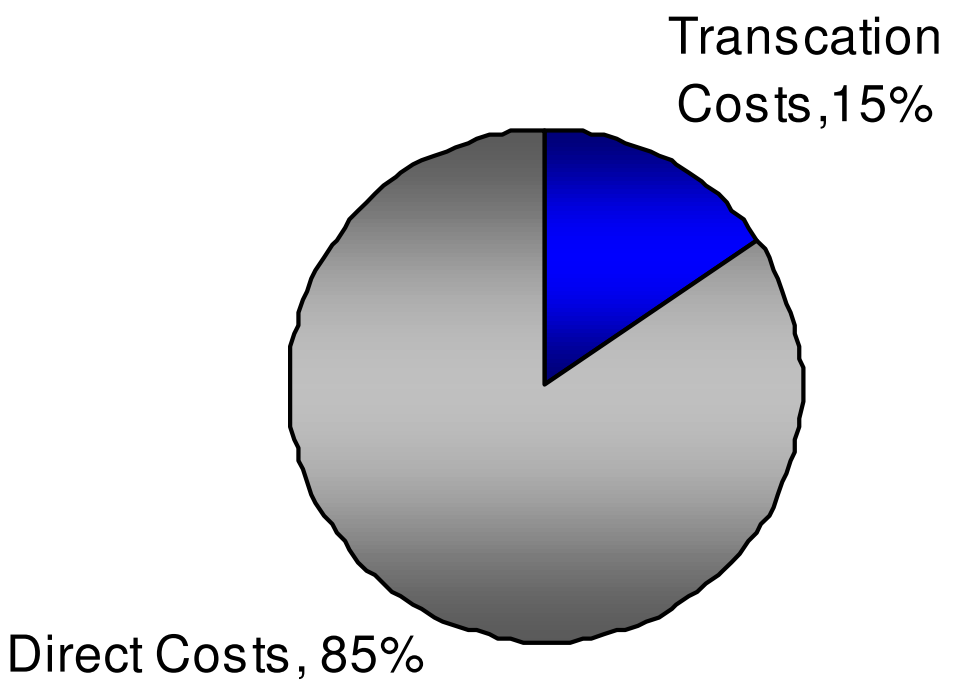
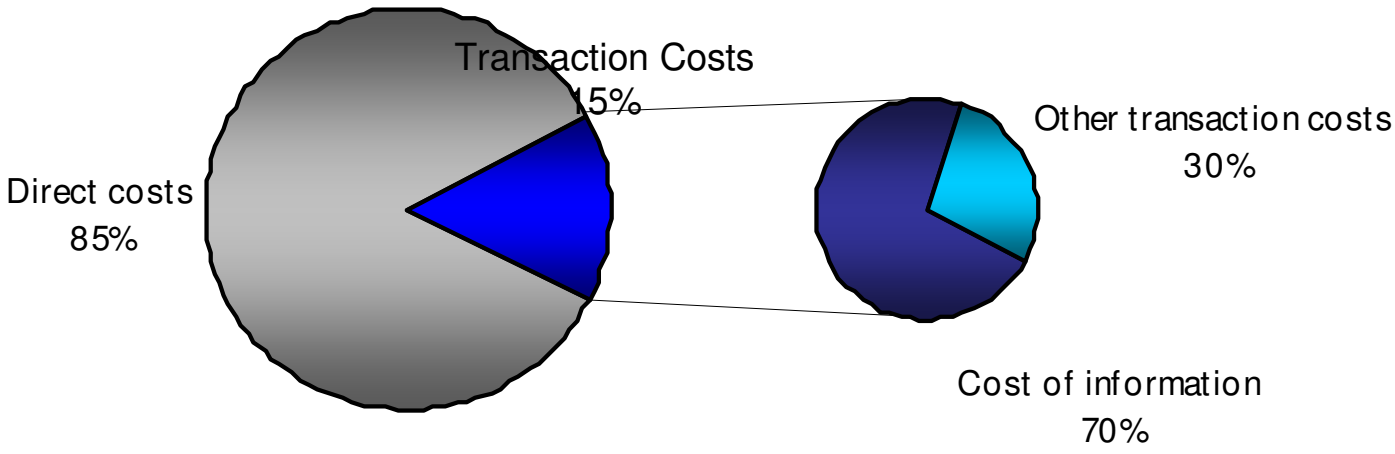
Transaction costs are 15.18% of the total cost incurred by the farmer



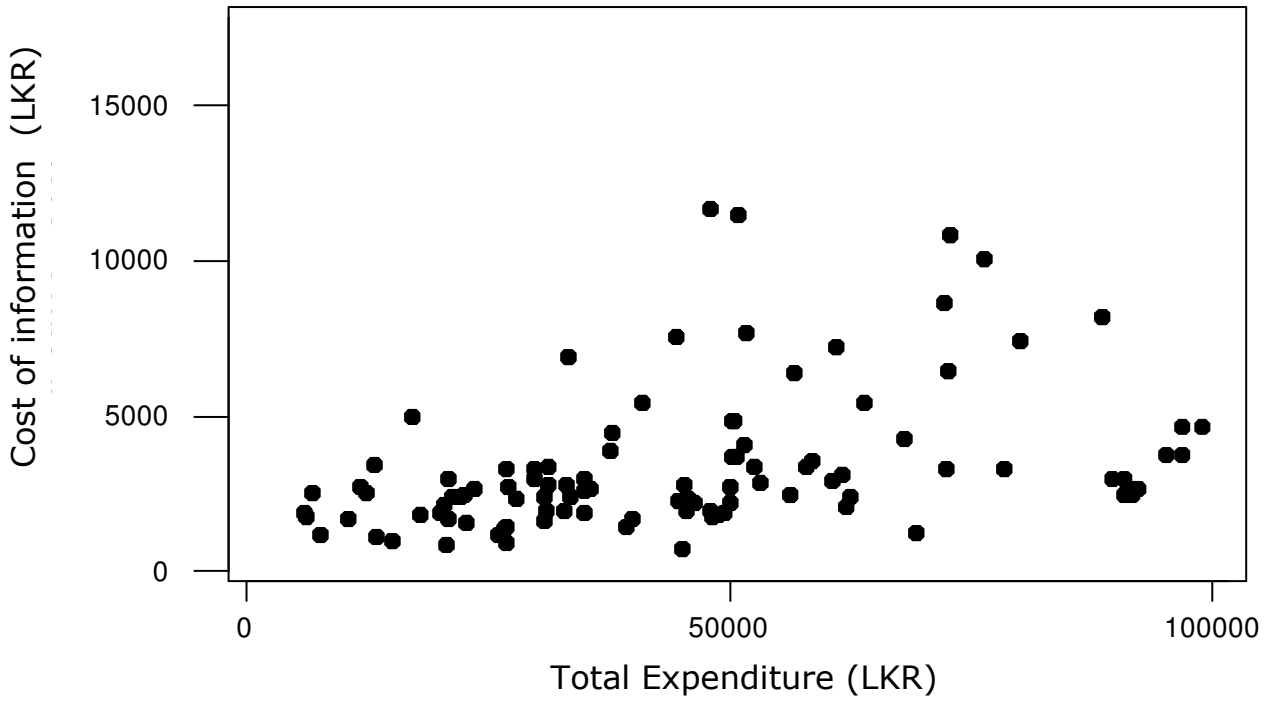
Cost of information is 11.04% of total expenditure

- i.e. cost of information is 69.77% of the Transaction cost



Small farmers feel it more

Cost of Information is FIXED



Findings

Distribution of Costs

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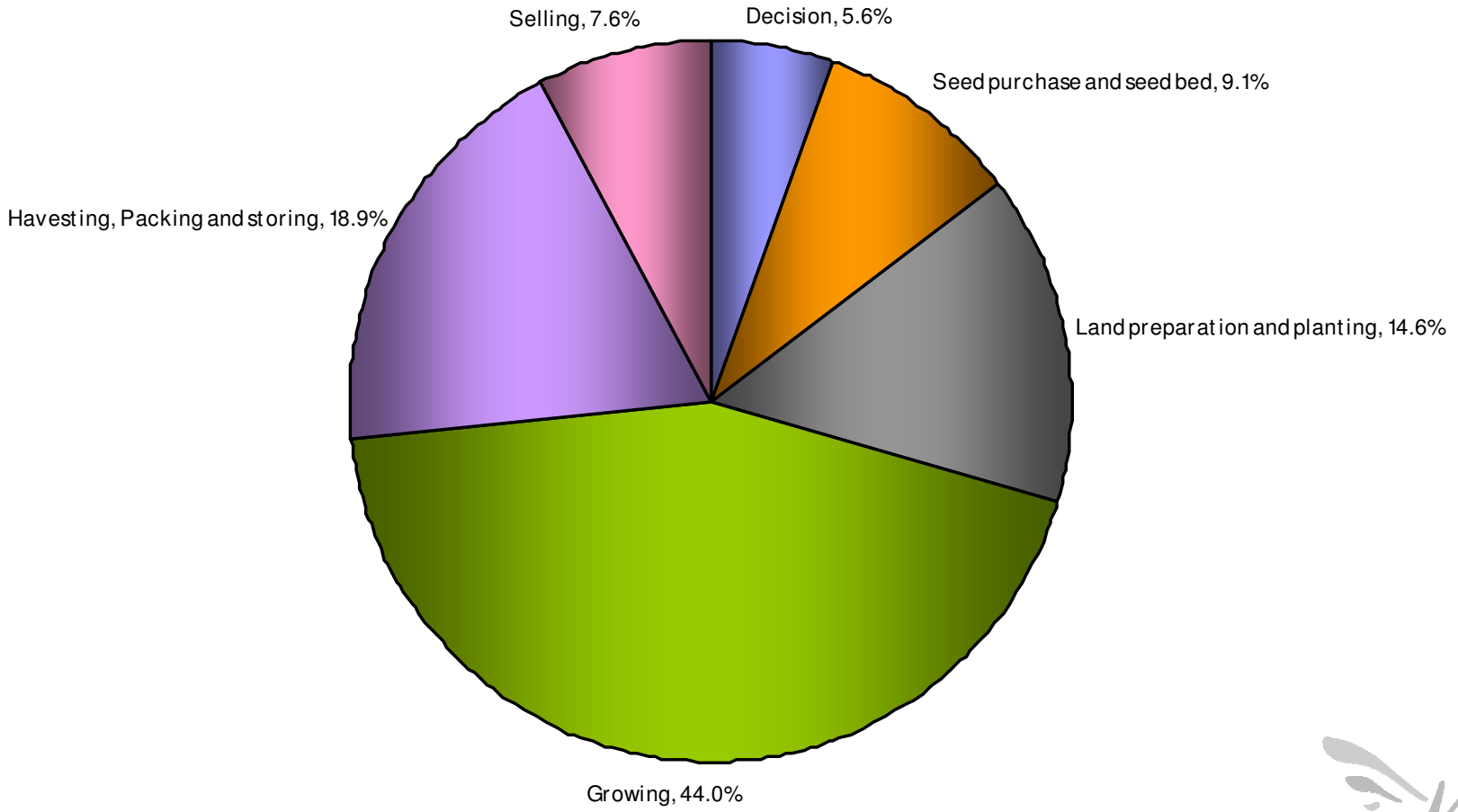
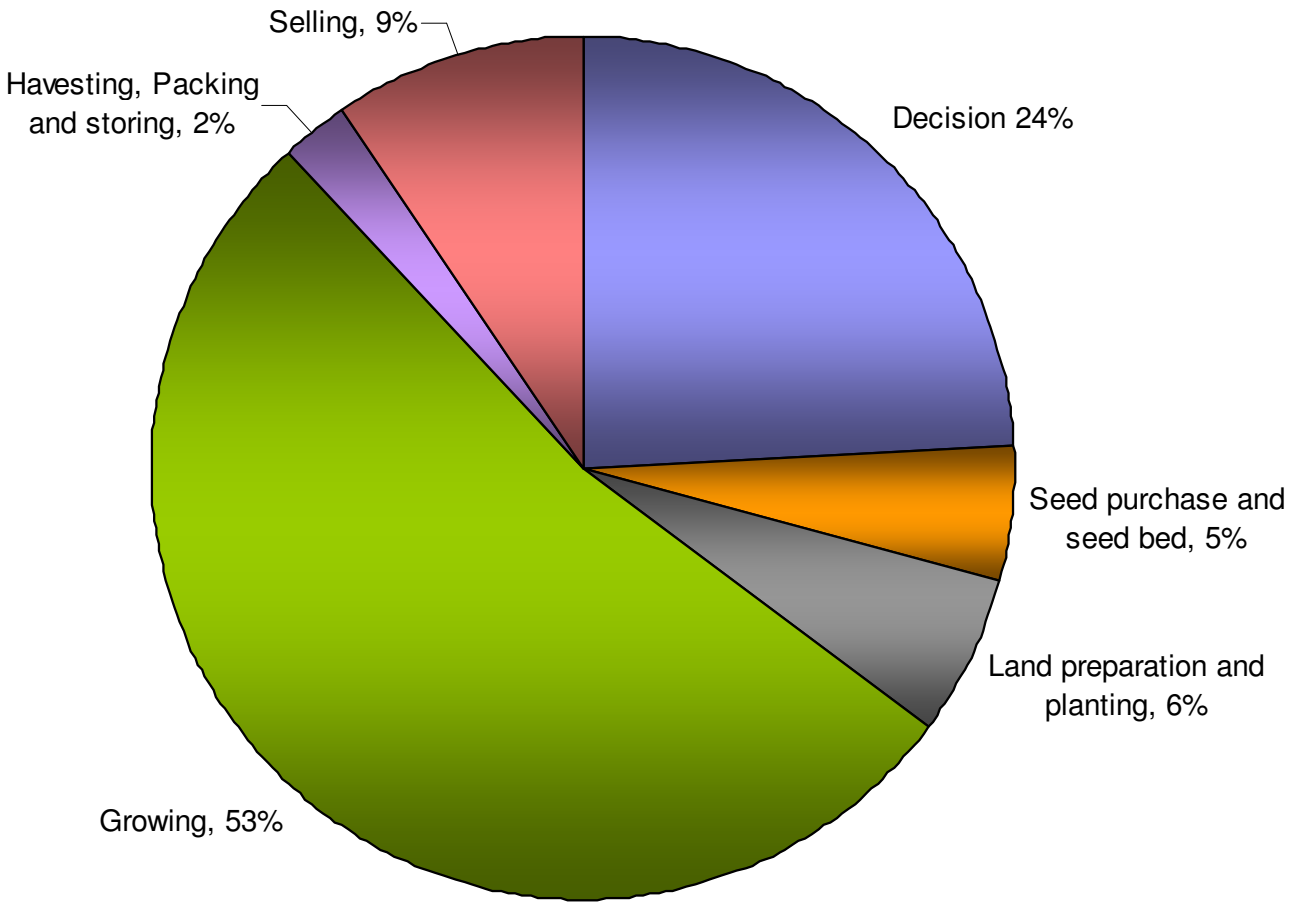
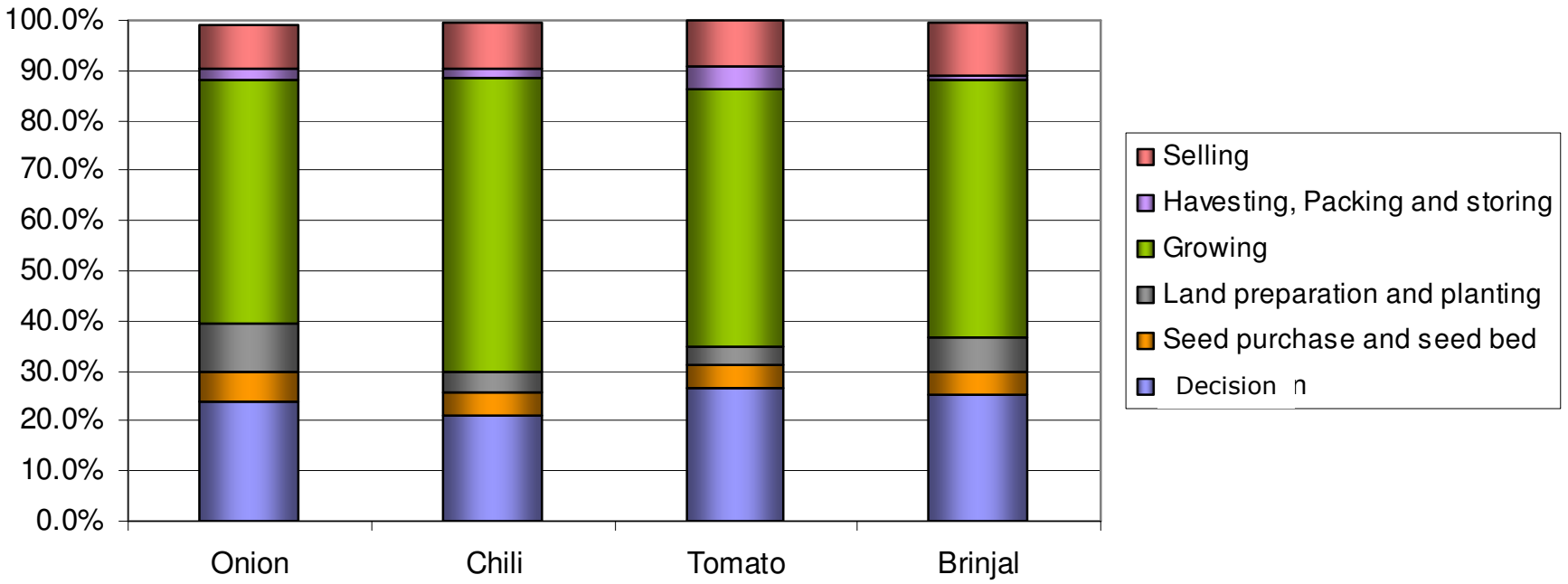
Growth phase has 44% of total cost of production



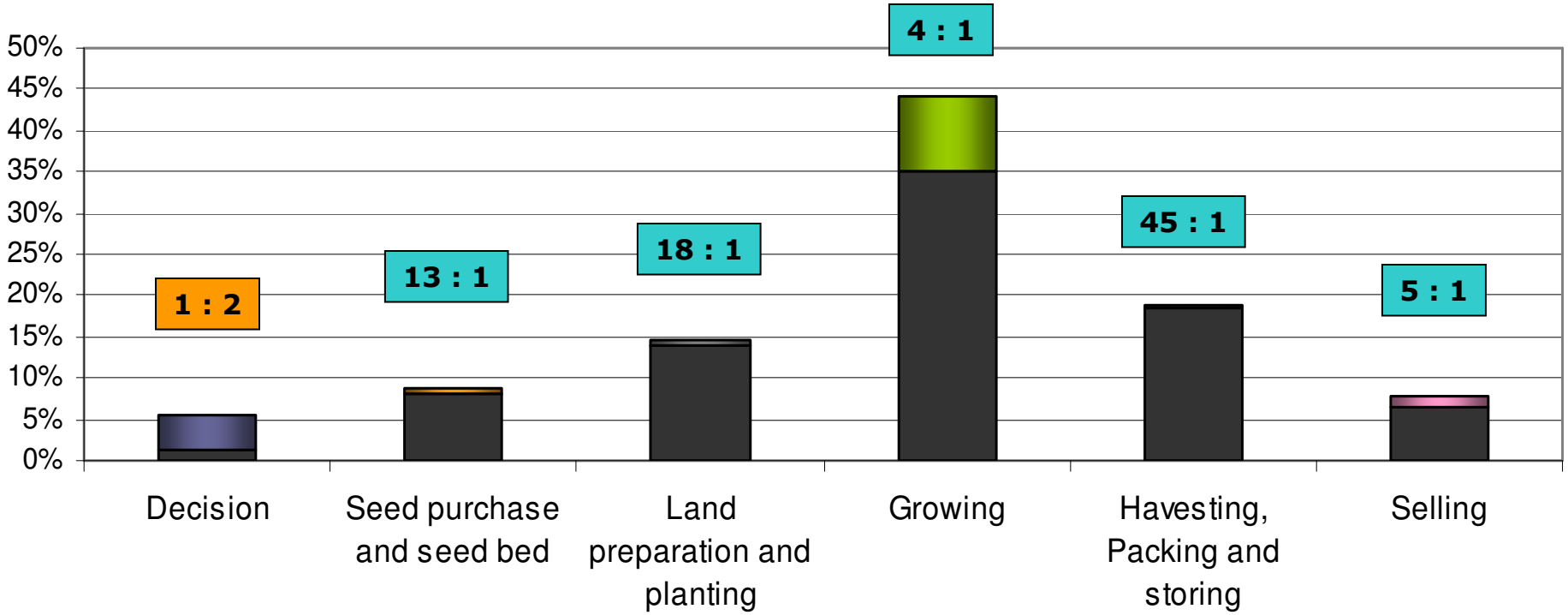
Highest cost of information is in the growth phase



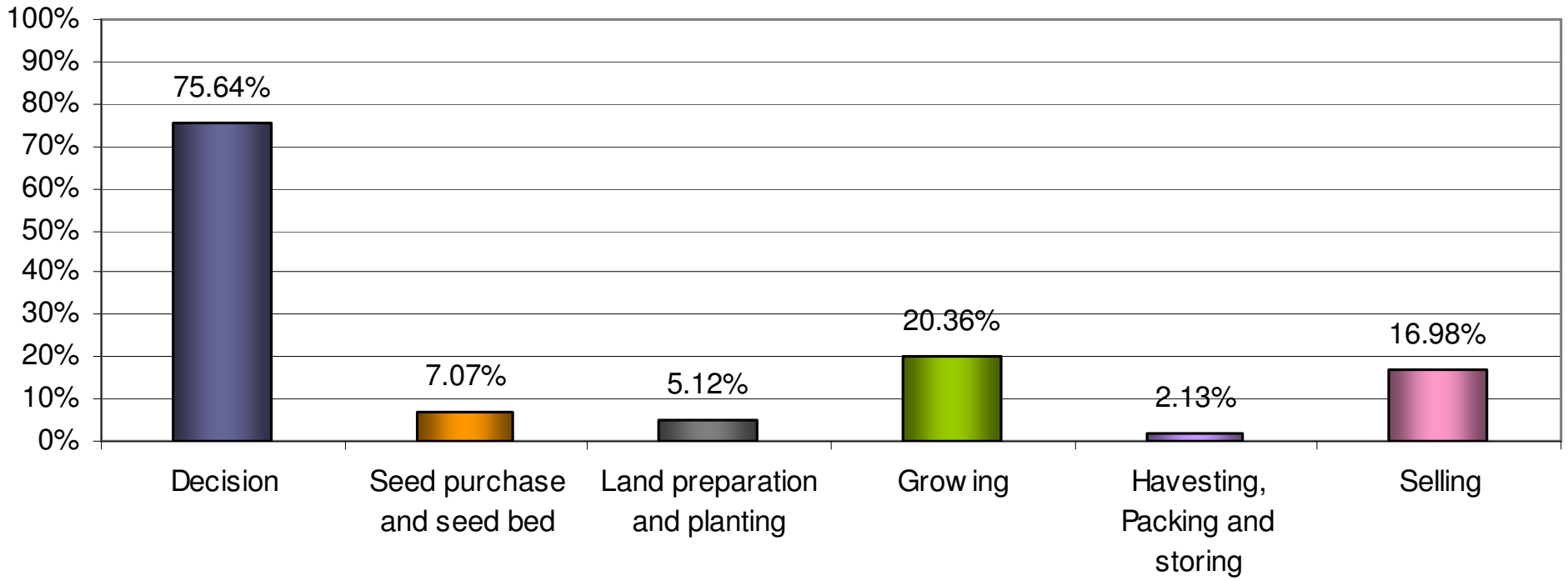
Growth has highest cost of information irrespective of the crop



but.... The proportion of information cost is not the same for every stage



Decision stage has highest relative percentage of cost of information



Use of phones

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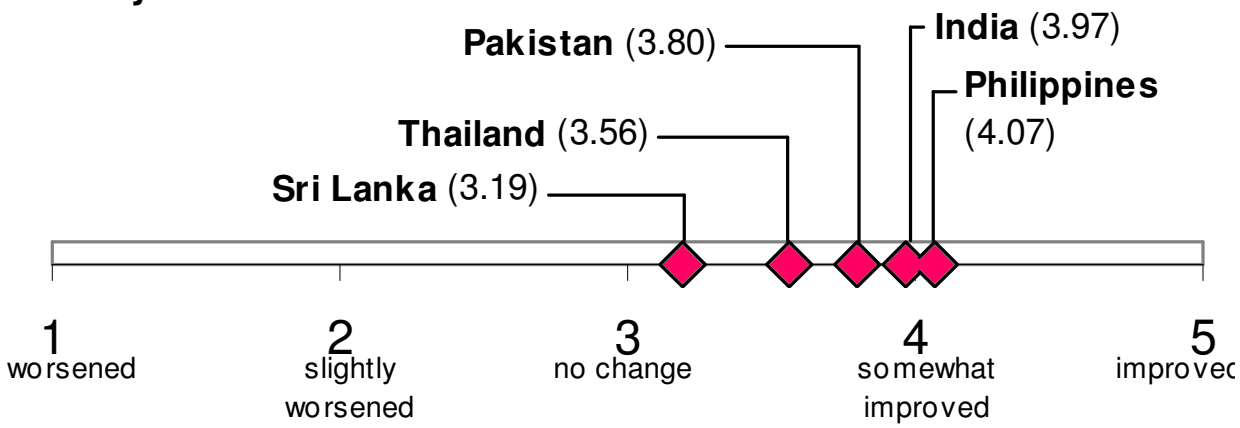
Sri Lankan BOP does not realize the economic benefits of phones

- Access to phones at Sri Lanka is 92%
- Only 8% of the calls are for business purposes
- **Ability to earn or save**



Source : Teleuse@BOP study, LIRNE*asia,* 2006

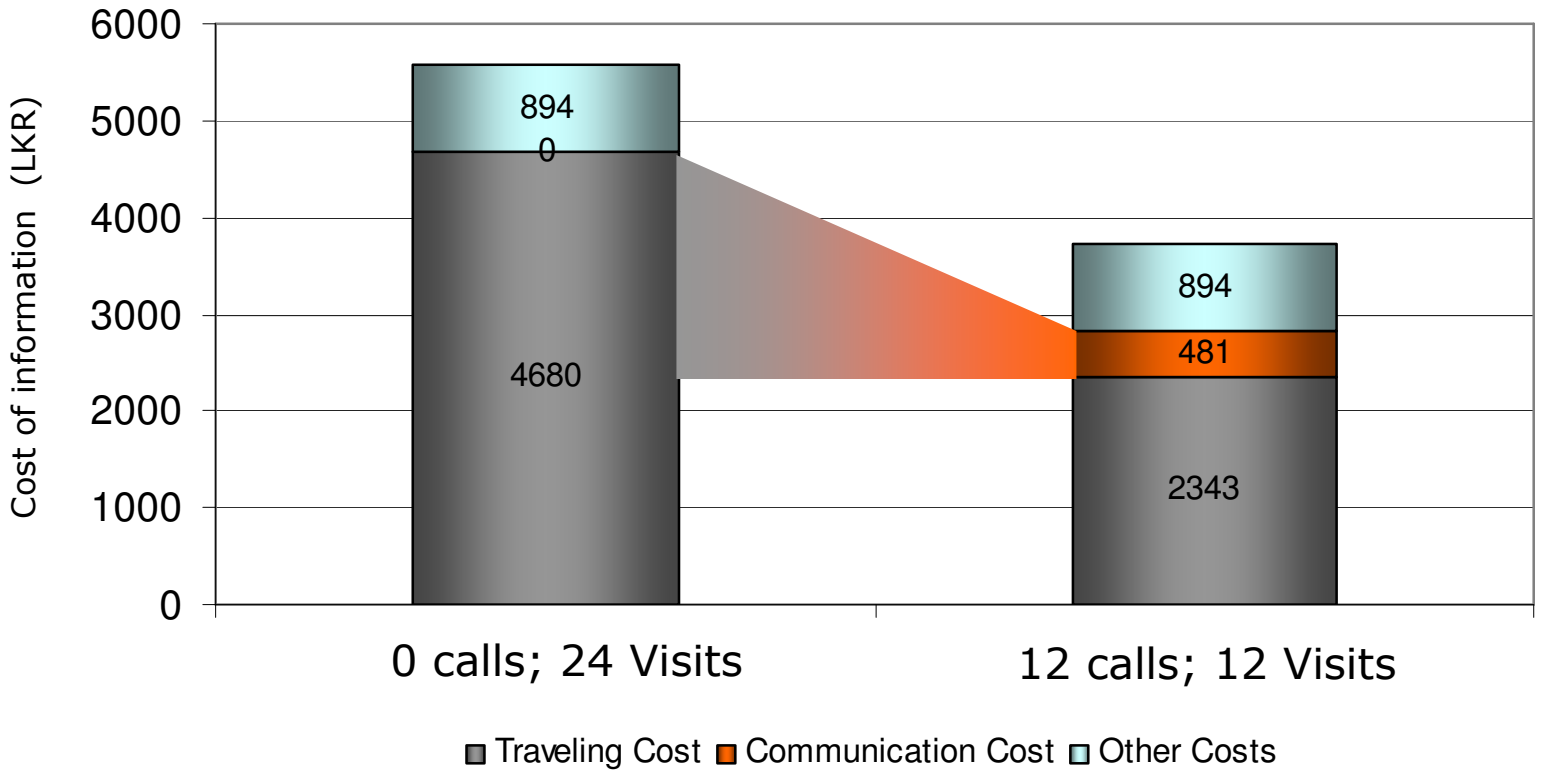
Farmers hardly use phones to find information

- Cost of phone calls is only 0.21% of cost of information
- i.e. they travel to find information
  - The average cost of traveling = LKR 195 per visit
  - Average number of visits = 24

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 cost of information– 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 cost of information– LKR 3,714

33% reduction in cost of information



33% reduction in Cost of information and time saved !!

More scenarios