Leveraging Mobile 2.0 for Agricultural Market Access

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IDRC International Development Research Centre
CRDI Centre de recherches pour le développement international
DFID Department for International Development

Study Background

- Part of LIRNE*asia* Mobile 2.0 Paper series
- What is Mobile 2.0?
  - Mobile 2.0 is used to refer to the use of mobiles for “more-than-voice” applications and services. The ability of phones to send/process/ receive voice, text, images and video and utilized for a variety of services including payments, information access and retrieval, etc. all come under this broad definition of the term

Agricultural sector in South Asia

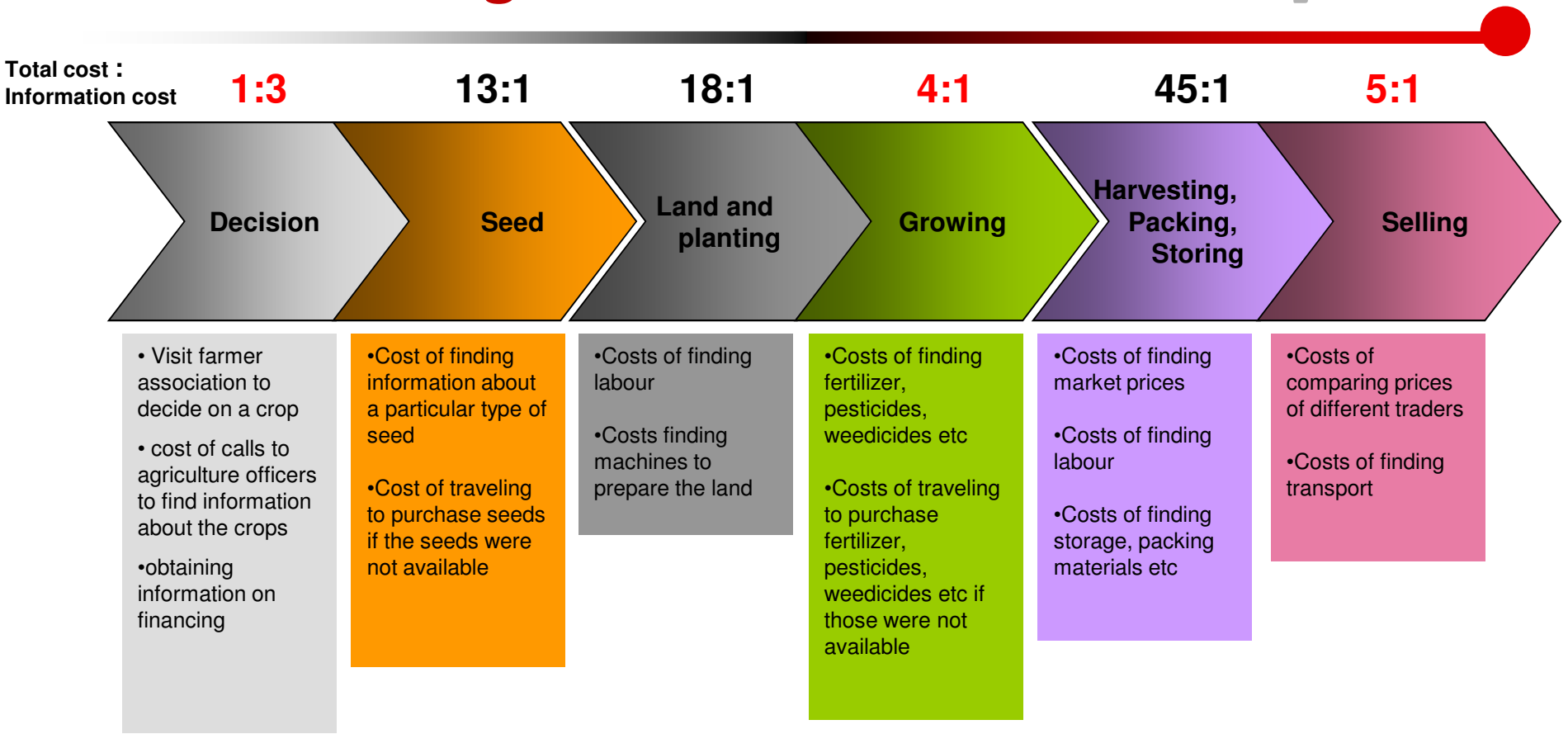
	Bangladesh	India	Pakistan	Sri Lanka
Share of GDP (2009)	18.7%	17.5%	20.8%	12.8%
Labor employed by sector (2009)	45%	52%	43%	32.7%

- The sector has the lowest share of GDP but highest share of labor (except Sri Lanka)
- The sector is generally characterized by various problems:
  - Land related issues (ownership as well as use)
  - Large numbers of small poor farmers who are mostly not land owners
  - Low productivity
  - Inefficient markets
  - High information asymmetry

Agricultural & ICTs

- ICTs can't solve all the problems
  - E.g. land reforms
- ICTs can however reduce information search costs
  - reduce information search costs → lower transaction costs → increase efficiencies in agricultural markets → increase welfare and improve livelihoods of farmers [and consumers]

Demand for information [sample survey of 300 small scale vegetable farmers in Sri Lanka]



De Silva, H., and Ratnadiwakara, D. (2008).
Using ICT to Reduce Transaction Costs in Agriculture through Better Communication, Working Paper, LIRNE*asia*

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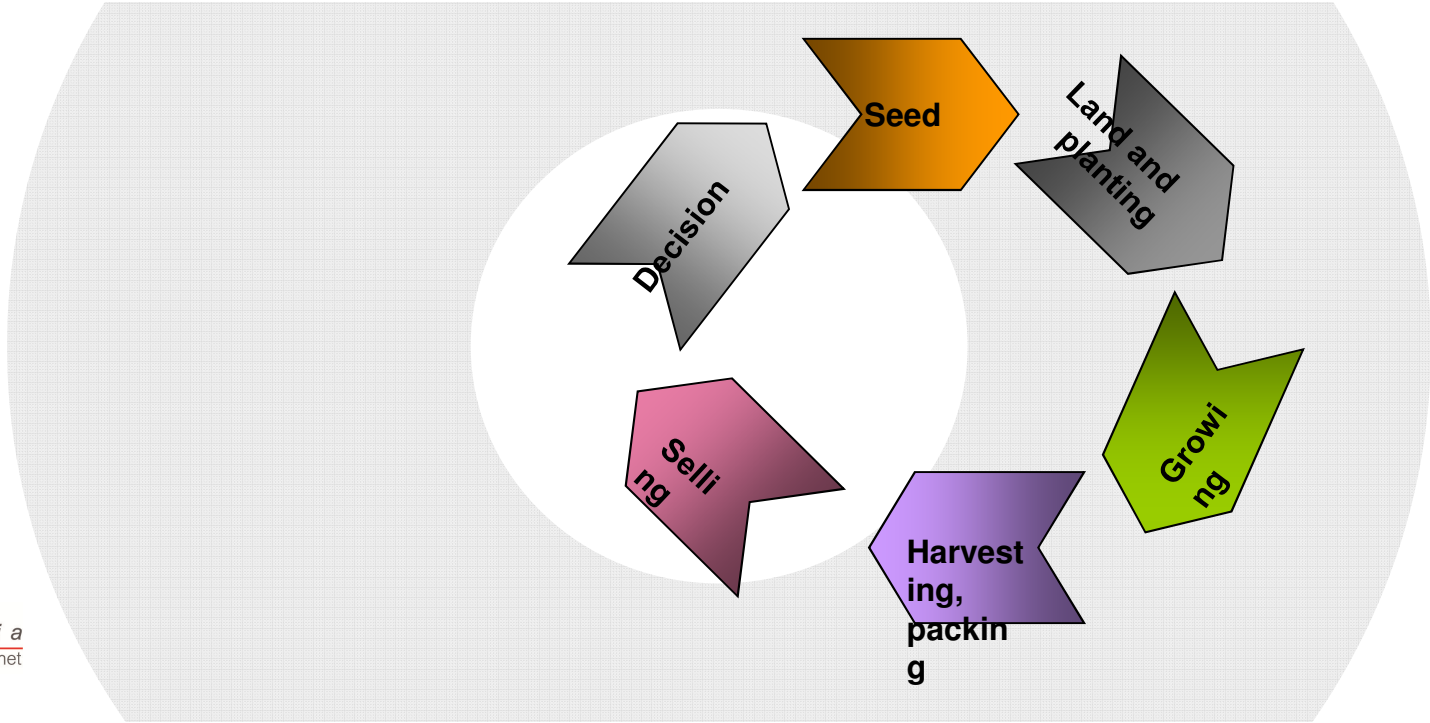
Role of ICT in agriculture

relevant, accurate & timely information

- Integrated systems that address individual information needs from Decision to Selling
  - Closing the loop: Decision ←→ Selling
  - Forward sales contracts [FSC]



Current state of play in India of agricultural VAS through mobiles

Services

	Market price information	Crop Advisory	Weather forecasts
RML (2007)	√	√	√
IKSL (2008)	√	√	√
Mandi on Mobile (2008)	√		
KRIBHCO Reliance Kisan Ltd. (2009)	√	?	?
Mani Bhav (2009)	√		
Idea Krishi (2010)	√	√	√
BSNL & NFL Venture (2010)	√	√	√
RCOM Grameen VAS (2010??)	√	√	√

Technology

	SMS	WAP	IVR	USSD	Application
RML (2007)	√				
IKSL (2008)			√		
Mandi on Mobile (2008)			√		
KRIBHCO Reliance Kisan Ltd. (2009)					
Mani Bhav (2009)	√	√			√
Idea Krishi (2010)					
BSNL & NFL Venture (2010)	√		√		
RCOM Grameen VAS (2010??)	√	√		√	

- Interfaces in upto 9 local languages, including Hindi (but not for all)

Lets take a closer look: IKSL & RML

	IFFCO Kissan Sanchar Ltd. (IKSL)	Reuters Market Light (RML)
Began Service	June 2007	October 2007
Partners	Bharti Airtel + Indian Farmers Fertiliser Cooperative Limited (IFFCO)	none
Cost	Free Voice messages Helpline service: INR 1/ min	Maharastra: Rs. 175 for three months Rs. 350 for six months Rs. 650 for an year
Technology	Voice message	SMS
Subscribers	1.5 million (Oct 2009)	170,000 (Oct 2009)
Comments	•Adhoc message delivery • Message can also be retrieved later for INR 1/ minute • Revenues are made from the sale of SIM cards	• Messages delivered at preset times • Message can be retrieved/saved • Subscription is the only revenue source

Business Models

	Joint Venture				Direct selling
	Telco + Farmer Org	Telco + VAS company	Telco + VAS + Govt. Bodies	Telco + NGO	
RML (2007)					√
IKSL (2008)	√				
Mandi on Mobile (2008)			√		
KRIBHCO Reliance Kisan Ltd. (2009)	√				
Mani Bhav (2009)		√			
Idea Krishi (2010)		√			
BSNL & NFL Venture (2010??)	√				
RCOM Grameen VAS				√	

Pricing Models

	Subscription	Usage Based	Free
RML (2007)	√		
IKSL (2008)		√	√
Mandi on Mobile (2008)		√	
KRIBHCO Reliance Kisan Ltd. (2009)			
Mani Bhav (2009)	√		
Idea Krishi (2010)	√		
BSNL & NFL Venture (2010)			√
RCOM Grameen VAS (2010??)	√		

Why are companies getting into agricultural VAS?

- Telcos:
  - Primarily using it to increase the number of rural customers:
    - E.g. Airtel sells a IKSL branded SIM (1.5million customers already)
    - Decrease churn
  - Might be a new source of revenue but is a secondary consideration …… but maybe not in the near future
    - Voice is very commoditized in the budget telecom network model of South Asia
- Agricultural VAS companies see a business case.
  - Is it proven?

How are farmers reacting to these services?

- Use at BOP very low
  - Does not necessarily mean that it doesn't filter to the BOP through others such as larger farmers who do use these services more regularly
- Poor value-for-money on some services
  - E.g. IFFCO Kisan Sanchar Ltd VAS services is deemed less valuable than RML especially for crop advisory (linked to Telco's priorities)
  - Farmers need relevant (i.e. localized), accurate and timely information
- Prefer voice
  - Lower literacy levels mean they prefer voice to text

Policy implications

- Leverage demand driven technology choice(s)
  - Voice is still King
    - IVR: better (requires less literacy) but costs are greater
  - If it's a text based solution local language is key
    - Plus text can be stored for later use
    - Use of unicode supported phones
- Awareness building and training
  - Youth are faster adopters and serve as gateways for their less tech savy parents
  - Proactive awareness building by companies

Policy Implications – Telco / VAS provider relationship

- Telcos are better off partnering with organizations specialized in providing information that farmers want
  - RML is cited has giving more relevant and timely information
- VAS companies may not have the resources (advertising, marketing) necessary for going solo
- Agricultural VAS can be a more complicated service than other Mobile 2.0 VAS services
  - Localized content (e.g. crop advice for growing cabbage in Sialkot) Verses generic content (e.g. ring tunes)
- Possible business models?
  - Too soon to say what works (maybe an Apple App Store model?)
  - Best to let market decide (spurs innovation)