Reforming Rural and Urban Food Distribution Systems

Comments on Experiences from Costa Rica, Other Latin American Countries and Kenya

Michael Weber

- Key Forces: Population Growth, Urbanization and Retail/Market Purchase
Key Concept: How Does Retailing and Wholesaling Tend to Change

Graph 3: Changes in Food Retailing and Wholesale in the Course of Economic Development in Developing Countries

How To Study These Issues-IO Framework

<table>
<thead>
<tr>
<th>VARIABLES OFTEN EXAMINED IN URBAN FOOD SUBSYSTEMS STUDIES</th>
<th>Structure</th>
<th>Context</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure:</td>
<td>Percentage of purchases by various retailer types</td>
<td>- Levels of satisfaction</td>
<td>- Prices</td>
</tr>
<tr>
<td>- Preparation distribution by income level</td>
<td>- Value of purchases by retailer type</td>
<td>- Distance traveled to purchase time</td>
<td>- Costs</td>
</tr>
<tr>
<td>- Food consumption by income level</td>
<td>- Transportation type &amp; costs by retailer type</td>
<td>- Percentage of income spent on food</td>
<td>- Profit levels</td>
</tr>
</tbody>
</table>
| - Food consumption by various product groups      | - Consumer attitudes about different retailers | - Quality of food consumed | - Services offered (e.g., Channel co-ordination)
| - Income elasticity or demand for food     | - Consumer preferences for convenience of location | - Ability to achieve optimal balance, given income | - Growth in sales |
| - Projections of future consumption             | - Why | - Amount of employment | - Degree of competition |
| Tensions:                                   | Reasons                                      | - Frequency                             | - Amount of employment |
| - Number and type of retailers                | - Product availability by retailer type | - Frequency                             | - Amount of employment |
| - Sales by type of retailer                   | - Store's reputation                        | - Frequency                             | - Amount of employment |
| - Employment and job rotation                 | - Management practices                       | - Frequency                             | - Amount of employment |
| - Level of education and management skills     | - Why                                       | - Frequency                             | - Amount of employment |
| Wholesalers:                                 | Reasons                                      | - Frequency                             | - Amount of employment |
| - Number and type of wholesalers             | - Product availability by retailer type | - Frequency                             | - Amount of employment |
| - Sales by type of retailer                   | - Store's reputation                        | - Frequency                             | - Amount of employment |
| - Employment and job rotation                 | - Management practices                       | - Frequency                             | - Amount of employment |
| - Level of education and management skills     | - Why                                       | - Frequency                             | - Amount of employment |
| - General characteristics                     | Reasons                                      | - Frequency                             | - Amount of employment |

- Input-Output Analysis
- Prices
- Costs
I. Performance- Summary of Findings from MSU Latin American Research in late 1960’s & early 1970's

A. Results for Consumers
   1. Poor consumers pay more for food
   2. Quality of products was generally lower for lower income consumers
   3. Location convenience was important for retailing services
   4. Retail sales on credit were only a minor factor in store choice

B. Food Retailing and Wholesaling
   1. Gross margins at retail and wholesale were generally comparable
      (normally expect wholesale to be lower-some possible factors for this)
      a. costs and risks were high
      b. losses were high
      c. weak competition
   2. In general, profits were not found to be excessive
   3. Economic efficiency measures (higher productivity in labor and capital) tended to increase as volume increased for personal service retailers
   4. An extra link in the food distribution system serving small retailers
   5. Wholesalers & retailers operate with passive selling, active buying orientation
   6. Supermarkets and self-service stores are sources of competitive pressures

II. Challenges (mid-1970’s Urban Food Dist. System Reform

A. Reform the urban retail/wholesale systems
   1. Get reasonable variety and assortment of food products in stores
   2. Combine with lower prices for large masses of consumers (not just high end consumers)
   3. How to get location convenience in retail options for consumers

B. Designing and evaluating urban wholesale market reforms
   1. Interest in urban food reform related to wholesale markets. Why?
      a. urban bias and urban renewal planning & the political process
      b. visibility of wholesale mkts/large clearing house function
      c. infrastructure bias in foreign and domestic financial sources
      d. potential role of wholesalers as channel captains in dist. chains

C. Promote improved retail/wholesale/farm linkages, not just supermarkets
D. Maintain investments and interest in complementary marketing services rules of the game, information systems, marketing extension services and training of public and private participants
Coca Cola Foundation Study-2003
Value for Emerging Consumers in Retailing
In Latin America

Myths They Informed About Emerging Consumers
1. Have Little $ to Spend
2. Have Simple Demands on Retailing
3. Overwhelmingly Attracted to Low Shelf Prices
4. Fallacy of “Modern Trade” for Everyone
5. Its Just a Matter of $ and Time for These Consumers to Flock to Large Supermarkets

<table>
<thead>
<tr>
<th>Per capita Income Quintile</th>
<th>Mean Per Capita Income (Ksh)</th>
<th>Market Outlet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Supermarket Chains</td>
</tr>
<tr>
<td>1 (lowest)</td>
<td>7,407</td>
<td>0.1%</td>
</tr>
<tr>
<td>2</td>
<td>19,199</td>
<td>0.4%</td>
</tr>
<tr>
<td>3</td>
<td>33,567</td>
<td>0.6%</td>
</tr>
<tr>
<td>4</td>
<td>59,560</td>
<td>0.1%</td>
</tr>
<tr>
<td>5 (highest)</td>
<td>276,698</td>
<td>14.9%</td>
</tr>
<tr>
<td>Overall</td>
<td>79,079</td>
<td>0.3%</td>
</tr>
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</table>

Fewer than 1 in 20 Ksh spent on fresh produce is spent in supermarket chains …
… and nearly ALL of this occurs among the wealthiest 20% of the population

Open air markets and kiosks dominate

Table. Supermarkets and the Central American fresh fruit and vegetable domestic markets

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<th>Country</th>
<th>Number of supermarket stores</th>
<th>Value of domestic food market million $</th>
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<td>45</td>
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<td>132</td>
<td>7,300</td>
<td>292</td>
<td>116</td>
<td>75</td>
<td>34</td>
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<td>125</td>
<td>5,200</td>
<td>458</td>
<td>8.3</td>
<td>46</td>
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<td>Total</td>
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<td>599</td>
<td>518</td>
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Supermarket Share of FFV Still Relatively Limited in Central America!

Reforming Rural and Urban Food Distribution Systems In Costa Rica: Progress/ Challenges 30 Years Later) (72-02)

Objectives

• Review Original Problems & Diagnostic Research/Extension Efforts
• Identify Actions Taken & Follow-up Dynamics
• Discuss Current Food Distribution Forces & Changes in Costa Rica
• Place CR Marketing Changes in Context of Change in Other Countries
• Highlight Important Future Research & Policy Extension Issues
• Point out Key Sources of Information on Food Distribution
Milestones in PIMA’s Early Development
• Municipal Development Institute (IFAM) Established 1970
• 1972 PIMA (Integrated Program of Agricultural Marketing) Set Up
• IFAM and Ministry of Agriculture Join Forces to Provide PIMA Staff
• MSU Ag. Econ. Group Assists Over First 5 Years 1972/78
• (Weber/Baucom in Residence-Riley/Harrison/Shaffer Backup
• PIMA Becomes a Permanent Govt. Program in 1979

Municipalities in Costa Rica Where Market Feasibility Studies Were Done
Naranjo County

Naranjo City-County Seat Market

Rural Food Retail Store

Naranjo Rural Areas/Bus Routes & Rural Food Retailers

Naranjo County Seat Cash/Carry Food Wholesaler

Channel Map of Naranjo County Food Distribution Participants

Naranjo Municipal Market-1972-Not Enough Commercial Space?

Market Vendor Inside Mkt.-1972

Poor Traffic Flow Inside Municipal Mkt-1972

Inside Mkt-Poor Vertical Utilization By Vendors

Original Proposal for a New Naranjo Municipal Market
Proposed Market and Traffic Flow Layout for Remodeling

Proposed Bus Stop and Market Remodeling

Ideas for Proposed Vendor Display & Sales Areas

What Not To Do!

Recommended Renovations For FFV Display and Sales Areas of Naranjo Market to Utilize Vertical Space and Facilitate Consumer Access

What Not To Do!
Naranjo Market & Bus Stop As Remodeled & As It Appeared in March-2002

Improved Consumer Traffic

New Vendor Display and Sales Areas

Supermarket in Naranjo Opposite the Municipal Market –FFV Market Shares Still Modest-but Growing

Another FFY Vendors inside Renovated Municipal Market of Naranjo
What Happened To Rural Retail Food Supply System Needs?
Costa Rican Experience With Neighborhood Food Retailer Chains

Grecia Retailer Chain-1974

Retailer Chains
35th Year
Anniversary

http://www.csu.co.cr/cadenas/masxmenos/sanjose.html

San Jose Retailer Chain
Wholesale Cash & Carry Warehouse in 1974

San Jose Neighborhood Retailer
(Member of San Jose Chain)
Naranjo Retailer Chain As It Appeared in March 2002

1974 PIMA Study Recommended Establishment of A Retailer Chain for Naranjo

Established Sometime in Late 1970’s

Naranjo Retailer Chain 25+Members Provides Full Line of Basic Food Products (non-perishible), Credit, Order filling, Delivery and Related Assistance

PIMA Recommendations For Other County Seat Towns

Wholesale Warehouse in San Isidro-2002

Rural Retailer Chain For This Region Established 100+ Members in 2002

Retailer Picking Up Order

San Isidro Municipal Market Before-1974

After 1 Way Streets and No Parking Enforcement -1974
Concerns of Municipal Governments in the San Jose Metropolitan Area: Traffic Congestion/Urban Renewal In Key Food Retail and Wholesale Areas of the City

Major Urban Infrastructure Needs
Downtown San Jose-Wholesale Market & Surrounding Street/Warehouse Congestion
Studies Done to Focus on the San Jose Metro Area Wholesale/Retail Marketing & Infrastructure Needs

But Linking Back to Rural Assembly/Production Coordination Issues

New CENADA Wholesale Market Location in Heredia - Opened in 1981
New CENADA Wholesale Market

Wholesale Fresh Fish Market Building

Greatly Improved Sanitation

Ample Truck & Merchant Operating Space/Facilities

New CENADA Wholesale Market Facilities (March 2002)
Innovative Services-Grain Trading Floor & Electronic BOLPRO

Fruit Ripening Rooms with Pallet Access

PIMA- Key Services

- Wholesale Market Facilities
- Market Price and Supply Information-Collect and Diffuse
- Marketing Extension to Improve Quality and Production Coordination
- Farmer Market Organization
- Cold Storage
SERVICIOS OFERIDOS POR PIMA
Services Offered by PIMA

- Programa Nacional de Centros de Acopio Transportes
- Program of Rural Assembly Markets
- Dirección Ejecutiva Nacional
- Central Ejecutiva CENAPA
- Sistema de Información de Mercados Nacionales
- Asesoría Tecnológica y Capacitación

PIMA (Integrated Program of Agricultural Marketing) Services

SERVICIOS PIMA

- Dirección de PIMA
  What is PIMA
- Manual de comercialización Hortícolas
  FFV Marketing Manual
- Perfiles de mercados
  Consumption Trends
- Calendario comercialización
  Marketing Calendars
- Conferencias
  Conferences

¿QUE HEMOS SABE APROXIMADAMENTE LAS FIESTAS Y BODAS?
What Should We Know About FFV
Origin of products arriving at the CENADA wholesale market:

Tomato comes mostly from the counties (cantones) of Alajuela, San Ramón, Naranjo, Grecia, Valverde Vega, Santa Barbara, Titán, Paraiso and Palmares.

Basics specifications for marketing tomatoes in the CENADA market

**Minimum Characteristics**
Tomatoes must be fresh, consistent, clean, whole, free of external humidity, free of insect damages, no severe deformations, free of foreign matters and free of rotting due to fungi and bacteria.

**Grades:**
- **First:** The tomatoes must be of good quality, free of open cracks. Acceptable are slight defects of form and development, discoloration, slight skin defects, and light bruises. Maturity level between green and ripe.
- **Second:** This category includes those that cannot be classified in the first category, but display the minimum characteristics. They must be firm and have no unhealed cracks. The following defects are admitted if the product maintains its essential characteristics of quality and presentation: defects of form, development and skin discoloration, defects or bruises, whenever they do not damage the fruit seriously, healed cracks of 3 cm maxima in length.

- **Third:** This category includes those that cannot be classified in the higher categories, but correspond to the second category second and they can display healed cracks of more than 3 cm in length.

**Tolerances**
- **First:** 10% in number or weight of tomatoes that do not correspond to the characteristics of the category, but fit into the second category.
- **Second:** 15% in number or weight of tomatoes that do not correspond to the characteristics of the category, but fit into the second category.
- **Third:** 20% in number or weight of tomatoes that do not correspond to the characteristics of the category, nor to the minimum characteristics. This excludes rotten products or alterations that make them improper for consumption.

**Defects**
- Fruit deformed
- Mechanical damage
- Rotten
- Fungi
Through a graph of the annual behavior of prices and quantity supplied it is possible to appreciate in which time of the year prices are normally higher or there is greater or smaller amounts of the product in the market.

### Seasonal Indexes

<table>
<thead>
<tr>
<th>Month</th>
<th>Supply Price</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAN</td>
<td>0.8854</td>
<td>0.9995</td>
</tr>
<tr>
<td>FEB</td>
<td>0.9310</td>
<td>0.8159</td>
</tr>
<tr>
<td>MAR</td>
<td>1.0409</td>
<td>0.7331</td>
</tr>
<tr>
<td>APR</td>
<td>0.9804</td>
<td>0.9037</td>
</tr>
<tr>
<td>MAY</td>
<td>0.9308</td>
<td>0.9308</td>
</tr>
<tr>
<td>JUN</td>
<td>1.0506</td>
<td>0.7331</td>
</tr>
<tr>
<td>JUL</td>
<td>1.0825</td>
<td>1.2088</td>
</tr>
<tr>
<td>AUG</td>
<td>1.1404</td>
<td>0.9892</td>
</tr>
<tr>
<td>SEP</td>
<td>1.1644</td>
<td>0.7331</td>
</tr>
<tr>
<td>OCT</td>
<td>1.0455</td>
<td>0.9255</td>
</tr>
<tr>
<td>NOV</td>
<td>0.9462</td>
<td>1.3643</td>
</tr>
<tr>
<td>DEC</td>
<td>0.9072</td>
<td>1.5409</td>
</tr>
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### Marketing unit at the wholesale level:

The marketing container is the plastic box. It holds 48 to 100 first class tomatoes, 175 to 198 second class fruits and 265 tomatoes of third class. Presents a gross weight average of 19 kg.

### Classification according to weight:

1. **First**
   - Fruits: 65 to 265 g.
2. **Second**
   - Fruits: 16 to 114 g.
3. **Third**
   - Fruits: 17 to 77 g.

### Patterns of behavior of monthly price and quantity supplied: Interpretation.

Through an analysis of the graph, it is evident that:

- Months with lower supply prices are: April, May, June, and November.
- Months with higher supply prices are: July, August, and December.

### Chemical Composition per 100 g of edible portion

<table>
<thead>
<tr>
<th>Product</th>
<th>Value Energy (kcal)</th>
<th>Humidity %</th>
<th>Protein (g)</th>
<th>Carbohydrates (g)</th>
<th>Fiber (g)</th>
<th>Ca (mg)</th>
<th>P (mg)</th>
<th>% VE act. (mg)</th>
<th>% VE th. act. (mg)</th>
<th>% Th. act. (mg)</th>
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<tbody>
<tr>
<td>Tomato</td>
<td>21</td>
<td>93.8</td>
<td>0.8</td>
<td>0.3</td>
<td>4.6</td>
<td>0.5</td>
<td>7</td>
<td>24</td>
<td>180</td>
<td>0.06</td>
<td>0.7</td>
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**Supermarket Growth in Costa Rica**

*High End Store Format*

*Middle Income Neighborhood Store Format*
From Berdegue et. al. The Rise of Supermarkets in Central America: Implications for Private Standards for Quality and Safety of Fresh Fruits and Vegetables.

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CENADA Facilities and PIMA Market Facilitating Services

Powerful Combination To Improve Marketing-Wholesaling Especially & The Price Discovery Process and Trader/Farmer Education for Fresh Market Products

http://www.pima.go.cr/

CNP-Old Costa Rican Grain Board Becomes Provider of Information—Reinforces PIMA and CENADA

http://www.mercanet.cnp.go.cr/default.htm

¿Qué es Mercanet? Es un sistema integrado de información de mercados, comercialización, agroindustria y calidad agrícola orientado al Sector Agropecuario Costarricense.

• Market Information & Analysis
• Virtual Markets
• Bolpro-La Bolsa de Productos Agropecuarios
• Facilitating Trade Environmental Services and Products

http://www.mercanet.cnp.go.cr/SIM/SIM.htm
http://www.trade-exchange.biz/trades_sp/bolpro/vista_global.shtml
Key Dimensions to the Rapid Innovation & Growth in Food Retailing/Wholesaling in Costa Rica in Past 10-15 Years

• 2 Innovative Supermarket Groups in Costa Rica Grow Rapidly in Domestic & Central American Market. 2001 CSU Alliance with Fraga/Ahold

• In F & V Areas Each Group Works With or Sets Up a Full Service Specialized Wholesaler to Facilitate/Coordinate Linkages to Retail & Farm

• Competitive Pressures To Relate To Farmers and To Expand Production of Needed Fruits and Vegetables For Target Markets-Role of CENADA/PIMA?

• What (Who) Are The Target Markets? How To Balance Pressure to Innovate And Pressure For Regulation of Competition and Growth? (Example of WalMex Bodega Stores in Mexico and Todo Dia Stores in Brazil)

http://www.mindfully.org/WTO/Wal-Mart-Dominate-Brazil.htm
CENADA and PIMA’s New Challenges

- Strengthening Services and Linkages to Farmers (Mercados de Acopio) Without Getting Caught By The “Infrastructure Bias”
- Identifying Marketing Services & Information/Analysis That Facilitates Further Private Sector Development
- What To Do To Enhance Competition Among Growing Retail Giants?
- Maintaining Competitive Warehouse Rental Rates & Services
- Through-Put Volume of Product In CENADA May Be Flat/Declining?
- How To Help Different Farmers Grow For Emerging Markets
- Complementing The Enormous Changes in Private Supermarket Sector Alliance of (CSU, Fraga and Ahold)

What Happens When WalMex Comes to Costa Rica?

http://www.csu.co.cr/
http://www.walmartmexico.com.mx/

Taking Advantage of Sources of Information on Retail & Wholesale Market and Marketing Development

- World Union of Wholesale Markets: http://www.wuum.org/
- Fresh Produce Marketing Reform in South Africa: http://dms-name.co.za/ShowPublished.php?ALL
- Marketing Extension Materials FAO, MSU, Others
- Race To The Top: (British effort to track supermarket progress on fairness and environmental commitments) http://www.racetothetop.org/documents/aboutrtt.htm
Not Enough Time To Rest—Too Many Important & Interesting Topics To Work On!