

# Competitiveness Framework for Asian Smallholder Dairy Development

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**Chiang Mai, February 25, 2008**

**Prepared for the project “Improved Market  
Access and Smallholder Dairy Farmer  
Participation for Sustainable Dairy  
Development” (CFC/FIGMDP/16FT)**

# Why is This Cow Smiling?

Friday, February 22, 2008



## Prosperous Asian markets fuel boom in meat dairy exports

9:54 AM :: 0 Comments :: ☆☆☆☆☆ :: Manufacturing and Marketing - Primary Production



Agri. & Commodities

### Milk prices to shoot up in Punjab

Jalandhar, (PTI): Come February, milk will be costlier in Punjab.

Expressindia » Story

### Milk prices all set to increase from March 1

Raakhi Jagga

Posted online: Sunday , February 10, 2008 at 11:22:43

Updated: Saturday , February 09, 2008 at 11:40:43

Print

Email

Jan 28, 2008 17:58 ET

**High Growth Forecasted for the China Milk Powder Market, Competition Situation Research Report**



A huge opportunity if we are ready for it...

- *Competitiveness* of Smallholder Dairy
  - Ability to respond to market opportunities
  - Ability to upgrade to meet market requirements
  - Ability to address challenges from international competition
  - Ability to provide sustainable and growing livelihoods to market participants

# What, Why, and How

- What is a competitiveness framework?
- Why it was developed?
- How it was used by the consultant team;
- How you can use the framework to better understand how to proceed in your own work.

# What is a competitiveness framework?

- Structured process of analyzing smallholder dairy *as an enterprise* in each country;
- A “language” for APHCA participants across Asia to understand their common challenges and important differences between (and within) national markets;
- A tool for looking at smallholder dairying “from the inside” and from the current situation rather than at the macro level;
- Way to identify what models can best address our challenges.

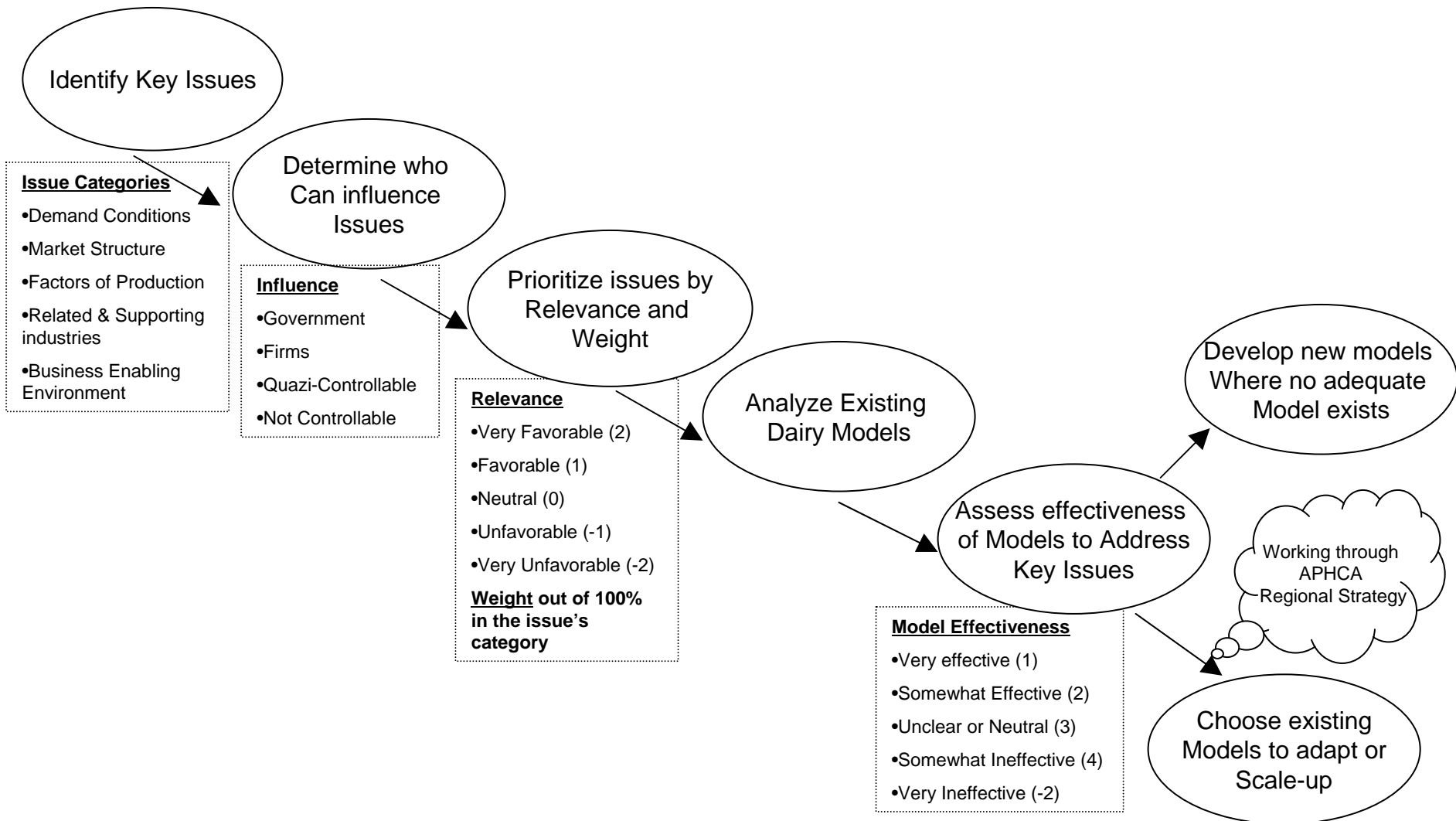
# Why a Competitiveness Framework

- **Prioritization:** Help government and policy discussions in narrowing their focus on the most important/urgent deficiencies in the operating environment for smallholder dairy;
- **Collaboration:** Provide a basis for different countries to come together to work on issues that are similar (since not all countries will face the same combination of issues and opportunities);
- **Targeting:** Guide participants to choose models or elements of models that have been shown to successfully address the specific deficiencies and opportunities that they face.

# How the Competitiveness Framework is Used

- Issue identification and categorization
- Evaluation of what can be influenced
- Determine relevance and weight of specific issues and issue categories
- Analysis of model effectiveness

# Process



# Performance-Competitiveness Driver Categories

- Key Categories
  - Demand conditions
  - Factors of production
  - Marketing chain and industry structure
  - Related and supporting activities
  - Business enabling environment

# Driver Categories with Sub-Factors

<b>Demand Conditions</b>	<b>Market Structure &amp; Governance</b>	<b>Factor Conditions</b>	<b>Related and Supporting Industries</b>	<b>Business Enabling Environment</b>
Market size and growth	<i>Domestic Market</i>	<i>Herd</i>	Value-Added Processing	<i>National</i>
Consumption patterns	Governance	<i>Breed</i>	Transportation and Distribution	Sector Regulation
Sophistication of consumers	Market Chain	<i>Human Capacity</i>	Producer services	Formal sector support
Receptivity to new products	Lead Firms	<i>Distribution-Infra Capacity</i>	Specialized inputs	<i>Provincial/Local</i>
Price elasticity	Barriers to Entry & Rents	<i>Processing</i>	Specialized finance & credit	<i>Formal Private Governance</i>
Impact of market opening and imports on local demand	<i>International Market</i>	<i>Land Supply &amp; Utilization</i>	Relevant research capacity & utilization	<i>Donor/NGO</i>
		<i>Credit-Finance Market</i>		
		<i>External Economies</i>		

# What can be quantified rapidly?

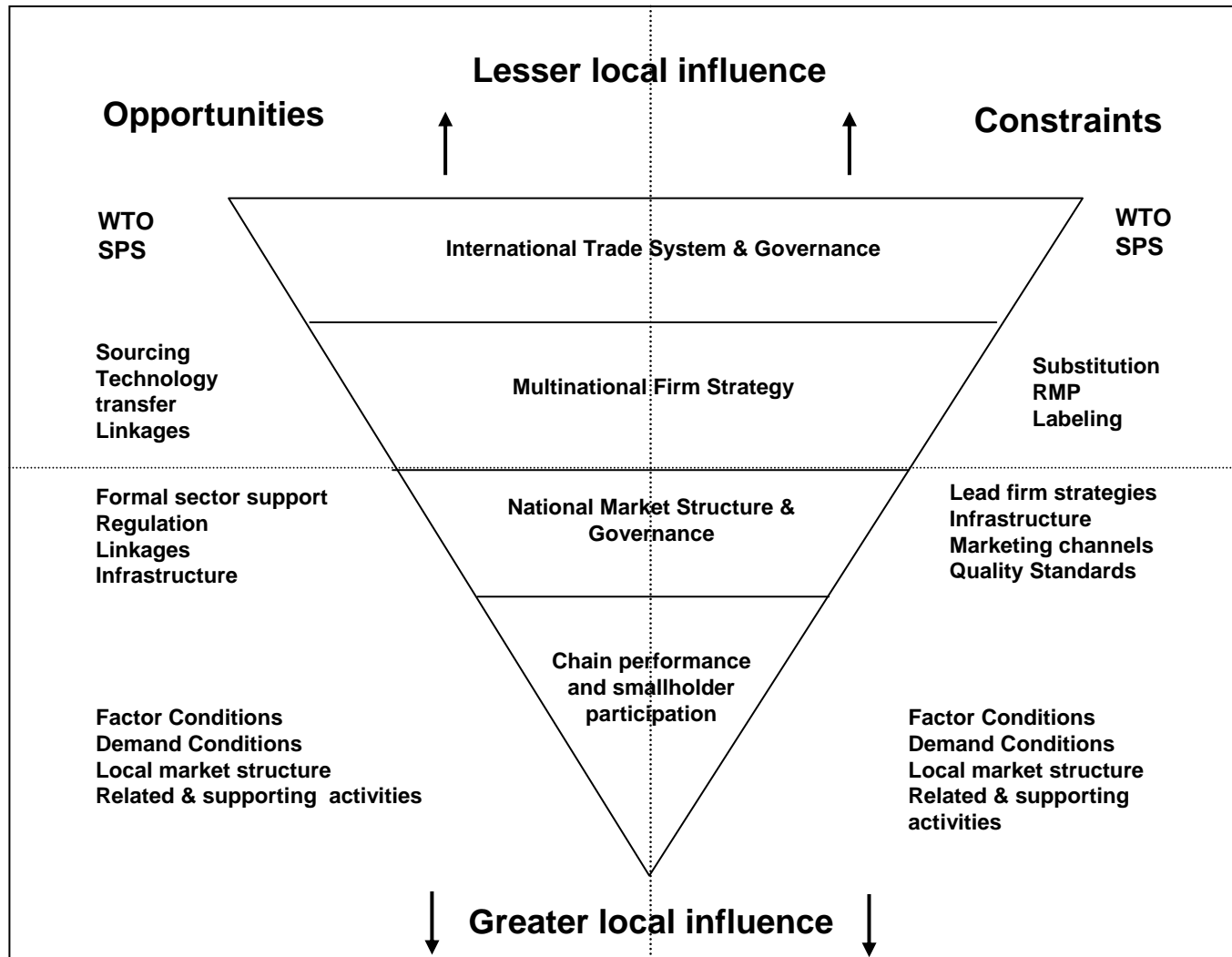
Factor conditions and utilization	Market structure & governance	Producer services and value chain depth	Demand conditions
Calving interval (# months)	Transport & Processing Costs (TPC) per unit output	Growth in processing capacity (5 years, %)	Demand growth
Quantity milk output/year (UNIT)	TPC as % WMP	Licensed veterinarians per 1000 population	Fresh Milk Premium (FMP) as % WMP
Lactation period (days)	TPC as % FMP	Capital resources	FMP increase past 5 years
Feed/fodder unit cost (FF) in local currency	Spoilage/Losses as % output		% output to non-powdered uses
FF unit cost as % of WMP	Import parity (value)		


 Farm & Enterprise Level    Value Chain Level    Market Level

# Analysis of these factors allows prioritization of greatest challenges and opportunities

- Three prioritization steps
  1. Who can influence or control the issue?
  2. Is the issue a favorable or unfavorable factor for smallholder dairy enterprise?
  3. How important is the issue compared to other factors?

# Step 1: What can we control through policy and program interventions?



## Steps 2-3: How relevant and important are specific drivers?

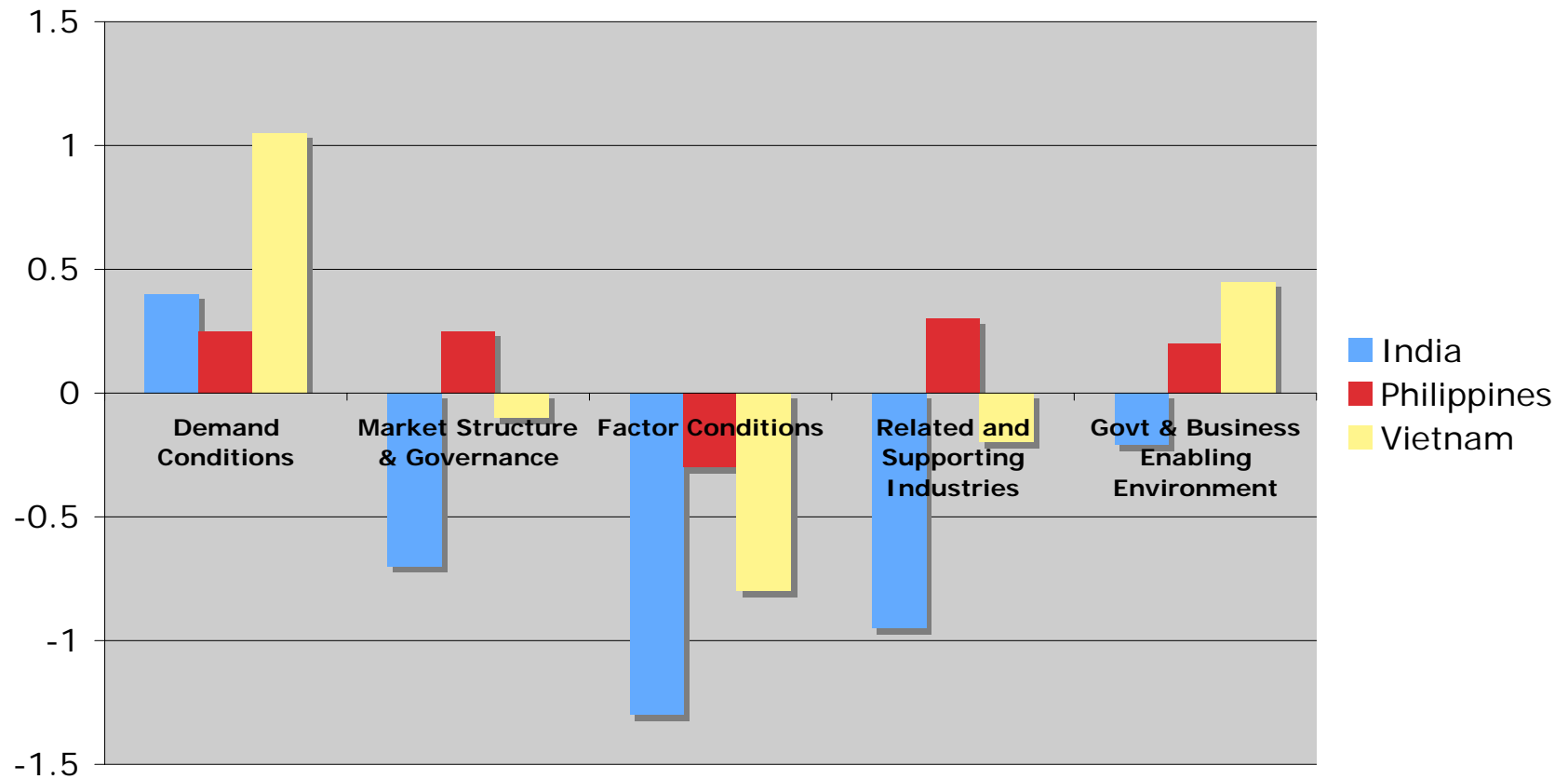
- Relevance ratings and weights are assigned to each specific driver
  - Very Unfavorable (-2) to Very Favorable (+2)
- Each driver is then “weighted” as a % of the category.
  - Each category = 100%
  - More important drivers are assigned larger % values within the category
- This creates a driver “score” that allows comparison.

# Driver Evaluation Matrix: Vietnam Factor Conditions

Performance/ Competitiveness Drivers	Key Industry Issue	Controllability				Relevance		Weight	Drivers Evaluation
		CF	CG	QC	NC	F/U	Score -2 to +2		
<b>Factor Conditions</b>									
<b>Herd</b>									
Herd	Uninsufficient supply of cross-bred heifers				x	U	-1	<b>0.05</b>	-0.05
Breed	Cross-bred heifers are expensive and starting dairy is risky for unexperienced smallholders.				x	U	-1	<b>0.10</b>	-0.10
Breed	High heat & humidity in Vietnam lower the performances of the H-LS				x	U	-1	<b>0.10</b>	-0.10
Feed	Lack of forages only partially solved.					VU	-2	<b>0.10</b>	-0.20
Feed	Recent considerable increase of industrial concentrates.				x	U	-1	<b>0.05</b>	-0.05
Veterinary Medicine	Apart maybe from southern Vietnam, poor availability of essential drugs for dairy (mastitis & reproduction)	x	x			U	-1	<b>0.05</b>	-0.05
Producer Technical Capacity	A very small number of producers have followed a good practical short-term training course on dairy production.	x	x			VU	-2	<b>0.10</b>	-0.20
Support services technical capacity	In locations with no international cooperation, smallholders are only advised by vets and inseminators. Vets have a low level of training and almost no continuing professional education is organized.	x	x			U	-1	<b>0.05</b>	-0.05
Org & Managerial Capacity	Lack of willingness from farmers to take leading roles and organize farmers' groups.				x	U	-1	<b>0.05</b>	-0.05
Entrepreneurial Capacity	As for other sectors in Vietnam, initial investment is very often too high in comparison to the funds that are put into the routine daily costs.				x	U	-1	<b>0.05</b>	-0.05
Land Supply & Utilization	Insufficient for smallholders		x			VU	-2	<b>0.10</b>	-0.20
Formal credit mechanisms	Credit has been available with the National Dairy policy and some dairy processing companies	x	x			VF	2	<b>0.10</b>	0.20
Informal credit mechanisms	Credit can be supplied by family relationships, other dairy farmer (in-kind) or collecting centers.				x	F	1	<b>0.05</b>	0.05
Transmission of learning	Happens a lot from farmer to farmer.				x	F	1	<b>0.05</b>	0.05
Social Capital and Trust									
<b>TOTAL</b>								<b>1.00</b>	<b>-0.80</b>

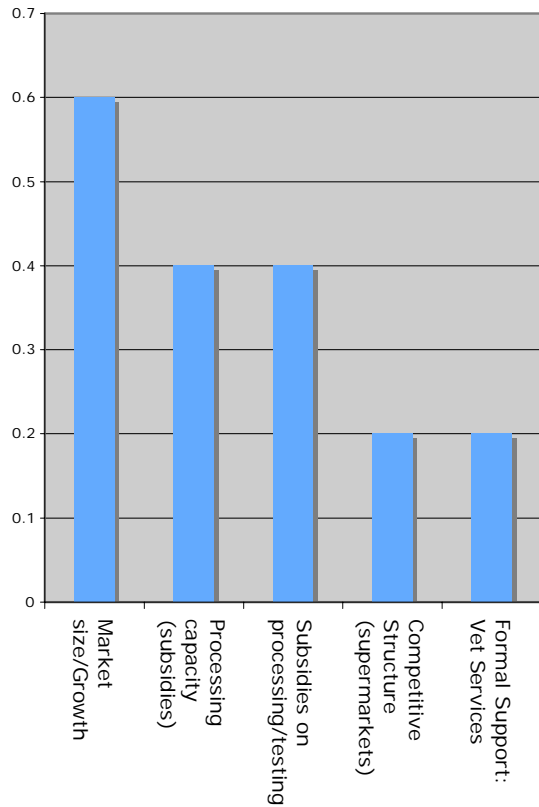
# Results from Consultant Studies

## Comparative Results of Dairy Competitiveness Drivers Analysis

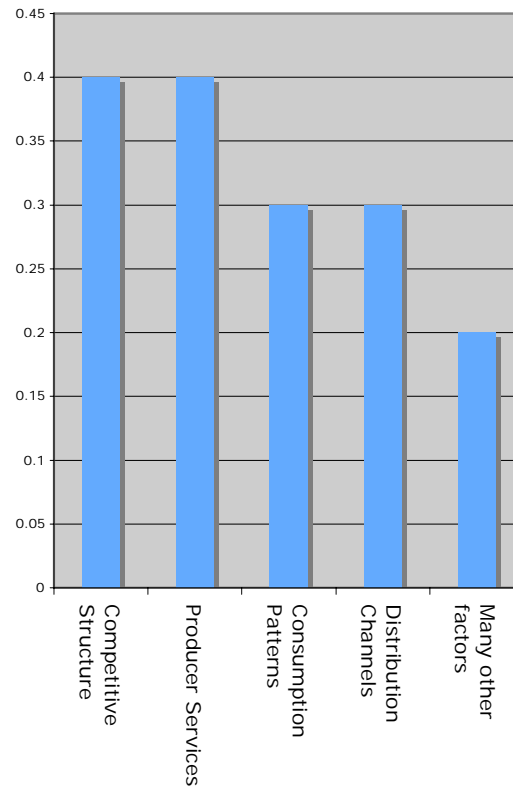


# Most Favorable Competitiveness Drivers in 3 Countries

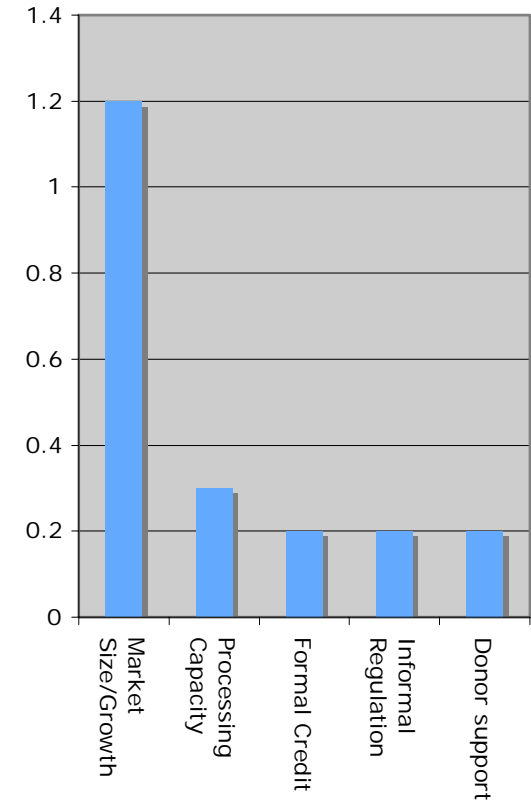
## India



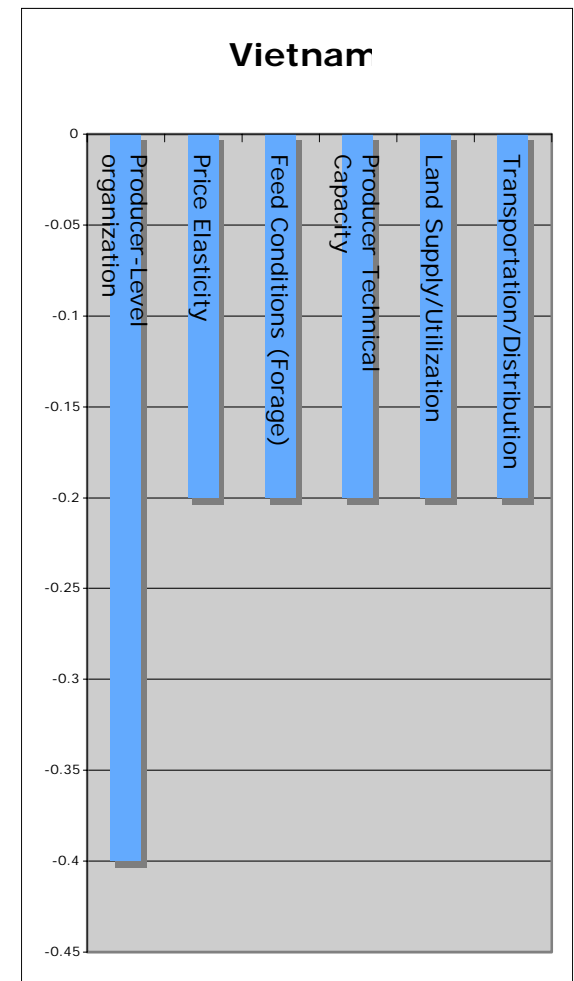
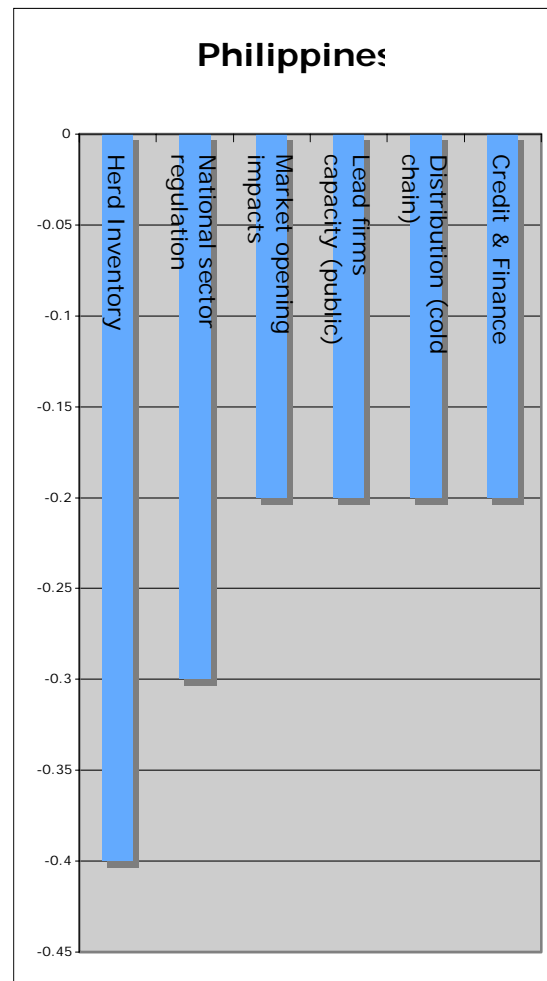
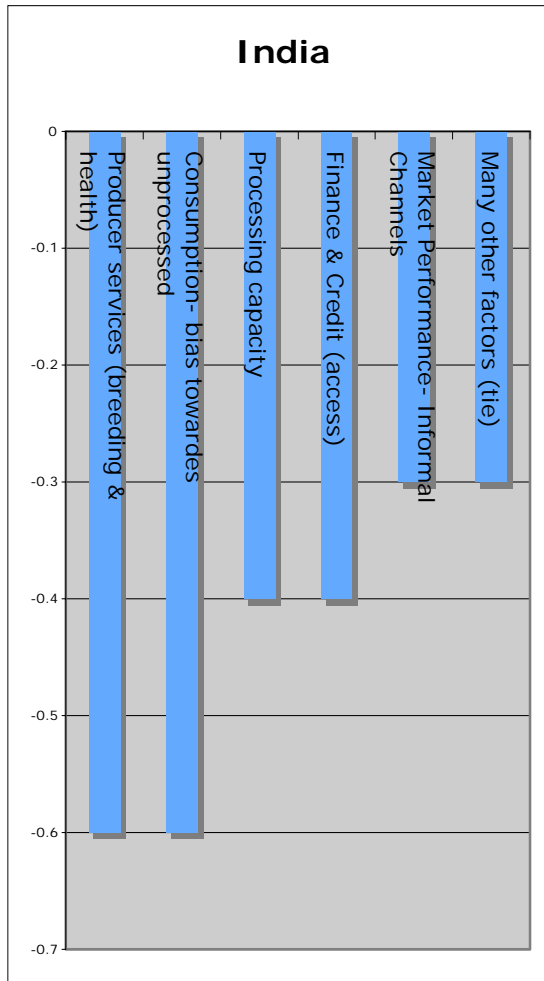
## Philippines



## Vietnam



# Least Favorable Competitiveness Drivers in 3 Countries



# Evaluating Models' Ability to Address these Issues

- Models should be selected for adaptation and scaling-up based on their responsiveness to the situation actually faced by the smallholder dairy enterprise.
- Most fundamental question:  
*“Does a particular model respond to the specific, high-priority challenges and opportunities that smallholder dairy faces in my country’s environment?”*

# Rating Models' Effectiveness: India examples

Competitiveness Drivers	Key Issues	Drivers Evaluation	Score	Co-operative Union	Score	MACS Society	Score	Private Dairy
<b>MODELS PROVIDE WAYS TO ADDRESS KEY DRIVERS</b>								
<b>Market size and growth</b>	Market growth due to high per capita consumption and increasing population	<b>0.6</b>	<b>4</b>	Not much investment in developing milk procurement to meet future high demand	<b>1</b>	Developing a village level infrastructure to meet future high demand	<b>4</b>	Not much investment at village level to meet future high demand
<b>Performance</b>	still large share of milk 85% of marketable surplus goes through traditional channel	<b>-0.3</b>	<b>4</b>	Not been able to undercut the traditional market	<b>1</b>	Giving competition to traditional channel by strengthening societies	<b>2</b>	Giving competition to traditional by offering higher price
<b>Processing Capacity</b>	lack of processing capacity in the country, including primary processing by bulk chilling	<b>-0.4</b>	<b>3</b>	Need to enhance capacity for processing and bulk cooling	<b>2</b>	Has a strong processing and primary processing infrastructure	<b>2</b>	Has strong processing and primary processing infrastructure
<b>Price regulation</b>	Price regulation by co-operatives	<b>-0.4</b>	<b>4</b>	Has to follow the price regulation norms of the co-operatives hence cannot give farmers better price	<b>2</b>	Has the flexibility to higher prices to farmers	<b>4</b>	Purchases milk from farmers through agents, thus they don't have control over prices
<b>MODELS DO NOT ADDRESS KEY DRIVERS: NEED FOR FURTHER INNOVATION</b>								
<b>Consumption patterns</b>	Unpackaged milk is still preferred because of taste and price	<b>-0.6</b>						
<b>Producer services</b>	Availability of health and breeding services can be enhanced, extension is almost non-existent	<b>-0.6</b>						
<b>Specialized finance &amp; credit</b>	Exist on paper, but very difficult to avail	<b>-0.4</b>						
<b>Processing Capacity</b>	Government subsidies on bulk chilling and processing infrastructure	<b>0.4</b>	<b>5</b>	has not availed of government subsidies	<b>3</b>	Cannot avail of government subsidies for bulk cooling	<b>3</b>	Cannot avail of government subsidies for bulk cooling

## Model Scoring Key

- (1) Very effective in addressing this key industry issue;
- (2) Somewhat effective in addressing this key industry issue;

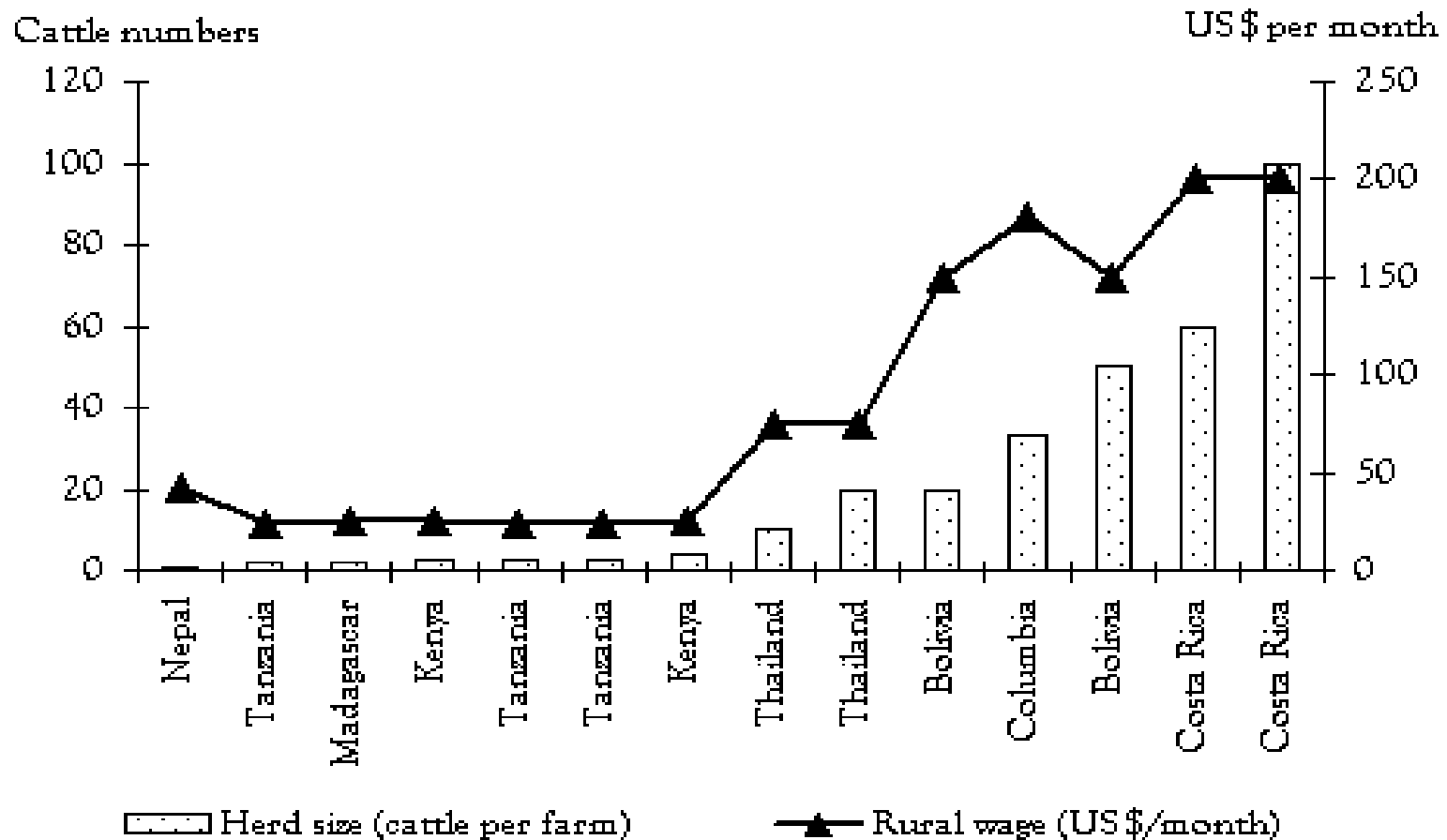
- (3) Unclear or neutral effectiveness in addressing this key industry issue;
- (4) Somewhat ineffective in addressing this key industry issue;
- (5) Very ineffective or counterproductive in addressing this key industry issue.

# Trajectory Determinant

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- The Rural Wage Rate

# Dairy Herds Grow as Rural Wage Rates Rise



*Unpublished results from case studies carried out in November to December 2000 by the International Livestock Research Institute (ILRI) and collaborators under the project on Transregional Analysis of Crop-Livestock Systems.*

# Smallholders and commercial producers view economic returns differently

**Economic returns on dairy production: smallholder and small commercial producers**

	<b>Smallholder</b>	<b>Small Commercial</b>
<b>Returns from Milk</b>	X	X
<b>Other Returns</b>		
Fertilizer (manure)	X	
Improved land productivity	X	
Savings/ Investment	X	
<b>Costs</b>		X
Fodder costs	X	
Capital costs	Principally cow/herd cost	Equipment costs, grazing land costs, herd costs

# Different Strategies are appropriate in varying rural wage and smallholder access conditions

Productivity more important to viability

Greater expected opportunities for Smallholders

		Smallholder Market Access/Participation		
		High % market	Moderate % market	Marginal % market
Rural Wage Rate				
Low-Stagnant	% urban wage	1. Sustainability and improvement of smallholder enterprise through on-farm productivity improvements	2. Sustainability and improved participation of smallholder enterprise: Improvement of market access: improved collection infrastructure and improved linkages.	3. Development and basic participation of smallholder enterprise: marketing chain access, basic collection infrastructure
Low-Growing	% urban wage	4. Imminent consolidation: Enterprise (or coop) development focused on intensification, transition to small commercial, including capital resources and economies of scale	5. Imminent consolidation: Enterprise (or coop) development to cope with intensification, improved market chain participation/access.	6. Smallholder viability in doubt. Expected consolidation/intensification. Selective enterprise development, basic market chain participation through linkages with larger enterprises.
Medium-Stagnant	% urban wage	7. Uncertain role for smallholders. Assumed prevalence of commercial or coop enterprises (intensification). Focus on enterprise development, productivity, technology	8. Uncertain role for smallholders. Assumed prevalence of commercial or coop enterprises (intensification). Focus on market chain access, market development, enterprise development, and efficiency productivity, technology	9. Assumed that local production viability is low. Smallholder participation possible. Focus on analysis of limited opportunities for smallholder participation, linkages with larger enterprises.
Medium-Growing	% urban wage	10. Any remaining smallholders threatened. Focus on intensification/transition to commercial enterprises through enhanced credit and technology/extension	11. Any remaining smallholders threatened. Simultaneous focus on commercial enterprise development for intensification and market chain access. Linkages to lead firms <u>important</u> .	12. Assumed that local production viability is low. Smallholder participation unlikely, poor prospects. Focus on analysis of small commercial opportunities, linkages with larger enterprises.
High	% urban wage	13. Very limited opportunity for smallholders. Enterprise improvement (productivity, technology), scale, export opportunities for commercial enterprises.	14. Enterprise improvement (productivity, technology), formalization and improvement of linkages for small commercial enterprise success	15. Assumed that local production viability is low. Smallholder participation unlikely, poor prospects. Focus on analysis of small commercial opportunities, linkages with larger enterprises.

Higher expected size/intensification of dairy enterprises

Market linkages more important to viability

## Next Steps with the Framework

- **Incorporate your input** on how this framework can be more helpful to you
- **Include more countries** through self-assessment exercise (next!)
- **Online tools** for self-assessment and model evaluation