

Smallholder Inclusive Value Chain Models for Local and Global  
Markets Workshop *4-6th of June 2016, Bali, INDONESIA*

**Developing Smallholder Inclusive Food Value  
Chain Models for Local and Global Markets:  
The Case of Taipei Agricultural Products  
Marketing Corporation (TAPMC)**

**Ching-Cheng Chang**  
Academia Sinica and  
National Taiwan University

# 1. Background:

- **Small Scale Farming → Low Farm Income**
  - Per capita farm income is only **70%** of non-farm income

	<b>&lt; 1.0 ha</b>	1.0-2.0 ha	2.0-3.0 ha	3.0-5.0 ha	5-10 ha	10 ha >
No of farms	<b>562,415</b>	117,884	32,849	18,511	6,885	1,672
% in total	<b>76.0%</b>	15.9%	4.4%	2.5%	0.9%	0.2%

- **Urbanization and Rise of mid-income households**  
**→ Higher demand for quality, diversified, safe agricultural products**

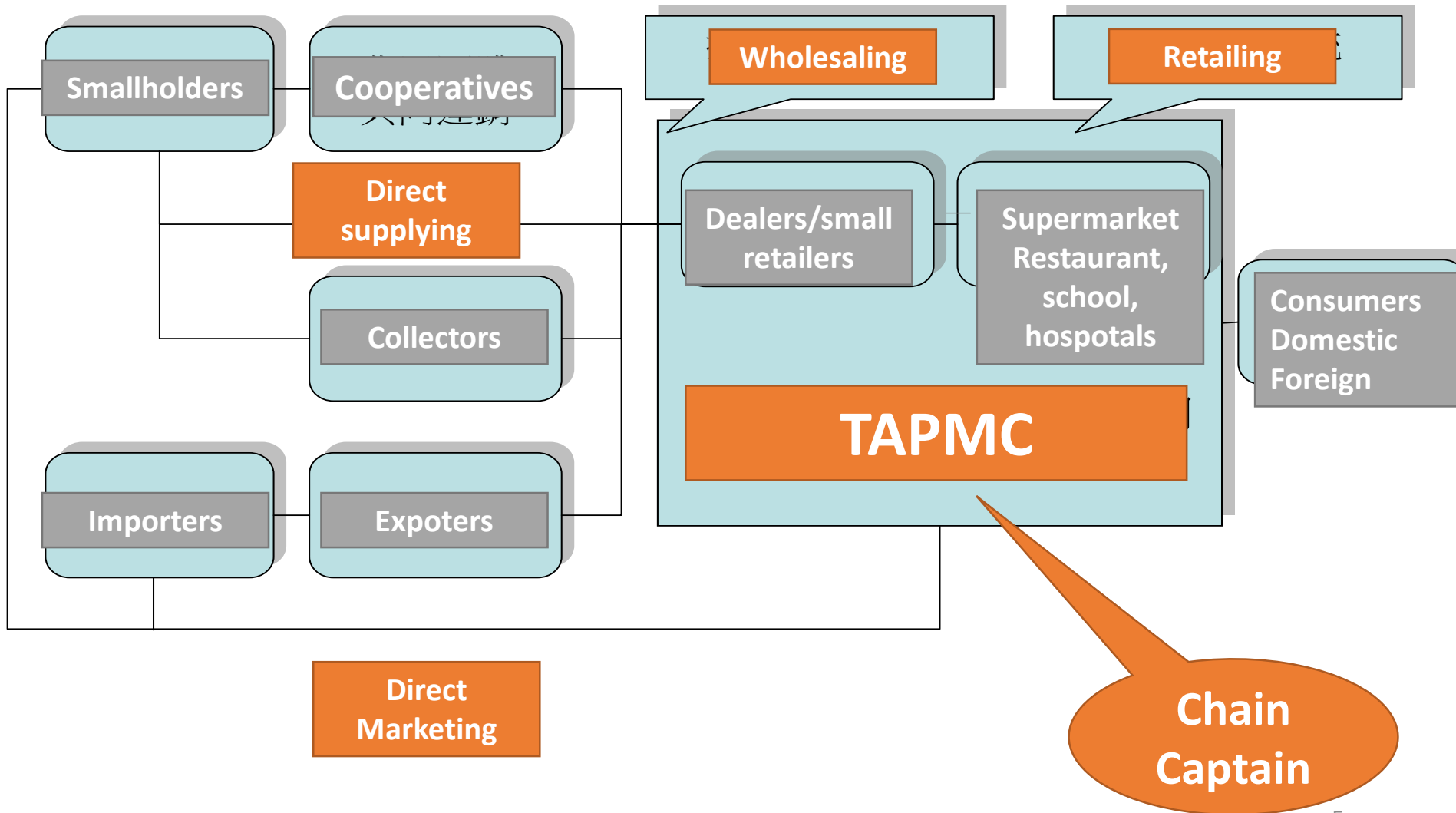
## 2. Purpose of the Business Model

- **Price formation and transparency**
  - Prices are determined by the market demand and supply.
  - TAPMC has a transparent digital system to collect and release prices and volumes of agricultural products that are auctioned in the company.
- **Welfare enhancement for smallholders and consumers**
  - Farmers can get higher prices and income because of trading produce in higher volumes.
  - Buyers (retailers) can gain access to lower price per unit which can benefit the customers at the retail stage.
- **Product quality and safety control:**
  - Although food safety and quality are guaranteed, the economic costs related to fulfilling such guidelines are heavy for the farmers to shoulder alone.

# 3. Scope of the Model

	Vegetables	Fruits
Annual Total Production (MT)	3,200,000	2,700,000
No of Varieties	232	137
Daily Transaction by TAPMC		
Value (million NTD)	21	15
Volume (MT)	1,300	800
Share in Total (%)	82%	76%

# 3. Value Chain Diagram



# 4. Business Objectives/Drivers

## Chain Captain

- Provide better prices for farmers/smallholders
- Provide diversified products at affordable prices for retailers/consumers
- Conduct Pesticide Residue Test and issue TAP (Traceability Agricultural Product), GAP (Good Agricultural Practice) certificates.

## Smallholders

- Provide quality products based on the daily transaction and price information from the company
- to both suppliers/buyers for strategic planning
- Provide grading/packaging assistance to farmers to increase their product values and consumers' satisfaction

# 5. How to define “Success”?

## 1. Competitiveness of the value chain

Price differentiation → Higher prices (10~90% higher) for better/safer products

Fruit	Grade A (1)	Branded 2)	(2)/(1)×100(%)
Orange	33.69	40.50	120
Tangerin	31.07	70.85	228
Mango	68.37	83.31	122
Lichi	103.70	260.00	251
Prune	85.19	140.97	165
Wax apple	103.14	175.82	170
Papaya	39.55	49.40	125
Melon	33.20	41.75	126
pears	49.96	51.32	103
Sugar apple	101.44	103.51	102

Vegetable	Average price (1)	GAP price (2)	(2)/(1)×100(%)
Broccoli	17.81	28.10	147
Summer squash	14.94	16.59	111
Bitter Squash	17.48	24.55	140
Tomato	24.96	35.63	143
Bell Pepper	11.57	22.47	194
Boy choy	7.90	10.65	135
Spinage	13.80	24.21	108
Mustard Green	10.26	11.27	110
Green onion	35.57	40.18	113
Sweet potato leaves	12.53	17.33	138

# 5. How to measure “Success”?

## 2. Smallholders’ Inclusiveness Aspects (1)

Ownership	Voice
<p><b><u>Private Shareholders - 54%</u></b> Retailers: 20% Marketing Cooperatives-9% Farmers’ Associations-25%</p>	<p>Because farmers’ associations own a stake at TAPMC, the smallholders’ interests are represented in dialogues.</p>
<p><b><u>Government - 46%</u></b> Council of Agriculture-23%, Taipei City Government- 23%</p>	<p>Prices are determined by the market, therefore farmers/buyers have no monopoly/monopsony power to influence.</p>



# 5. How to measure “Success”?

## 2. Smallholders’ Inclusiveness Aspects (2)

Risk	Reward
<p><b>Commercial-</b> If an error is found and the product is deemed to be in good quality, TAPMC will pay for 100% of the losses incurred by the farmer.</p>	<p>Because farmer associations and marketing cooperatives are also stakeholders at TAPMC, they also share the economic costs and benefits that the company gets.</p>
<p><b>Political-</b> Conflict of interest can be an issue since the local and national government are stakeholders of the company.</p>	<p>Products meeting quality standards and graded superior along with its value added premiums can be marketed at better and higher prices.</p>
<p><b>Reputational-</b> TAPMC strictly observes a transparent auction system ran by trained professionals to avoid underhand deals. They also have to uphold strict guidelines in terms of product grading and pesticide use to protect the interests of consumers.</p>	<p>This can be an added benefit for farmers to consider investing in post-harvest processing and packaging that could largely affect their product’s value.</p>

## 6. Roles/Contributions of the Key Players (1)

TAPMC is the key players in vegetable/fruit value chain:

- Help smallholders to package/grade/process their products to gain better prices and market shares
- Train farmers on improving farming/post-harvest practices to stabilize volumes and prices
- Ensure quality control and safety food by lab testing and labeling/certification
- Promote import/export of quality products to meet the demand of local and global market

## 6. Roles/Contributions of the Key Players (2)

### Exporting

Lettuce,  
Pineapple

Mango, Wax  
Apple

Papaya,  
Banana,  
Broccoli

### Importing

Yam, Kale  
Borecole,  
Chinese  
Cabbage,  
Radish

### Product Quality and Certification

TAP (Traceability  
Agricultural Product)

Organic Certification,  
Fruits with Trademark

GAP (Good  
Agricultural  
Practice), Pesticide  
Residue Test

### Innovations to scale up

Introduction of  
Varieties

Having smaller  
packaging

Effective and  
efficient ways  
of post-harvest  
practices

# 7. Challenges

- 1. Profitability:** Financial sustainability and investment in upgrading their services are jeopardized by the government regulations that cap the commission fee in 3%
- 2. Competitiveness:** Increase competition from e-commerce and rapid ageing populations has shrunk the market demand in volume basis and market shares.
- 3. Scale-Up:** Demand for higher standard to gain consumer confidence in local and foreign market has increase the cost of certification and traceability system.

# 8. Takeaway Messages

- Good business model requires transparency and information symmetry across stakeholders.
- The public sector should further improve the product standards and assist in establishing the traceability system for ensuring safety of agricultural products.
- The private sectors should provide a venue for smallholders to learn how to improve product quality and post-harvest handling/processing to gain get better profits/trade deals.



Thank you

