





Macro developments in the China and Southeast Asia beef sector

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ACIAR Project

"Beef markets and trade in China and Southeast Asia"

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www.asiabeefnetwork.com

Rationale

- Dramatic change in the regional beef sector over last 20 years
 - Economic growth consumption
 - Beef prices
 - Production
 - Trade informal and informal
- With wide-ranging implications
 - For export countries (Australia, Mekong)
 - For import countries (China, Indonesia, Vietnam)
 - 20 million small-holders, cattle traders, butchers, beef retailers in the region
- Important to (properly) understand the picture, drivers, dynamics, future & impacts.
 Project doing this through

Implications for small-holders



Trade modelling (SPEM) – for forcecasting and running scenarios



Statistical analysis



Industry research / papers

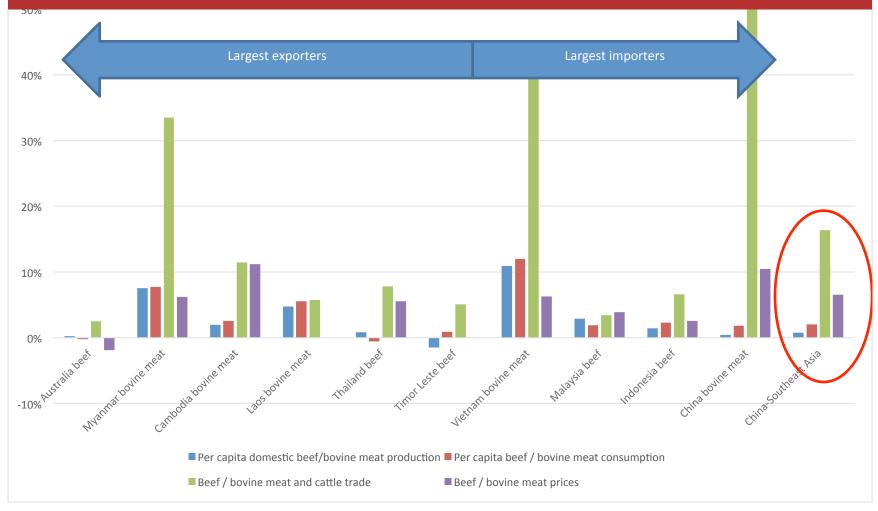
International livestock revolution

- ILR as an entry point
- Tenants of ILR
 - Demand driven revolution of the developing world
- Delgado et al. (1999)
 - Initially forecast that increasing demand in developing countries would be met by local supply, with little increase in trade or prices
- Subsequent studies show and forecast:
 - Demand has outstripped supply, leading to increased prices and trade

Contribution of project

- More disaggregated focus on:
 - Cattle and beef
 - The China Southeast Asia Australia region
 - National and sub-national level analysis
 - Diverse countries (Myanmar to China to Malaysia)
- Incorporates:
 - Detailed data from project network / country partners
 - Revisions of production data
 - Informal trade flows
- Findings
 - Confirms the trends of ILR (D>S, increased trade and prices)
 - But finds that the S-D gap, trade volumes & prices have increased faster than ILR literature
 - Based on 2014 data

Combined aggregate indicators



Compound Annual Average Growth, 2000-2014

Source: various country data

China-Southeast Asia

- 0.8% increase per capita beef production
- 1.9% increase "consumption" (per capita beef supply)
- 16% increase in trade
- 6.5% increase in price

Per capita supply

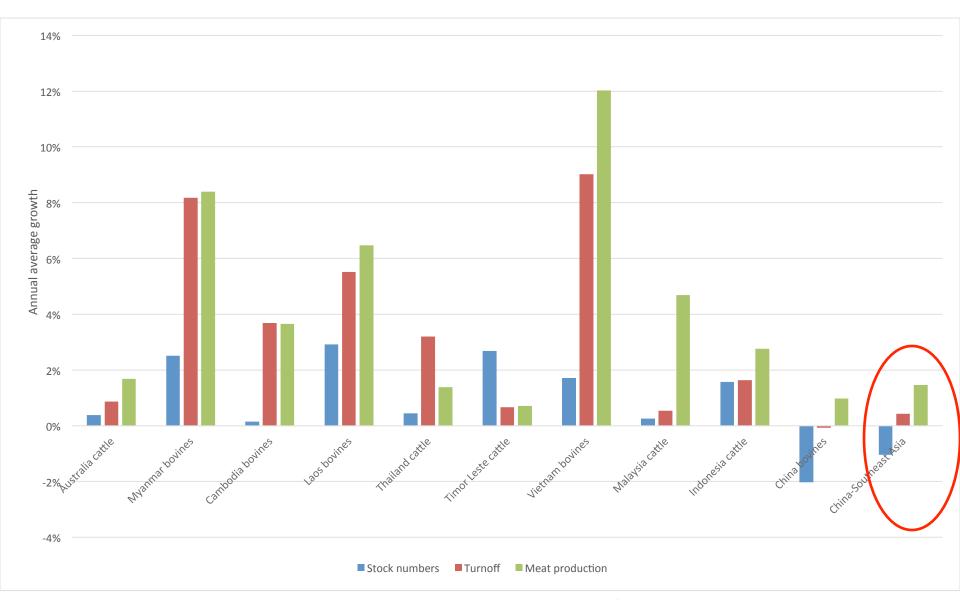
	Australia beef	Myanmar bovine meat		L a o s bovine meat	Thailand beef	T i m o r Leste beef	Vietnam bovine meat	Malaysia beef	Indonesia beef	China bovine meat	
Beef supply											
Beef supply (kg/person 2014)	62.7	2.1	1.2	3.7	1.8	1.5	4.3	7.2	2.7	5.4	4.7
Annual growth 2000-2014 (%)	-0.3%	7.7%	2.6%	5.6%	-0.5%	0.9%	12.0%	1.9%	2.3%	1.8%	1.9%
Demographics (annual growth 2000-2104)) (
Population growth	1.5%	0.8%	1.6%	1.6%	0.6%	2.3%	1.0%	1.8%	1.3%	0.5%	0.7%
Urbanisation rate	0.2%	1.5%	0.7%	4.1%	3.2%	1.9%	2.1%	1.3%	1.7%	3.1%	2.8%
GDP per capita	1.5%		6.0%	5.7%	3.5%	2.9%	5.2%	3.0%	4.0%	9.2%	5.3%

Per capita supply = domestic production (cwe) + net trade.

Project data + United Nations Population Division, World Bank Development Indicators

Countries – Vietnam high growth, China growth large agg effect, Aust plateau Drivers – population growth modest effect, compared to urbanisation and incomes

Production indicators



Drivers in the production sector

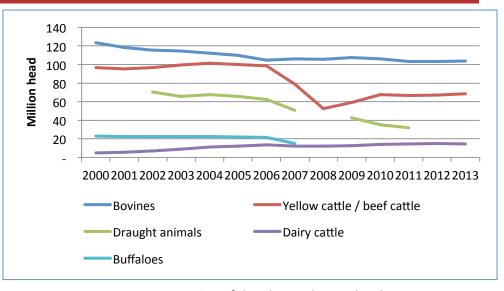
Lagged production responses / stock numbers

- Farm mechanisation / draught in some countries (China below, Myanmar)
- Opportunity cost labour
- Long cattle production cycles
 - = Low S-side price elasticities

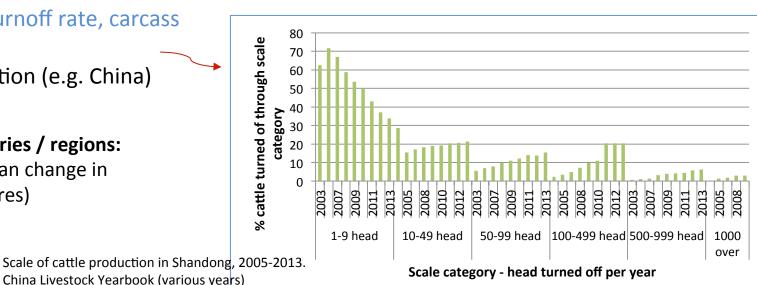
- But increased slaughter numbers, beef production
- Productivity (turnoff rate, carcass weight)
- Commercialisation (e.g. China)

(But in most countries / regions:

More continuity than change in production structures)

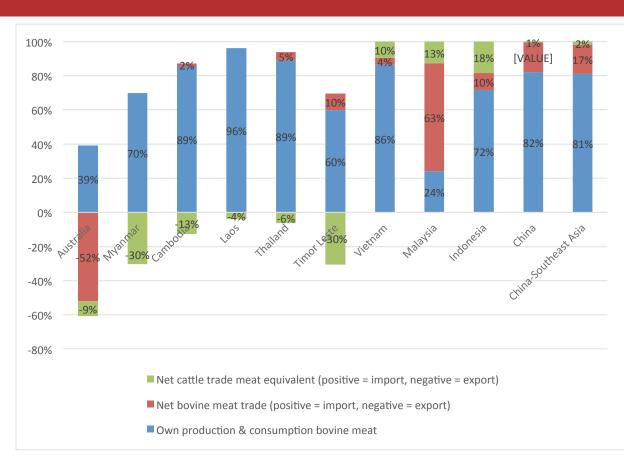


Composition of the Chinese bovine herd, 2000-2013. China Livestock Yearbook (various years)



Trade

	_		
000 tonnes cwe	%		
-1,579	2%		
-52	33%		
-3	11%		
-2	6%		
1	8%		
-1	5%		
49	43%		
162	3%		
198	7%		
1,330	55%		
1,679	16%		
	-52 -3 -2 1 -1 49 162 198 1,330		



Trade as a proportion of domestic production/consumption

The informal trade:

- Two-thirds of **beef** traded is through informal markets, especially the "grey trade" into China (>1 million tonnes / year)
- 60% of live cattle trade is formal (Indonesia, Vietnam, Malaysia), but large informal trade (China, Mekong, Timor)

Prices



Real beef prices in local currency units, 2000-2015. (2015=100).

Source: China Livestock Yearbook; Ministry of Agriculture; (Vietnam) Ministry of Agricultural and Rural Development; Australian Bureau of Statistics

Shows:

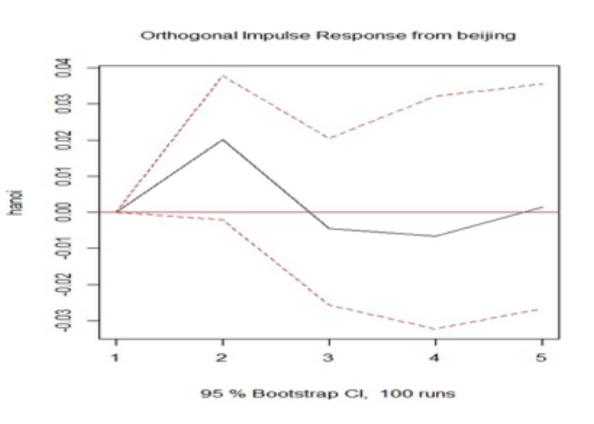
- Spikes
- Integration

	Hanoi loin		, 0		Jakarta chicken	
2000-2014		1.3%	8.3%	-0.5%	-0.4%	
2007-2014	8.1%	2.6%	10.6%	-2.2%	3.2%	

Compounded real annual av price change by period

Price integration between China and Vietnam

An increase of 10% in Beijing beef prices is followed by an increase of 2% in Hanoi within 2 periods (6 months), then moves to equilibrium



Source: Dong Xiaoxia (CAAAS); China Livestock Yearbook; Ministry of Agriculture; (Vietnam)

Conclusions

- Gaps between consumption and production and the magnitude of trade higher than documented / forecast. Due to:
 - Statistical methods (statistical revisions & incorporation of informal trade)
 - Factors particular to the period (2014) / region (dynamic)
- Which may not necessarily be ongoing or replicated
 - Peak consumption tapering in major importers (China and Vietnam)
 - Supply-side constraints in major exporters (Australia and Myanmar)
 - Liberal trade policies can change
 - Multiple scenarios
- Next steps
 - Incorporation into modelling, forecasting, simulations
 - Implications for small-holders
- Comments welcome on
 - Methods
 - What stands out
 - Scenarios to model
 - Anything else