

# **Agrifood Value Chains: Research Methods**

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- 1) “homework” Nigeria poultry/eggs VC, group discussion case based on analysis approach led by Saweda (separate ppt)
- 2) Saweda presents south RR and LSMS results (separate ppt)
- 3) Research questions (for methods application)  
... linking policy issues (testing conventional wisdom assumptions...) with research questions/hypotheses
- 4) Testing hypotheses & Myth busting... recalling Saweda’s Nigerian points & cereals example (from stacked survey) as motivation for stacked survey approach

- 5) Rapid reconnaissance/meso study
- 6) Stacked surveys/ micro study
- 7) Conclusions and way forward

## 4. Research Questions: patterns, determinants, effects

**a) What are the patterns & determinants in the structure of the segments of the VCs and the dynamics of restructuring?**

**... geography:** what is the “map” of the flows of product between rural production areas and cities and towns? How has this changed over time and why?

**... investments and asset levels**

## **b) What are the patterns and determinants of conduct at actor level?**

... product composition

... technology use and practices

... contract use, standard specification?

... procurement of inputs and marketing of outputs?

**c) What are the patterns and determinants of performance of actors?**

... profits

... net incomes

# 5. LINK between policy “shocks” & VC analysis

- a) All patterns (structure & conduct) in segments and over segments driven by actors' choices
- b) All choices are function of two sets of (proximate) drivers: **incentives and capacity**
- c) Incentives & capacity In turn affected by
  - c.1) Non policy variables
  - c.2.) Policy variables (ex. Road, energy cost, tax)

d) Per segment need sufficient variation over time & over actors to test hypotheses  
→ regular sample survey per segment (not small sample key informant)

.... “Stacked surveys” VC approach

**6. Myth busting! Testing “conventional wisdom” in VCs... with stacked surveys:**

**Rice Value Chain Transformation in Asia:  
Emergence of a Quiet Revolution**

# 6.1. Overview of surveys for rice

- a) Comparison over countries to see what is early, transitional, and advanced
- b) Hold constant: VC from main production area for mega-city to mega-city
- c) Stacked surveys: Samples of farmers, mills, rural & urban traders, and retailers (traditional & supermarkets)

	More advanced rice zone	Less advanced rice zone	Total
China	Heilongjiang	Jiangxi	
Bangladesh	Noagaon	--	
India	West UP	East UP	
Vietnam	Mekong River Delta (MRD)	Red River Delta (RRD)	
Surveys fielded:			
Farmers	925	1040	1965
Rural traders	110	177	287
Mills	162	135	297
Urban traders	150	153	303
Urban traditional retailers	275	970	1245
Supermarkets	170	182	352
Village heads	47	55	102
Total	1839	2712	<b>4551</b>

## 6.2. Quiet Revolution in Rice

### 6.2.1. Structural Transformation

**a) Conventional wisdom: “the backbone of the rice sector is 1000s of village mills”**

**Myth busted by our finding: Rapid concentration of the milling segment**

... disappearance of village mills over ONE DECADE

... rise of mills in rural town and district cities and now in large cities (with increase in capacity utilization as competitive advantage)

... increase in scale of mills (massive local investments)

**b) Conventional wisdom: “the backbone of rice trading is 1000s of small rural brokers” ... “many hands” in “long inefficient VCs”**

**Myth busted by our finding: Rapid disappearance of small rural brokers (dis-intermediation & re-intermediation)**

... Rapid rise in direct buying by mills

... Rise of direct buying by large urban wholesalers

→ cut out role of village trader (VT) in rice  
(Bangladesh, 7% to VT, China, 29% to VT, India, 18% to VT)

→ farmers sell direct to mills: 63% in China, 60% in Bangladesh; little in India (APMC act constrains shift)

**c) Conventional wisdom: “rice retailed only through small shops”**

**Myth busted by our finding: Rapid takeover of rice by supermarkets in China (emergence in India/Bangladesh/Indonesia)**

... supermarket chains adding to demand for diversity of types and quality (China)

... supermarkets procuring long-distance from large mills

... Supermarkets selling rice cheaper than traditional shops in India & China

## **d) Growth in geographic length of rice VCs (China)**

... combined with change in variety of rice in markets

... example of north to south shipment (train) & diffusion of japonica (and fall of indica) rice

... big increase in perfumed/jasmine rice from Thailand

... supermarket product differentiation strategies & branding & packaging important to spatial shift

## 6.2.2. Conduct/behavior

### Transformation

a) **Conventional wisdom: “rice market is just a commodity market – not a product-differentiated market**

**➔ assumption was that market NOT have quality or quality differentiation or packaging or branding” ... just sold loose, unbranded, bulk, non-traceable**

## **Myth busted by our finding: Rapid (in past few years) product/quality differentiation**

... rise of mill brands (in China)

... rise of packaged (in differentiated sizes) rice

... rise of dedicated agents/wholesalers in urban wholesale markets (in China & India)

... but in Bangladesh we found variety-quality change premium captured by traders and millers not farmers

**b) Conventional wisdom: “trader give advances to farmers to “tie” their rice sale to the trader”**

**Asian Myth busted** by our finding: Tied credit from traders has virtually disappeared! Same for input retail shops (saw in farm survey & trader survey) **now AFRICA (Saweda) (Tanzania, Uganda, Malawi, Nigeria)**

**Traders said 20 years ago they gave advances.**

**Traders said now it is too risky to advance to farmers because:**

**... farmers have cell phones so can shop around**

**... farmers have nonfarm income as their own source of cash**

**... the road density rose so too much competition**

**... farmers can now side-sell to other traders**

**c) Conventional wisdom, India: “Government input shops (subsidized) sell to smallest/poorest farmers”**

**Myth busted by our finding: Largest farmers get the great majority of government input shop sales**

**d) Conventional wisdom, India: “Government credit to rice farmers goes to to smallest/poorest farmers”**

**Myth busted by our finding: Largest farmers and richer zones get the great majority of government credit**

# 7. Rapid reconnaissance

## 7.1. Sampling

- a) **Choice of zones (from production or to consumption or both AND intermediate)**
- b) **And comparison different types VCs of product**
- c) **Minimum:**
  - **All segments in all zones**
  - **Say three strata per actor type**
  - **Say minimum 2 interviews per strata type**

## **7.2. interview approach**

- a) Type of interviewer geared to type of actor**
- b) No questionnaire, semi-structured in flow but structured in logic/needs**
- c) Probing but friendly**
- d) Implicit triangulation**

## **7.3. interview content**

**a) Two waves, meso at actor/zone level, then micro-meso at actor level**

**b) Four logical parts (implicit not necessarily in this order in discussion)**

- Assets/characteristics**
- Buy inputs**
- Make something (good or service)**
- Sell something**

**c) Now and 5 or 3 and 5 or 10 years ago (longer better)**

## d) Logical questions per category of question (journalist questions!)

- Who
- What
- Where
- When
- How
- Why

Plus meso and issues

## 8. Empirical approach to hypothesis testing: micro survey sampling and questionnaires, analysis

- a) “stacked survey” approach: for variation over zones and actors/assets and robustness
  - ... a “regular” sample-survey in EACH segment (like doing 6 surveys..)... better than the traditional “key informant”
  - ... to test hypotheses of inclusion/exclusion (like asset/investment thresholds/poverty),
  - ... determinants of investment,
  - ... conduct changes distribution,
  - ... performance effects

- b) Initial rapid reconnaissance to understand variations and possible basic patterns
- c) “meso” survey for inventory in areas
- d) Sampling approach for stacked surveys (urban and rural and over segments and zones)

## e) Example of fish VC in Bangladesh: Samples in Mymensingh, Comilla, and Jessore/Khulna; Dhaka, Chittigong, Bogra

- Upstream
  - a) Feed companies 10
  - b) Feed dealers 150
  - c) Feed wholesalers 20
  - d) Fish Hatcheries/nurseries 150
  - e) Shrimp hatcheries 20
  - f) Fry wholesaler 30
  - g) Fish households 1050
  - h) Shrimp households 300
- Midstream
  - i) Pharias 150
  - j) Rural dalal 60
  - k) urban dalal 150
  - l) Processors 50
- Downstream
  - m) Urban trader 150
  - n) Traditional retailer 150
  - o) Supermarkets 20
  - p) Exporters 50
  - q) Consumers 450

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VC actors 2700

e) Questionnaire approach (who, what, where, when, why, how)

... assets

... buy

... make

... sell

f) Analysis by segment (patterns and determinants and effects of structure and conduct), testing hypotheses

g) Analysis of VC “overview” (such as distribution of costs and returns over segments)

# 9. Steps

- a) Step zero, literature review past studies
- b) First step new study: is rapid appraisal (key informants) of all types of participants in VCs
- c) Pretest in two waves the questionnaires for all segments
- d) Structured questionnaire surveys and case study (semi-structured) surveys
- e) Analysis and write-up in sets
- f) Stakeholder workshops and final seminar