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# Indonesian Poultry Value Chain

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# Indonesian Poultry Value Chain – Outline (1)

- Industry Description
  - **Size**
  - **location**
  - **broiler sector**
  - **layer sector**
  - **village poultry sector**
- Stakeholders
  - **roles**
  - **the availability of feed capacity**
- Costs and margins
  - **this study should capture the level of margin in each stage of chain**
  - **to identify the cost of distribution in term of transportation cost**
  - **what is the “real” price for broilers**
- Prices
  - **industry fragmentation (or not)**

# Indonesian Poultry Value Chain – Outline (2)

- Influences and issues
  - to identify the main bottlenecks along the value chain
  - to identify what could lead to significant cost reductions
- International competitiveness
  - why the industry is not competitive
  - to identify the major players of broiler meat in the world market
  - to reveal the success story of countries experienced in broiler meat export
  - what are the opportunities for export growth
- Industry development
  - what are the opportunities for growth
  - what is the regional development potential
- Monitoring the industry
  - what data collection is required

# Methodology

- TOR review and clarification
- Identify key stakeholders for interviews/site visits
- Plan approach – based on ensuring deliverables
- Review industry statistics
- Web search for relevant data
- Interview industry stakeholders to understand system
- Obtain prices, costs from industry sources
- **Undertake a detailed production analysis and costing**
- Identify issues that evolve during analysis
- Work up international competitive issues
- Work up development issues
- Identify data that may assist MoT monitor industry

# Indonesian poultry value chain

- **Industry Description**
  - **Size**
  - **Location**

## Industry Description – Size (Volumes)

Metric tonne	2008	2009	2010	2011
Layer meat (LWt)	57,274	55,055	57,712	60,110
Native chicken meat (LWt)	273,546	247,725	267,636	283,135
Broiler meat (LWt)	1,018,734	1,101,765	1,214,339	1,270,438
<b>TOTAL POULTRY MEAT</b>	<b>1,349,554</b>	<b>1,404,545</b>	<b>1,539,687</b>	<b>1,613,683</b>
Native hen eggs	166,618	160,921	175,528	179,605
Commercial eggs	1,323,606	1,318,915	1,379,607	1,449,115
<b>TOTAL EGGS</b>	<b>1,490,224</b>	<b>1,479,836</b>	<b>1,555,135</b>	<b>1,628,720</b>

6.7kg poultry meat per capita

6.8kg of eggs or 108 eggs per capita.

**Industry estimates of consumption are closer to 9.3kg of poultry meat (+40%) and 9kg of eggs (+30%)**

## Industry Description – Size (Value)

BROILERS	Rp/kg DWt	Rp trillion per 1.6MMT	Rp trillion per 2.2MMT
DOC	3027	4.843	6.659
Feed	15761	25.218	34.675
Farm	4048	6.477	8.905
Post farm	3164	5.063	6.961
Total sales	26000	41.600	57.200

LAYERS	Per kg eggs	Rp trillion per 1.6MMT	Rp trillion per 2.2MMT
DOC	263	0.421	0.579
Feed	12185	19.496	26.807
Farm	2052	3.283	4.515
Post farm	3000	4.800	6.600
Total sales	17500	28.000	38.500

Combined sales of up to USD10billion

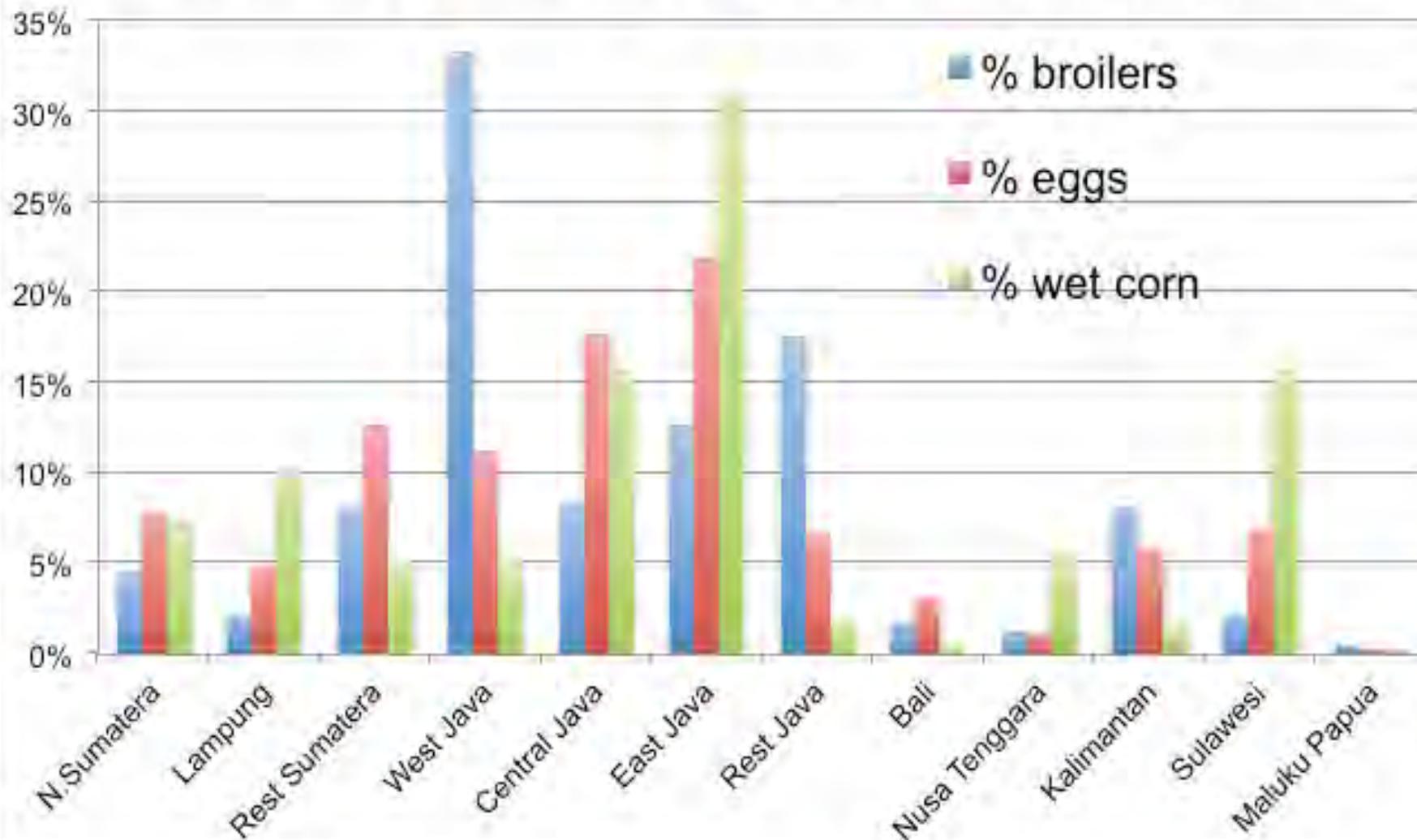
## Industry Description – Size (Consumption)

Category	% of income spent on food (50% of total spend)
Eggs	5.8%
Meat (62% poultry)	3.7%
Rice	15.0%
Fish	8.5%
Milk	8.6%
Oli	3.8%
Fruit	4.3%
Ready meals (chicken meat and eggs will be significant)	28.0%
Tobacco	10.5%

25-30% of food spend on poultry?

# Industry Description – Location

Relationship between broiler, egg and wet corn production by region

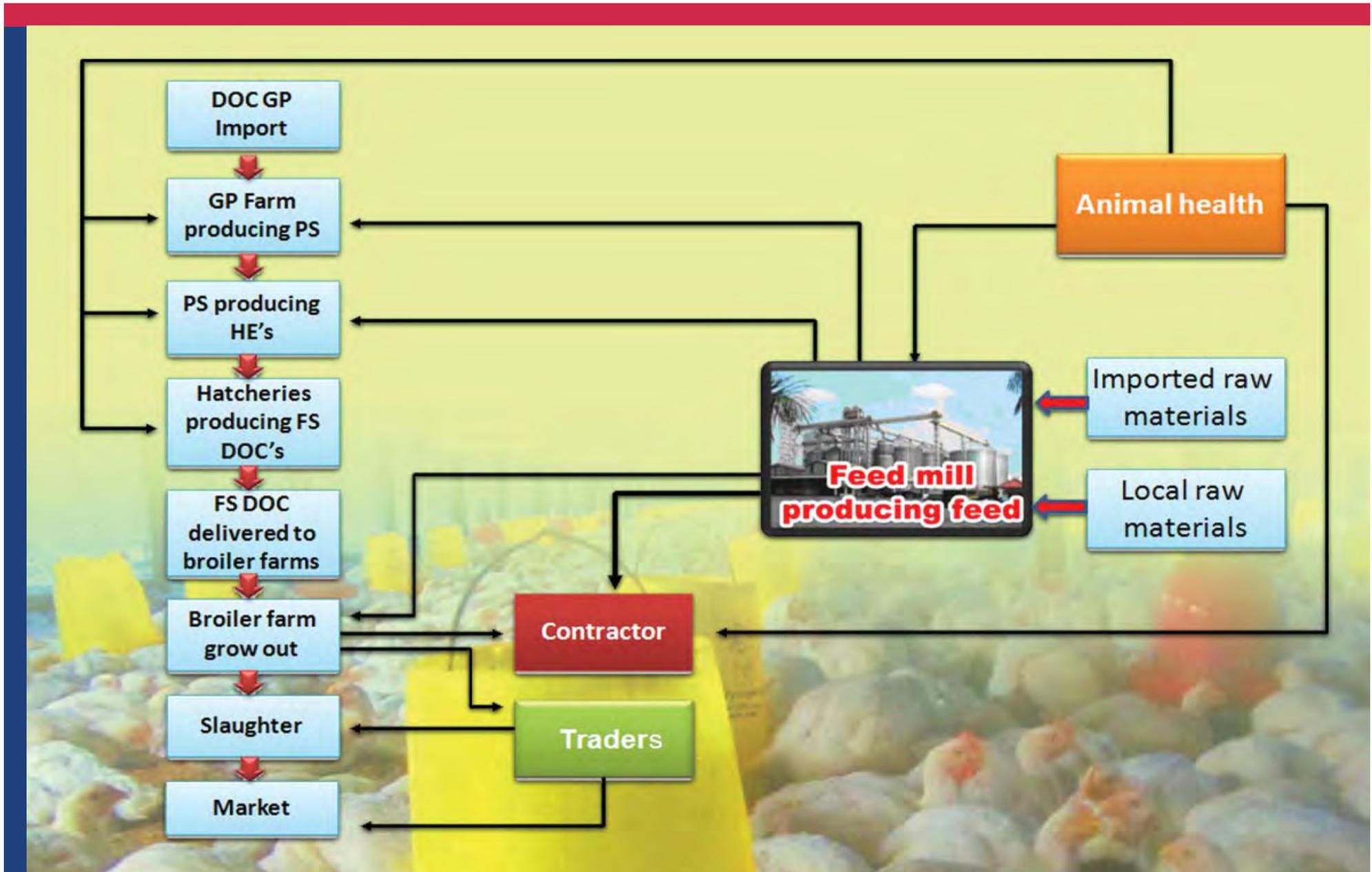


# Indonesian poultry value chain

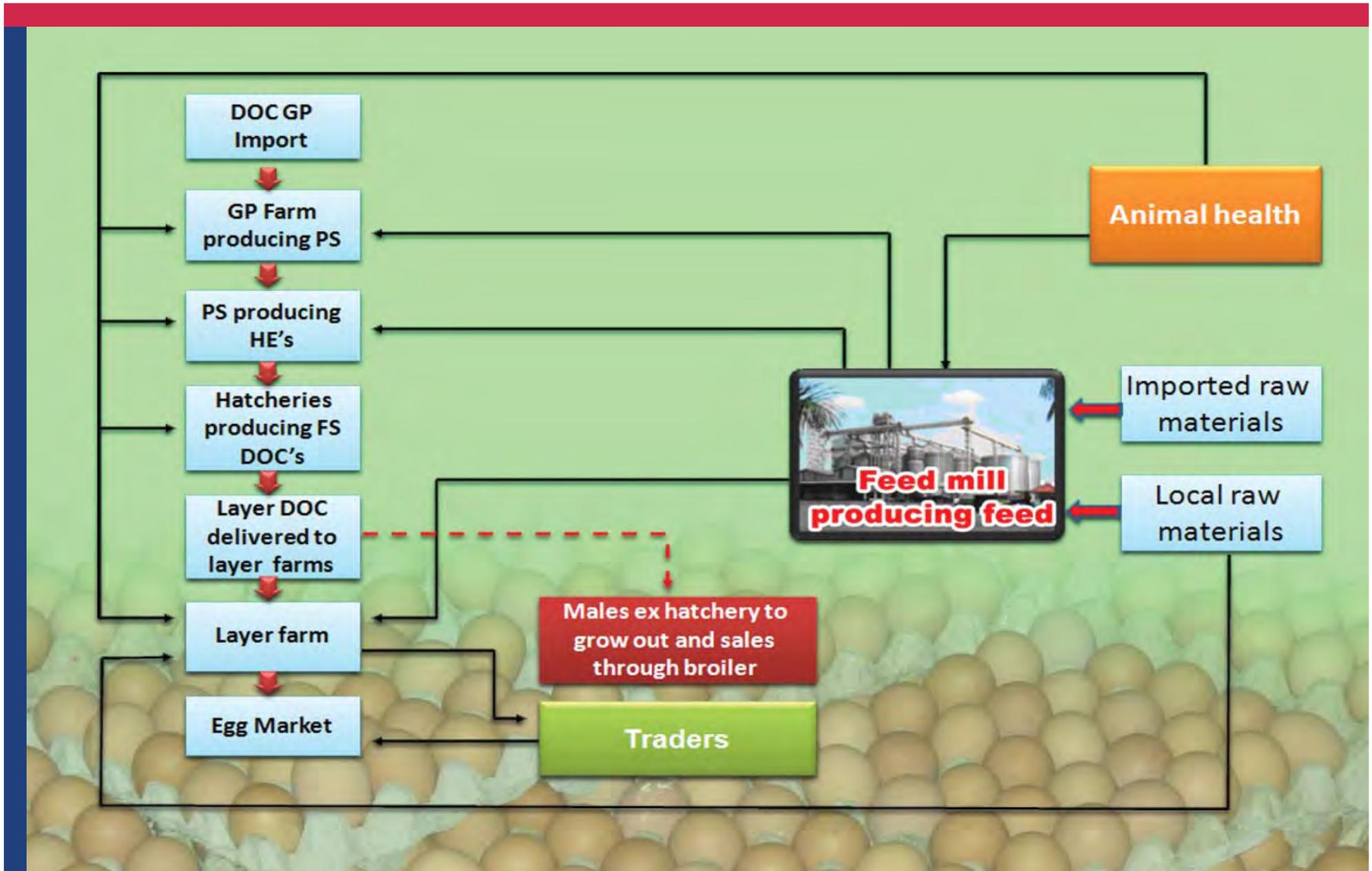
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- Brief description of the industry
  - **broiler sector**
  - **layer sector**
  - **traditional poultry sector**

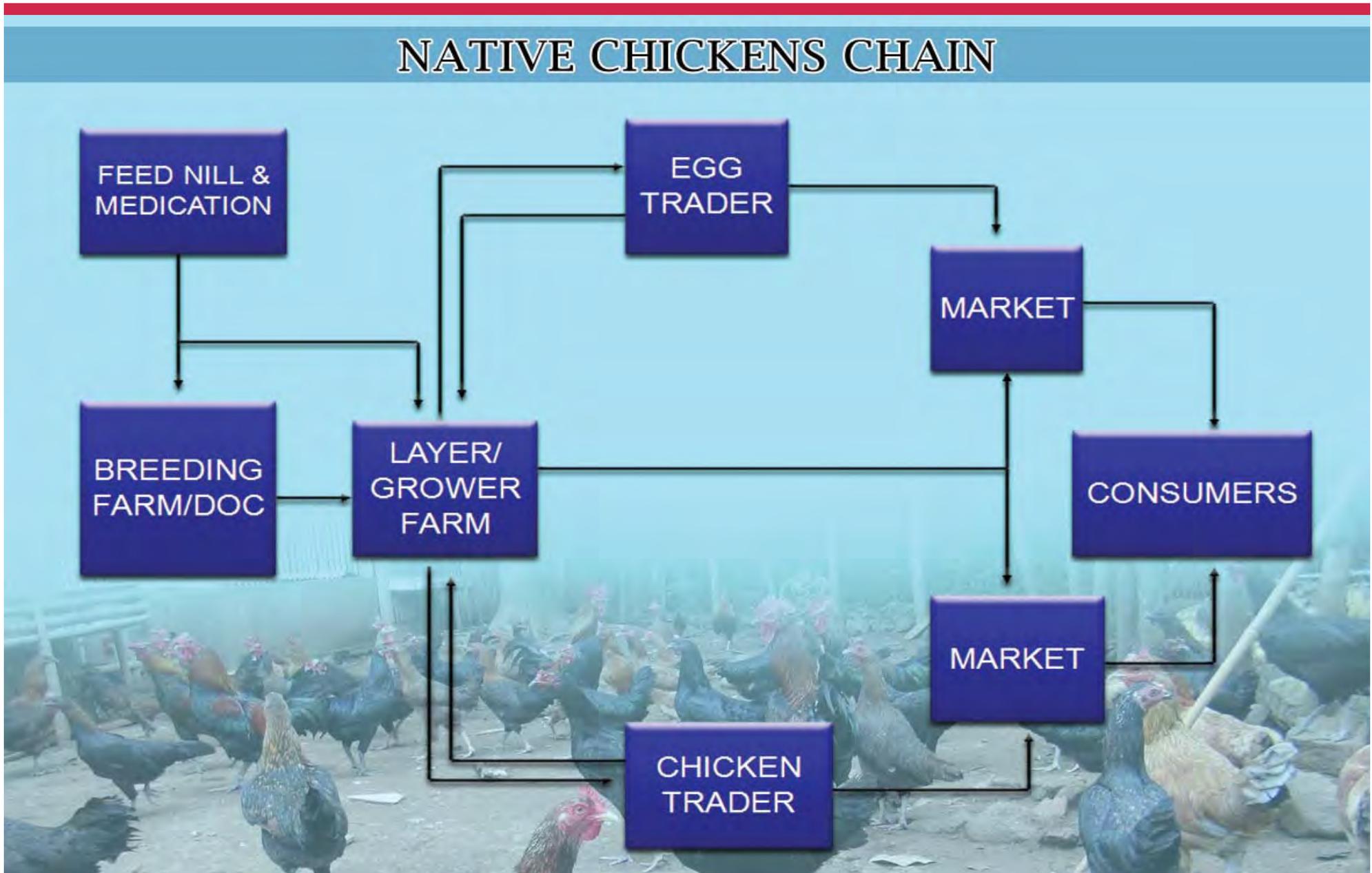
# Description of the broiler sector



# Description of the layer sector



# Description of the native poultry sector



# Indonesian poultry value chain

- **Stakeholders**
  - **roles**
  - **the availability of feed capacity**

# Stakeholders

- Integrators
  - CPI, JCI, SIERAD, MALINDO, WONOKOYO
- Feed mills
- Parent stock breeding farms
- Broiler/layer/village farmers
- Contractors
- Traders
- Processors
- Industry Associations
- Retailers – market, supermarket, food service
- Animal health companies
- Equipment suppliers
- Consumers
- Government

## Stakeholder – availability of feed industry capacity

Region	Feedmills	Capacity '000MT
North Sumatra	8	2,250
South Sumatra	4	1,500
West Sumatra	1	250
Banten	11	3,500
DKI Jakarta	4	750
West Java	8	2,000
Central Java	6	1,500
East Java	20	5,250
South Sulawesi	5	1,250
South Kalimantan	1	250
Total	68	18,500
<b>2012 production</b>		<b>12,300</b>

Ample capacity exists nationally for industry expansion

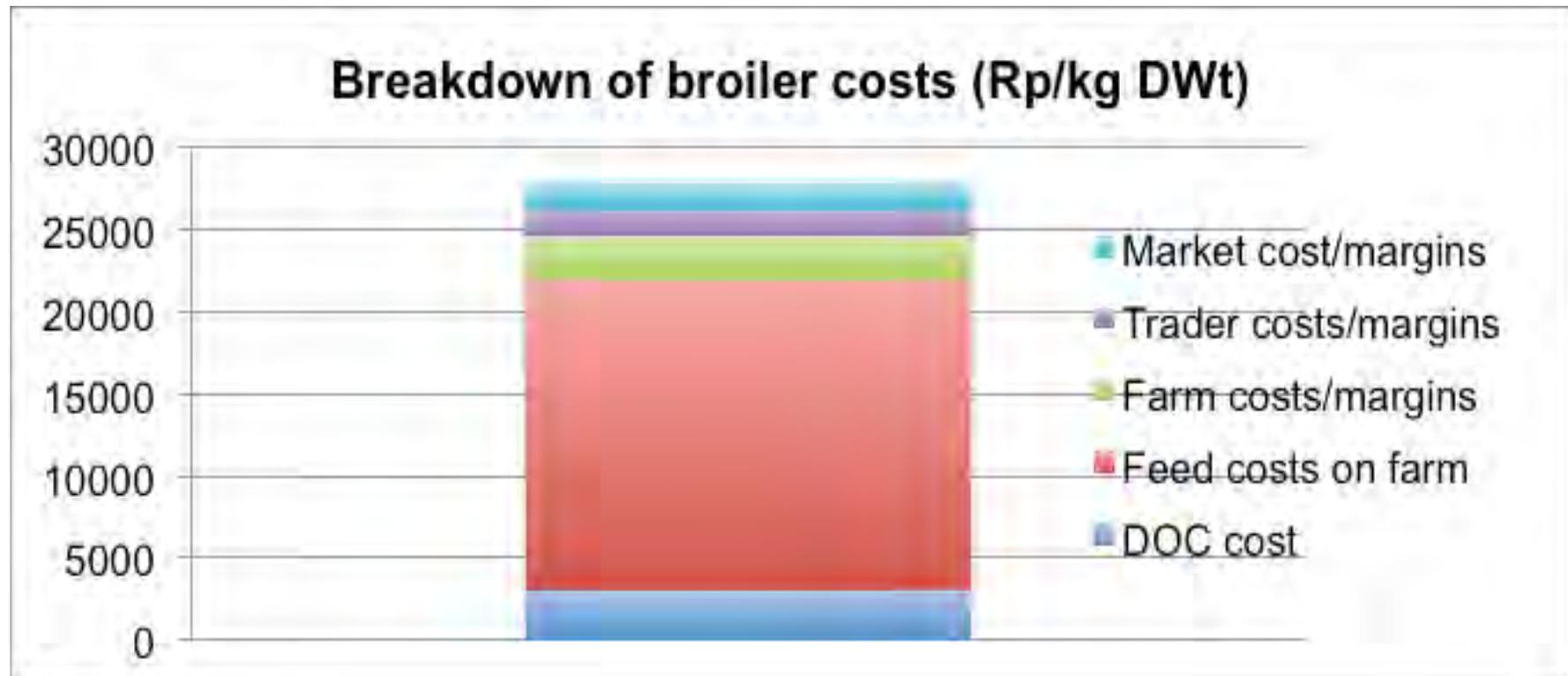
# Indonesian poultry value chain

- **Costs and margins**
  - **to capture the level of margin in each stage of chain**
  - **to identify the cost of distribution**
  - **what is the “real” price for broilers**

# Costs and margins - Methodology

- Work up livestock performance input assumptions
  - PS to near industry standard
  - Broiler and layer ex industry
- Obtain prices, costs and efficiencies
  - Ex industry and industry assumptions
- Calculate costs and margins via detailed model
  - Data ex listed companies/farms & market sources
- Margin assumption
  - Feed – net profit margin ex listed companies (excluding SG&A, finance and tax)
  - All others – gross profit margin
- Caveat
  - There will be variation throughout Indonesia
  - Illustration is the objective

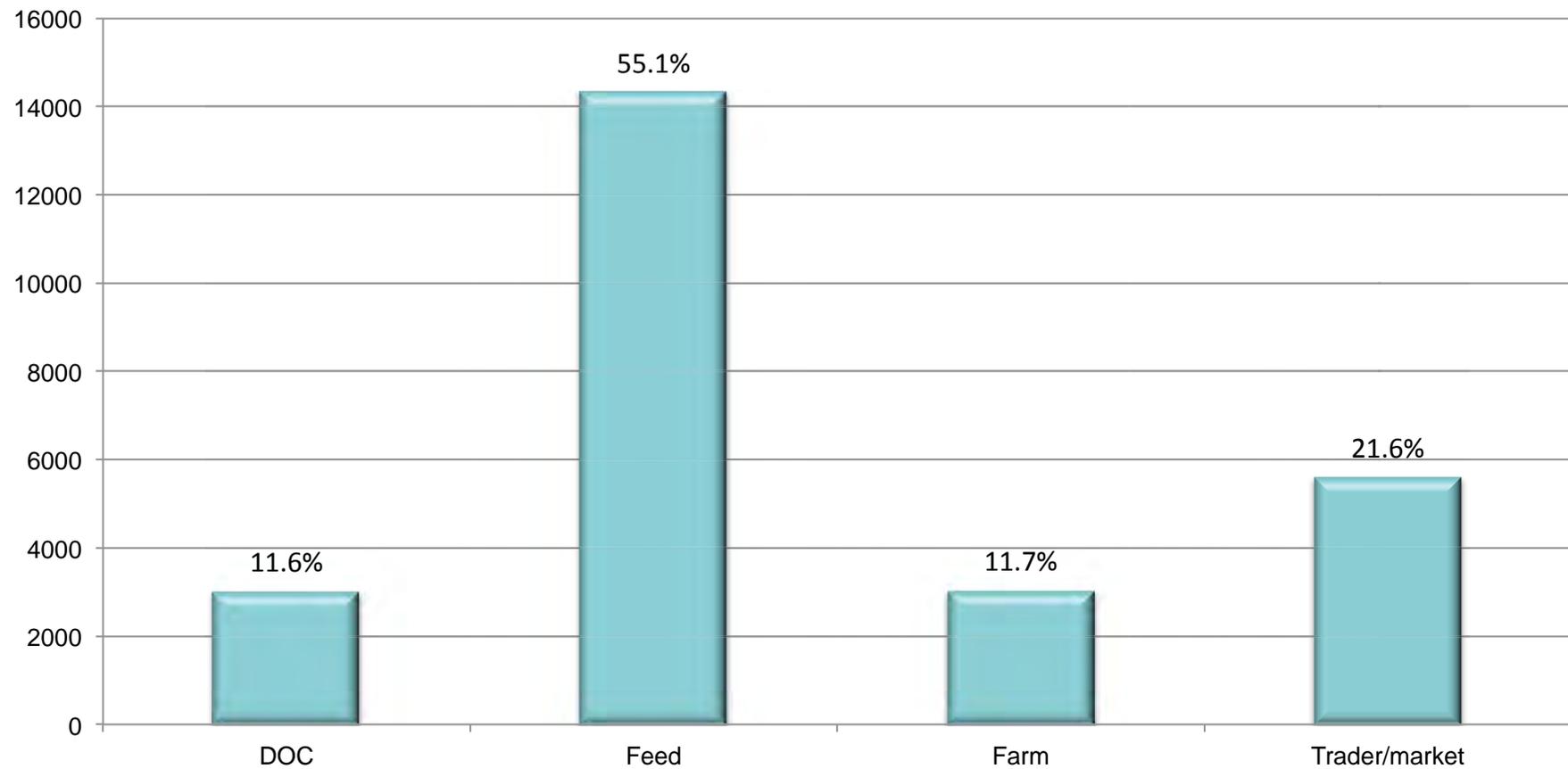
# Costs and margins – broiler to traditional market



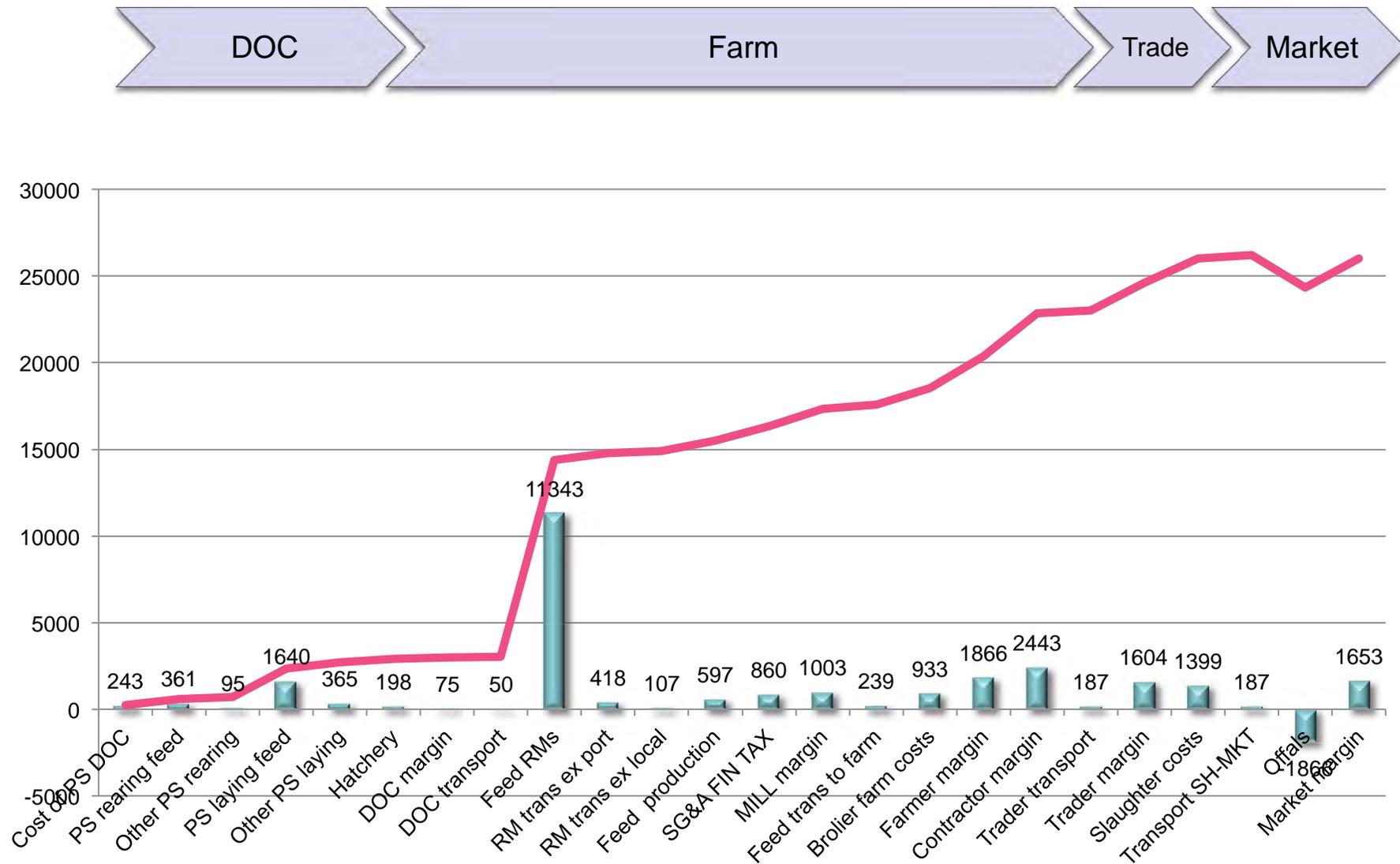
Detailed breakdowns in report

# Costs and margins – broiler to traditional market

**Breakdown of costs in broiler chain to consumer (Rp/kg dressed weight)**

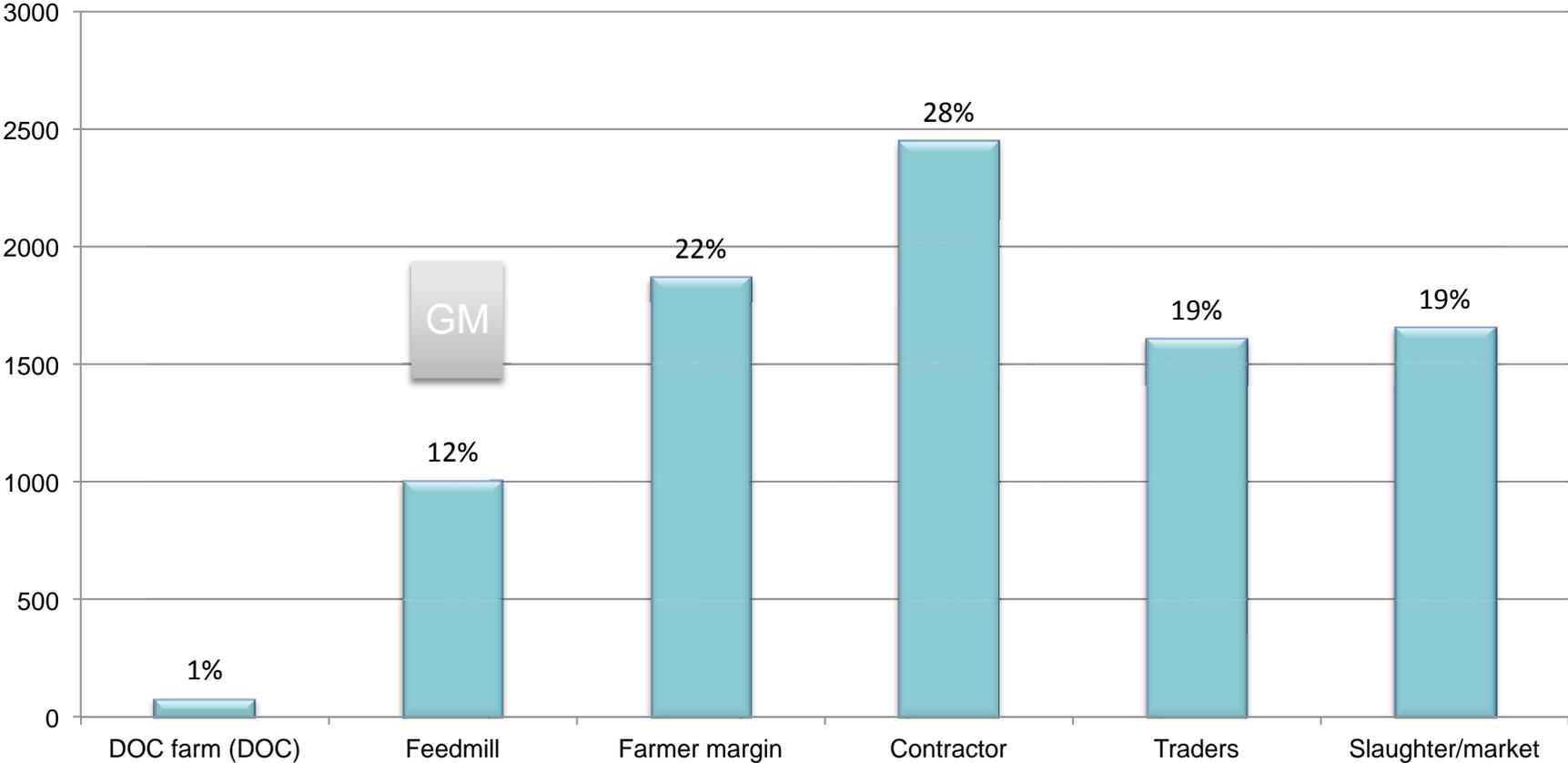


# Costs and margins – broiler to traditional market (Rp/kg DWt)



# Margins – margins in broiler chain

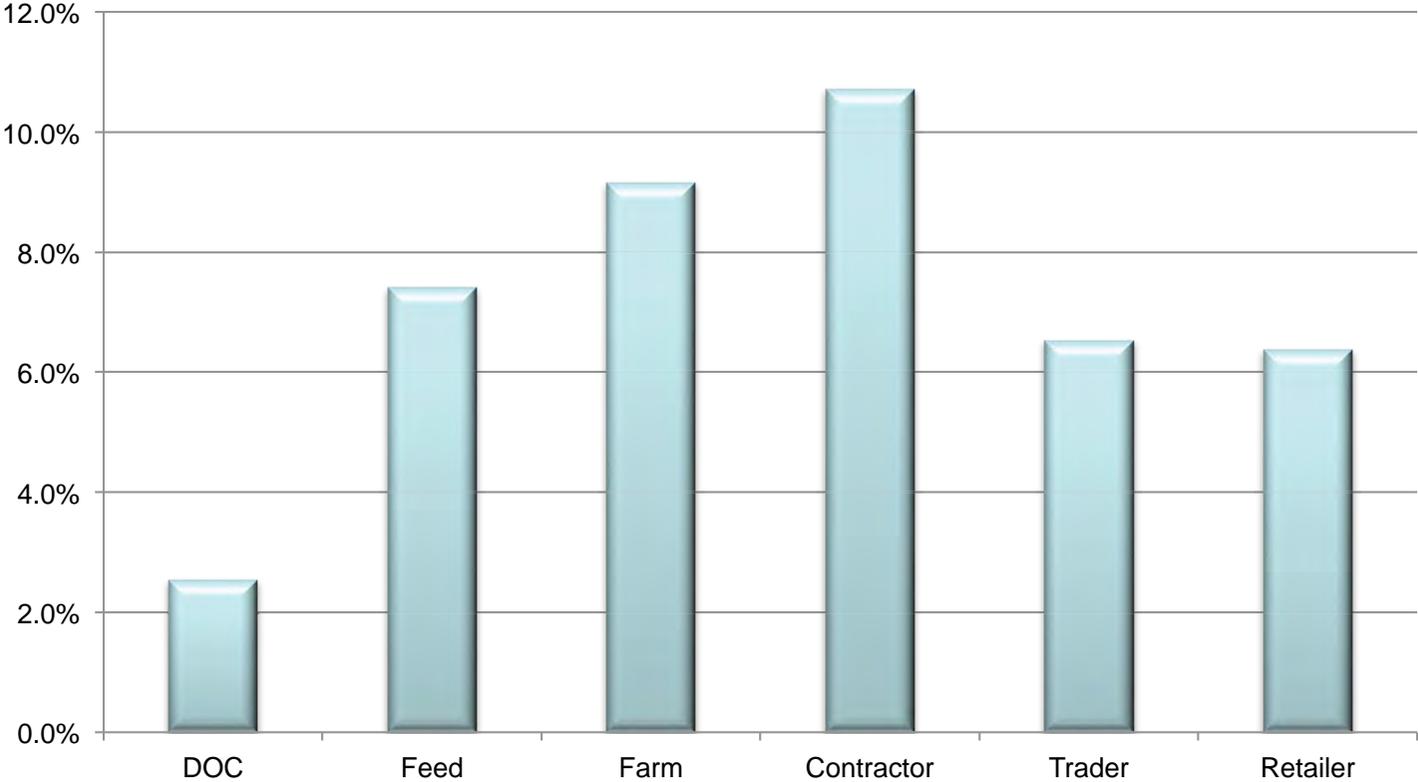
**Broiler margins per bird to consumer - Rp/Kg  
And % breakdown of all margins**



While actual margins will vary they are widely spread  
Feed GM includes real costs (SG&A, finance and tax)

# Margins – margins in broiler chain – as % of sales for each sub-sector

## Margin (%) on sales % for each sub-sector



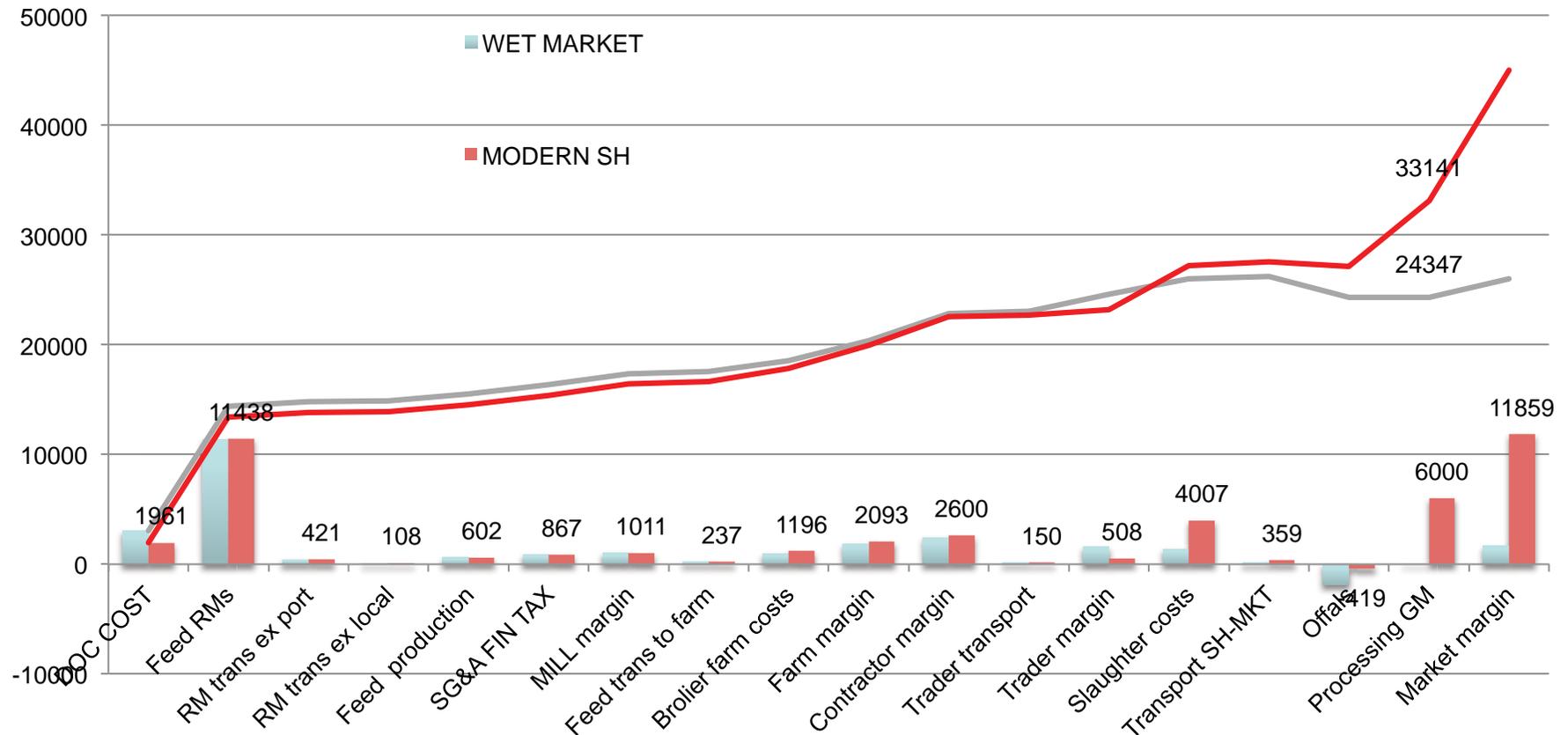
Margins represent fair return for investment and risk

DOC margins low due to depressed price late 2012

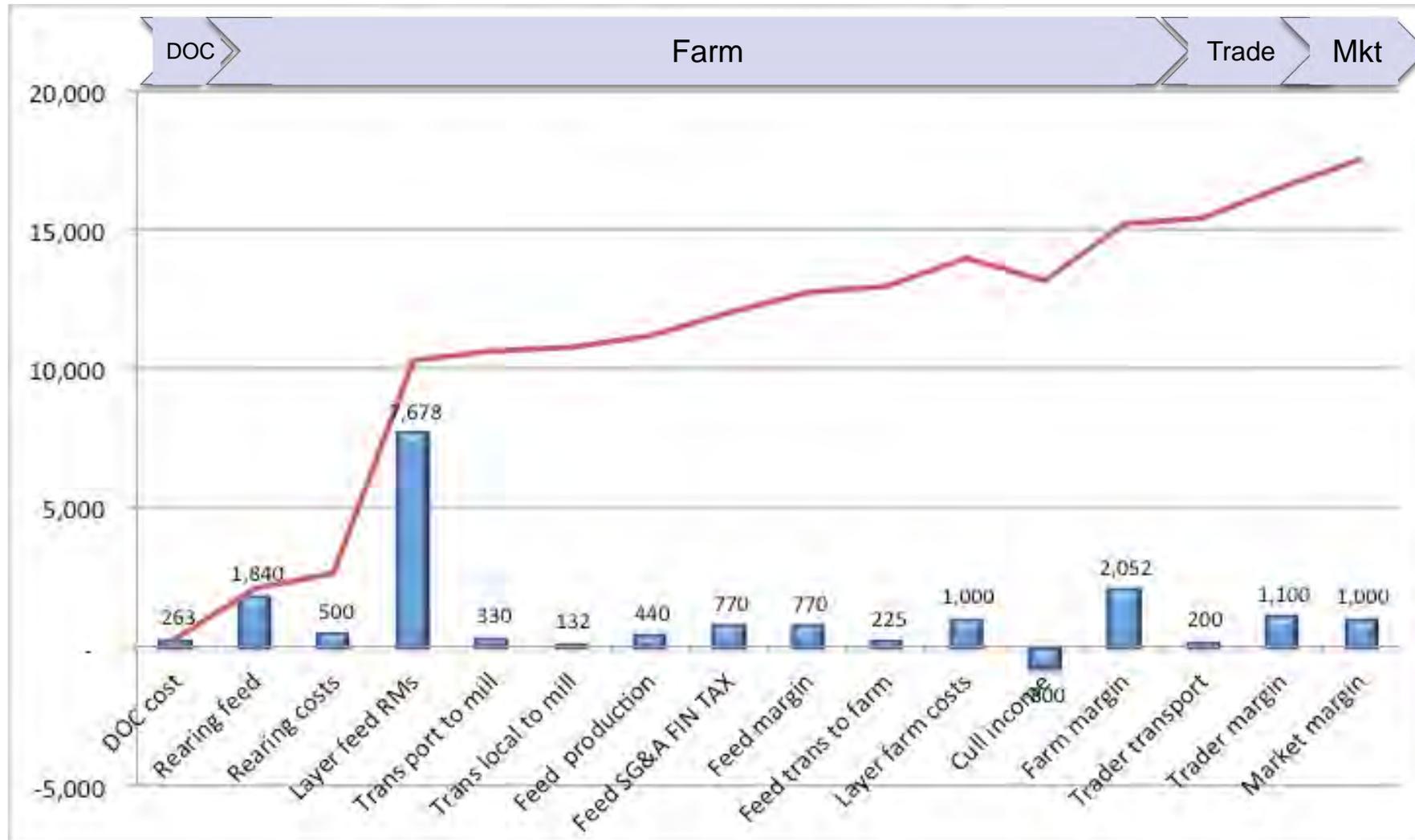
# Costs and margins – broiler to traditional and modern market



Comparison between costs and margins for 1.6kg bird to wet market versus 2.2kg bird to modern slaughter house

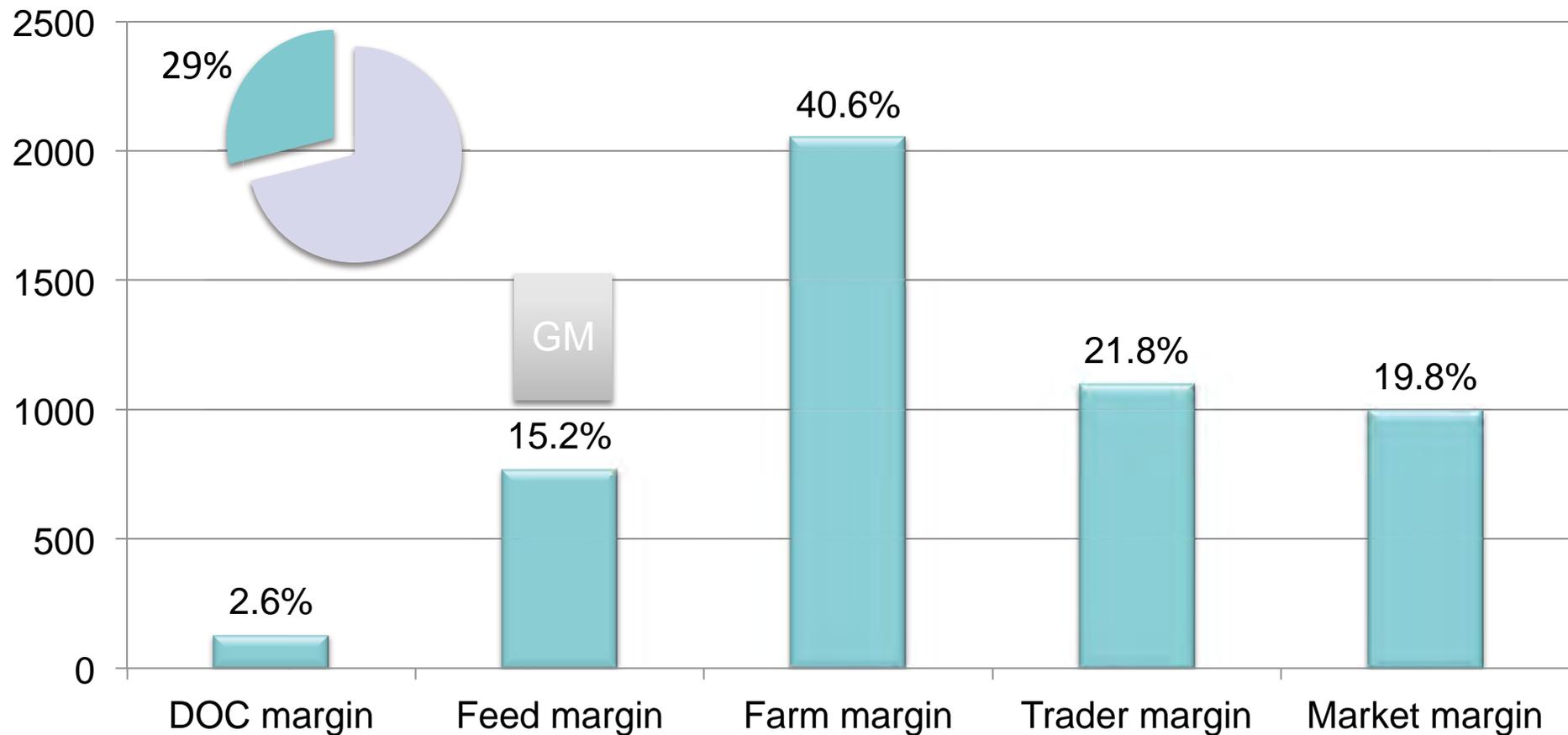


# Costs and margins – Commercial eggs (Rp/kg)



# Margins – Commercial eggs

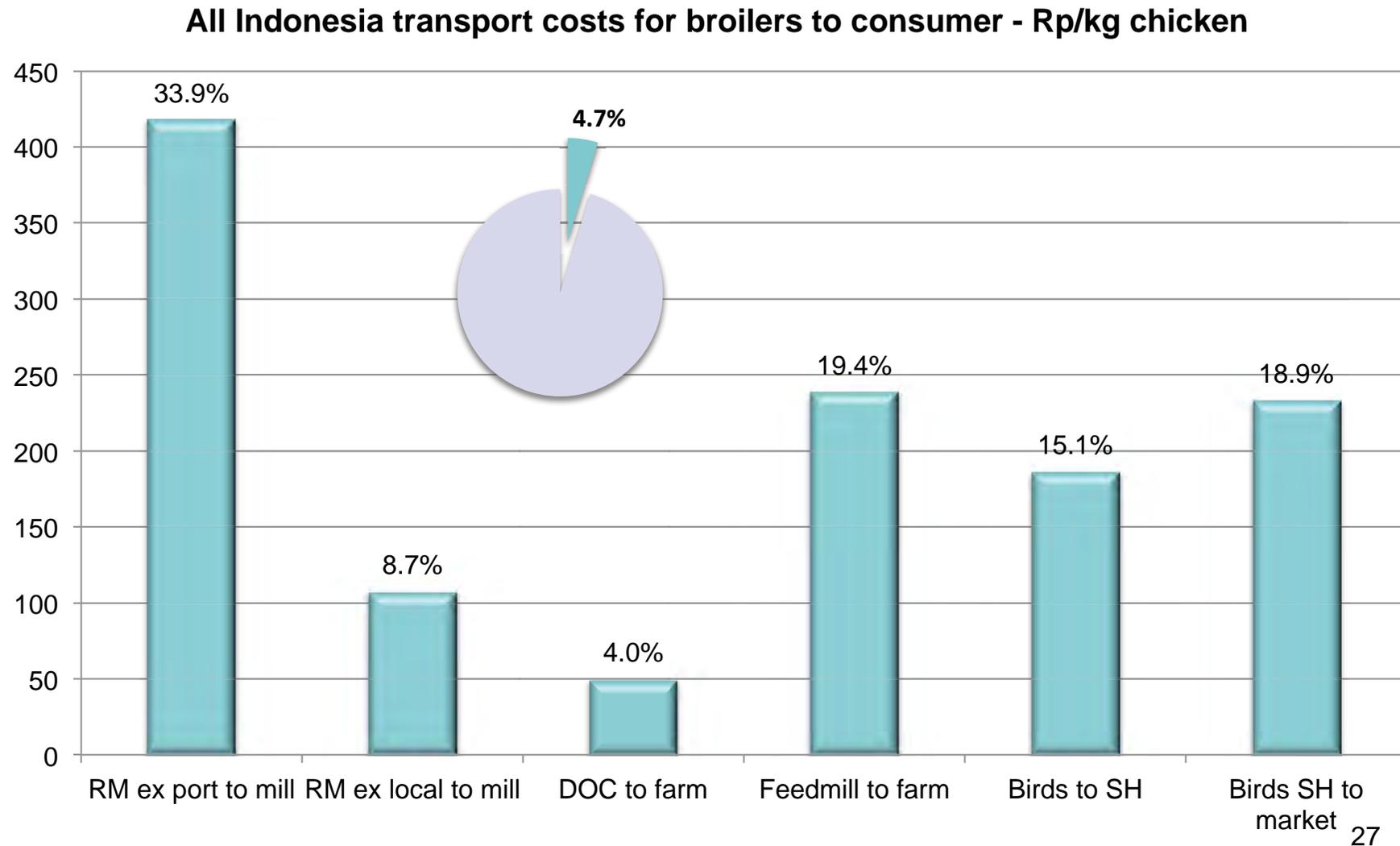
Margins in layer chain - Rp/kg egg



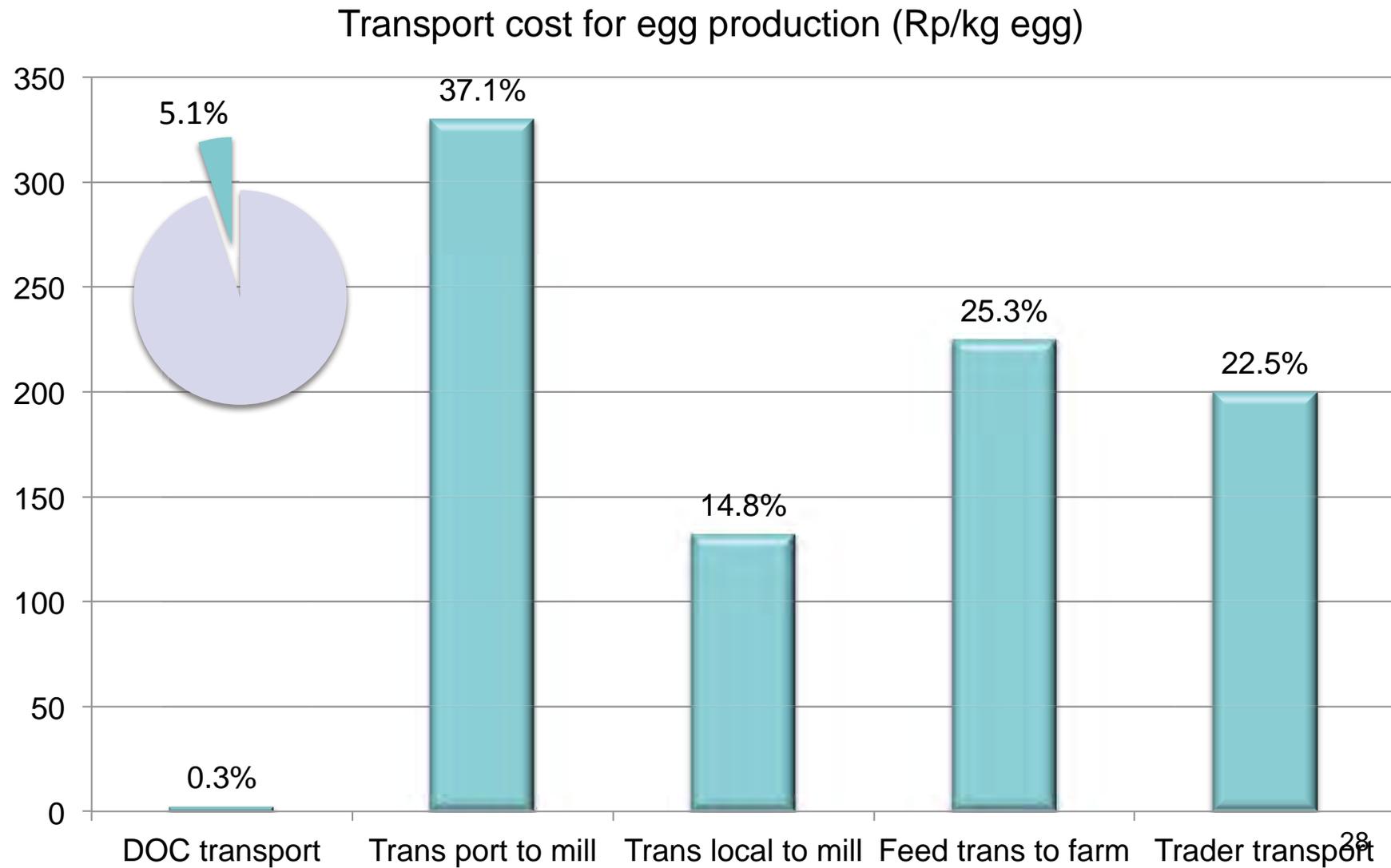
While actual margins will vary they are widely spread

Feed GM includes real costs (SG&A, finance and tax

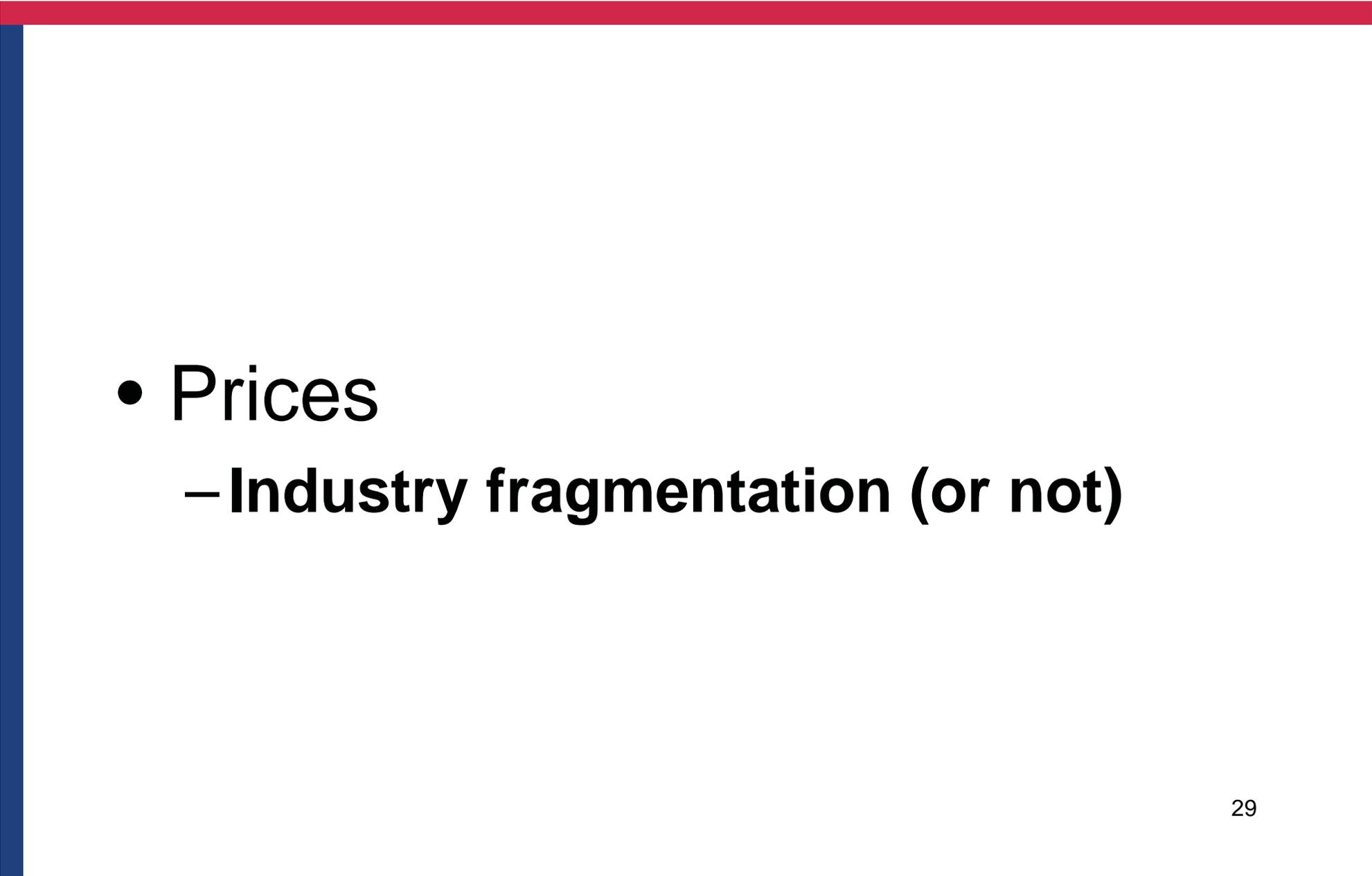
# Costs – transport costs in broiler chain



# Costs – transport costs in commercial egg chain

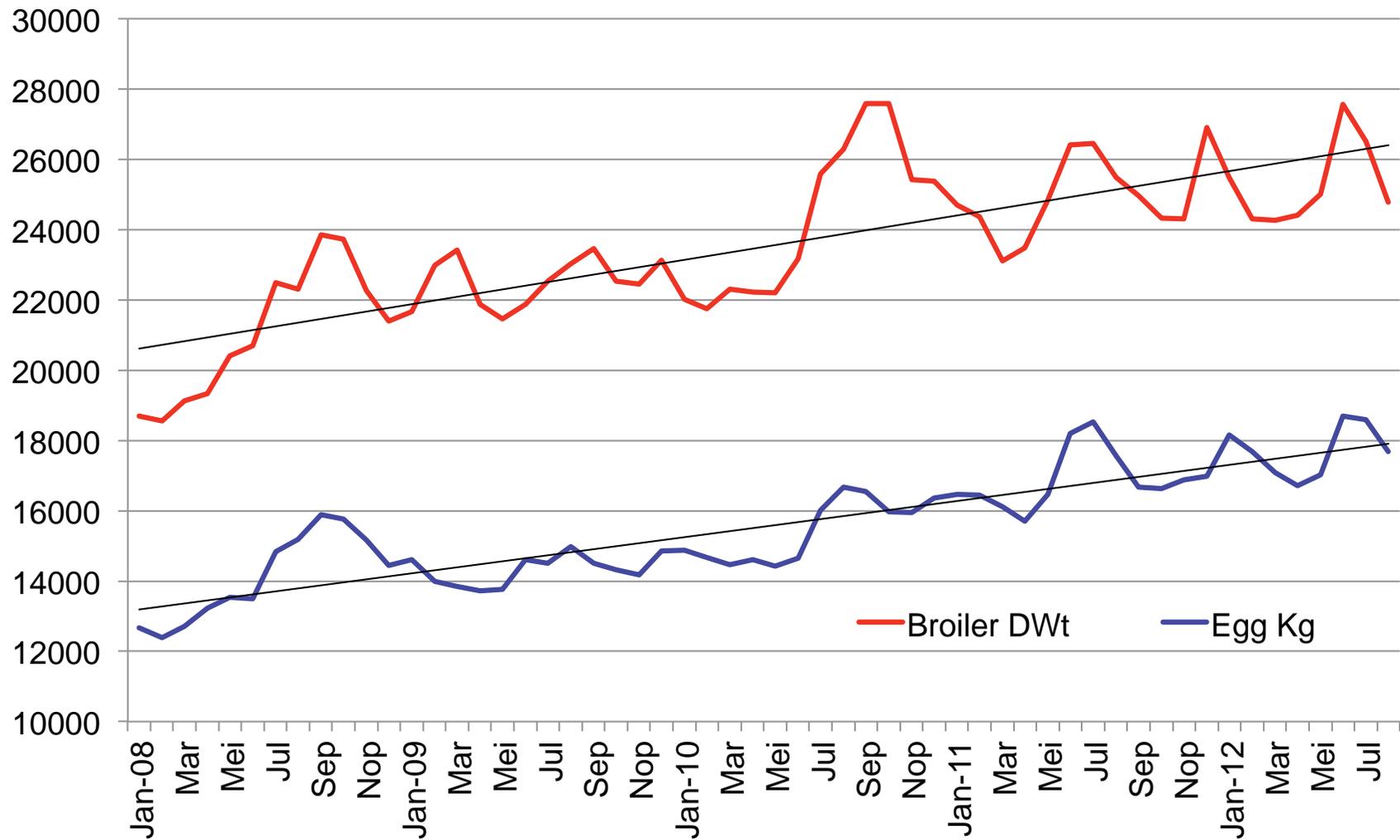


# Indonesian poultry value chain



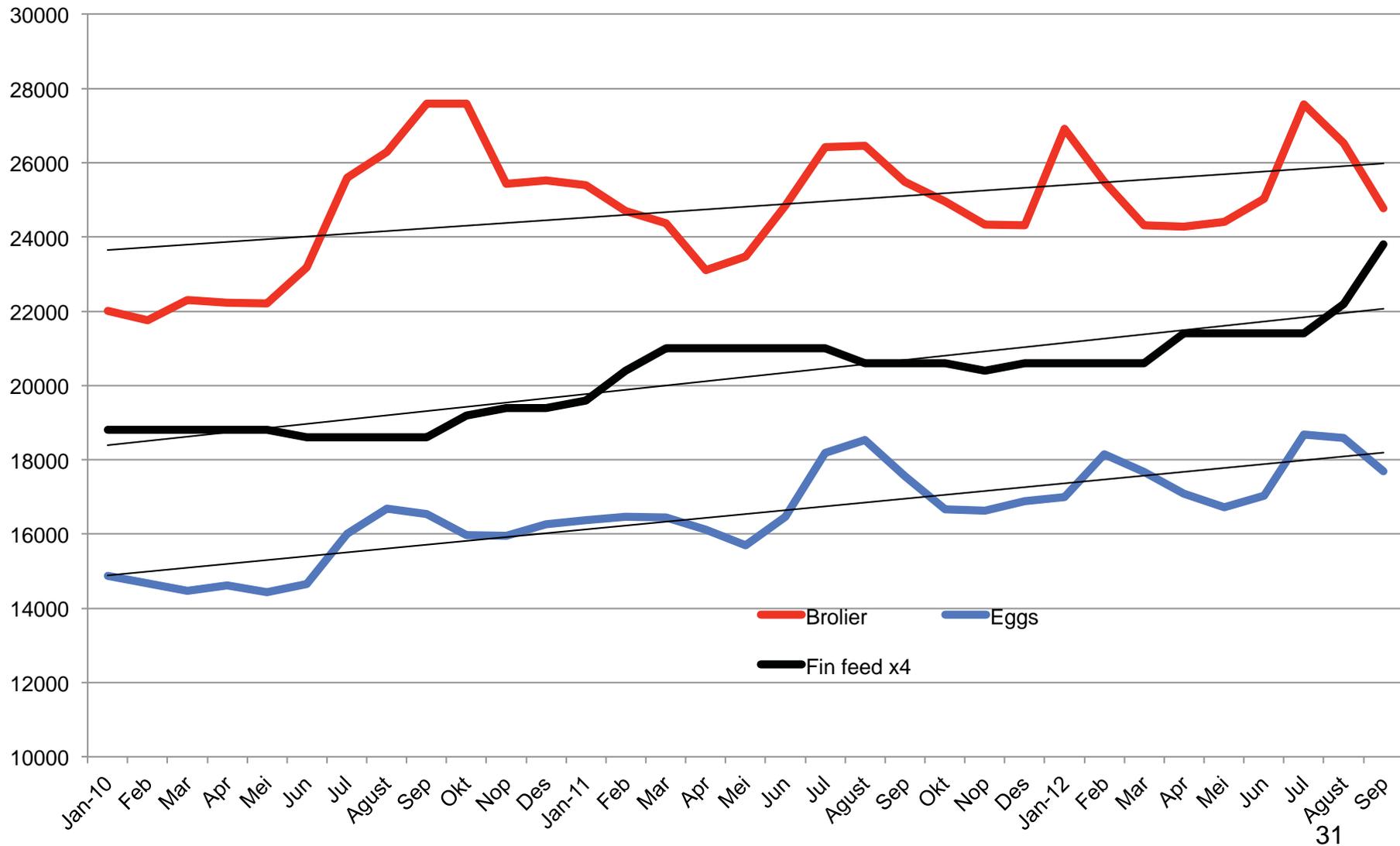
- **Prices**
  - **Industry fragmentation (or not)**

# Average Indonesian market prices (Rp/kg) - Broilers and Eggs



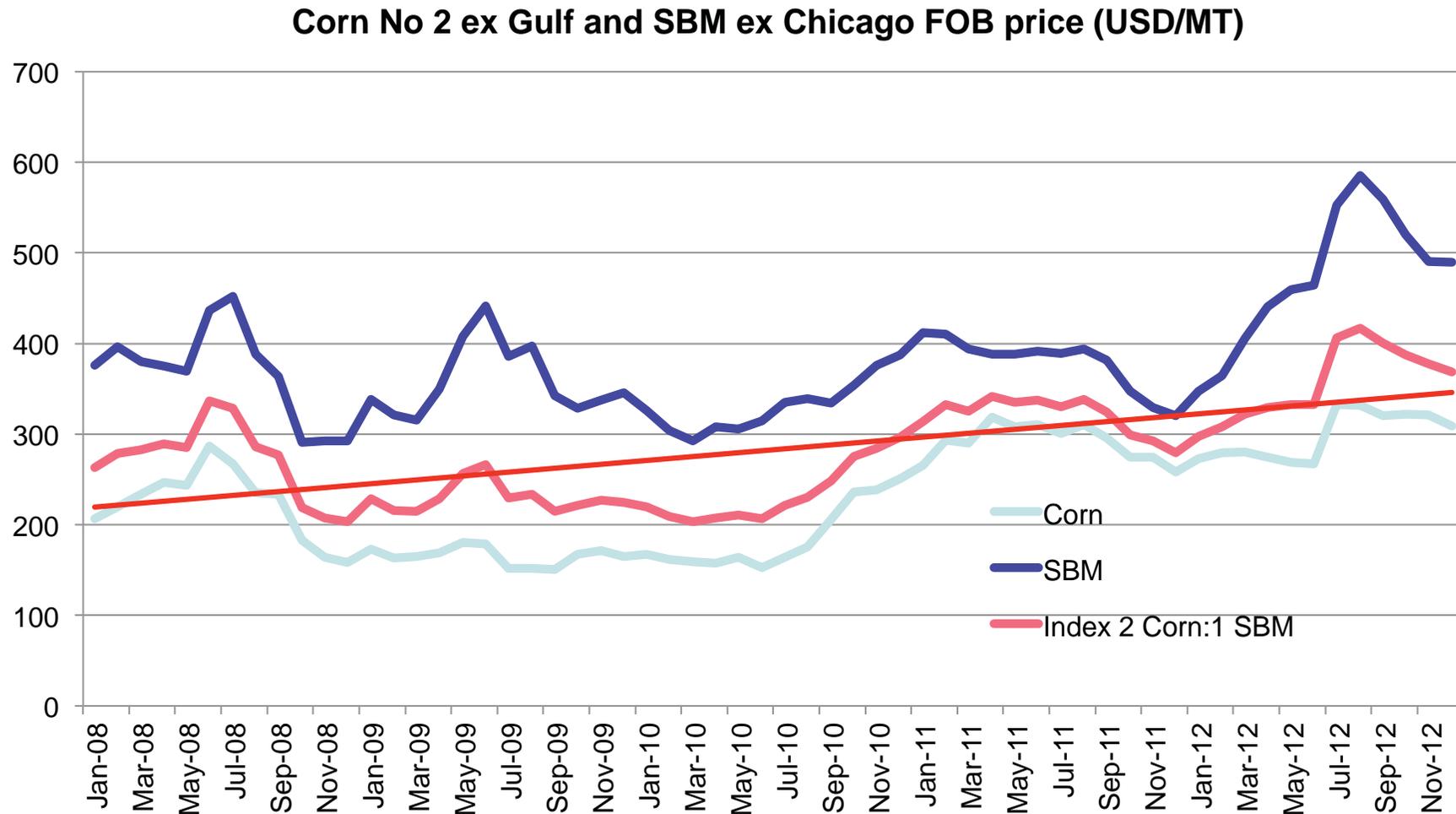
Prices increasing and variable through year

# Broiler and egg price (Rp/kg) versus Broiler Finisher feed (Rp/kgx4)



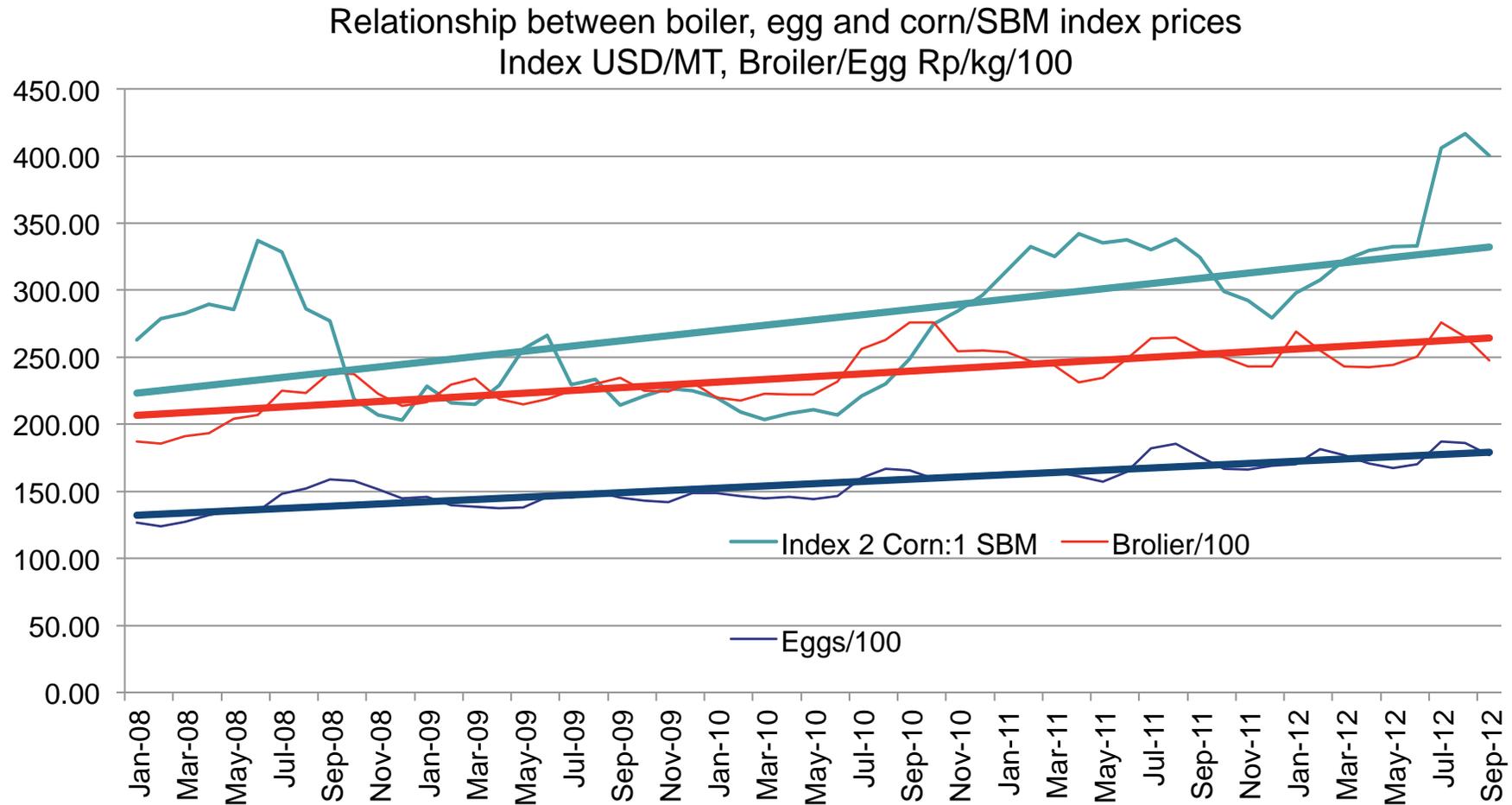
Strong long term correlation between prices and feed costs

# Corn and SBM prices FOB USA



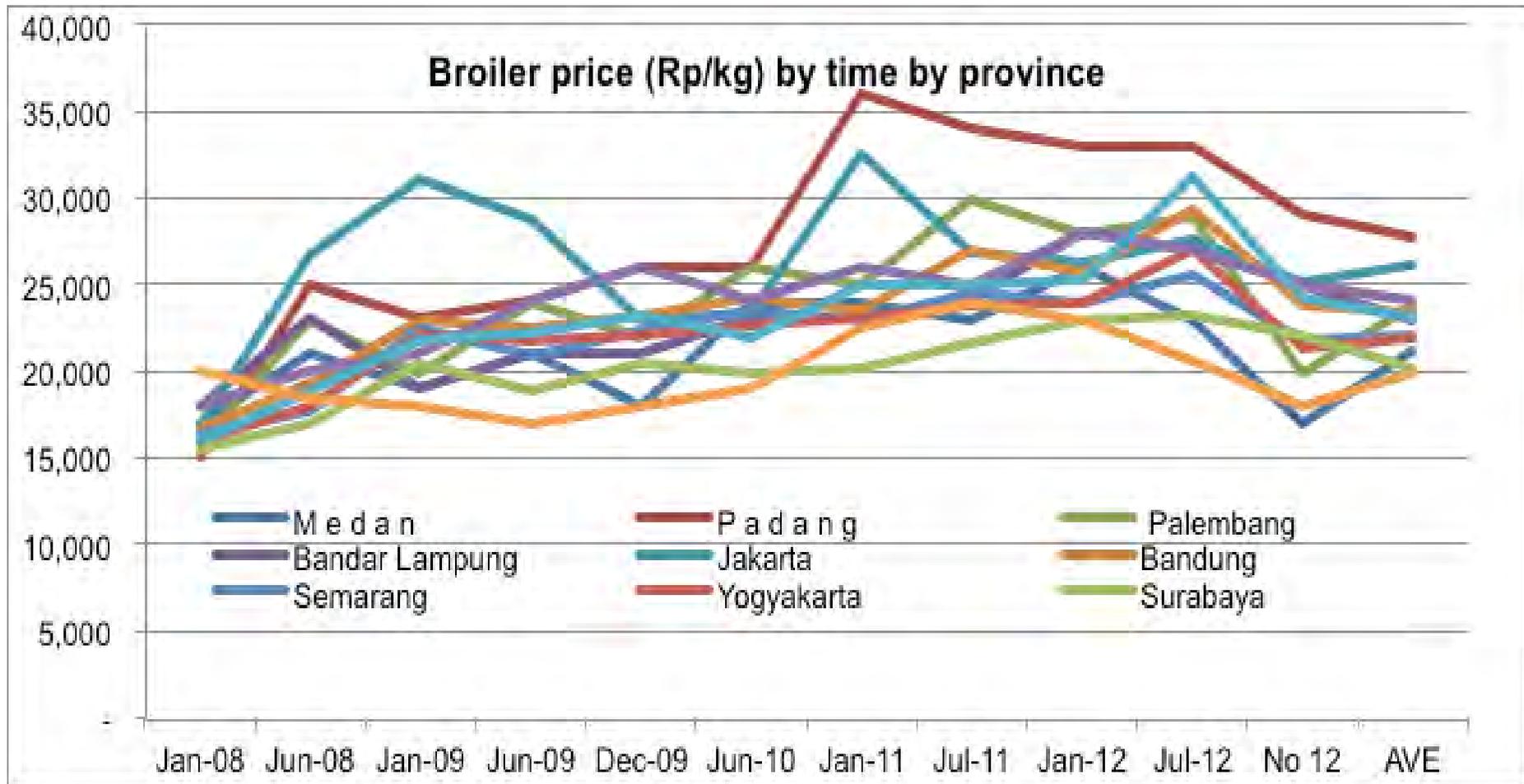
Feed price increases a function of raw material cost increases  
 Can use index to track trends and predictions

# Poultry prices versus corn/SBM index



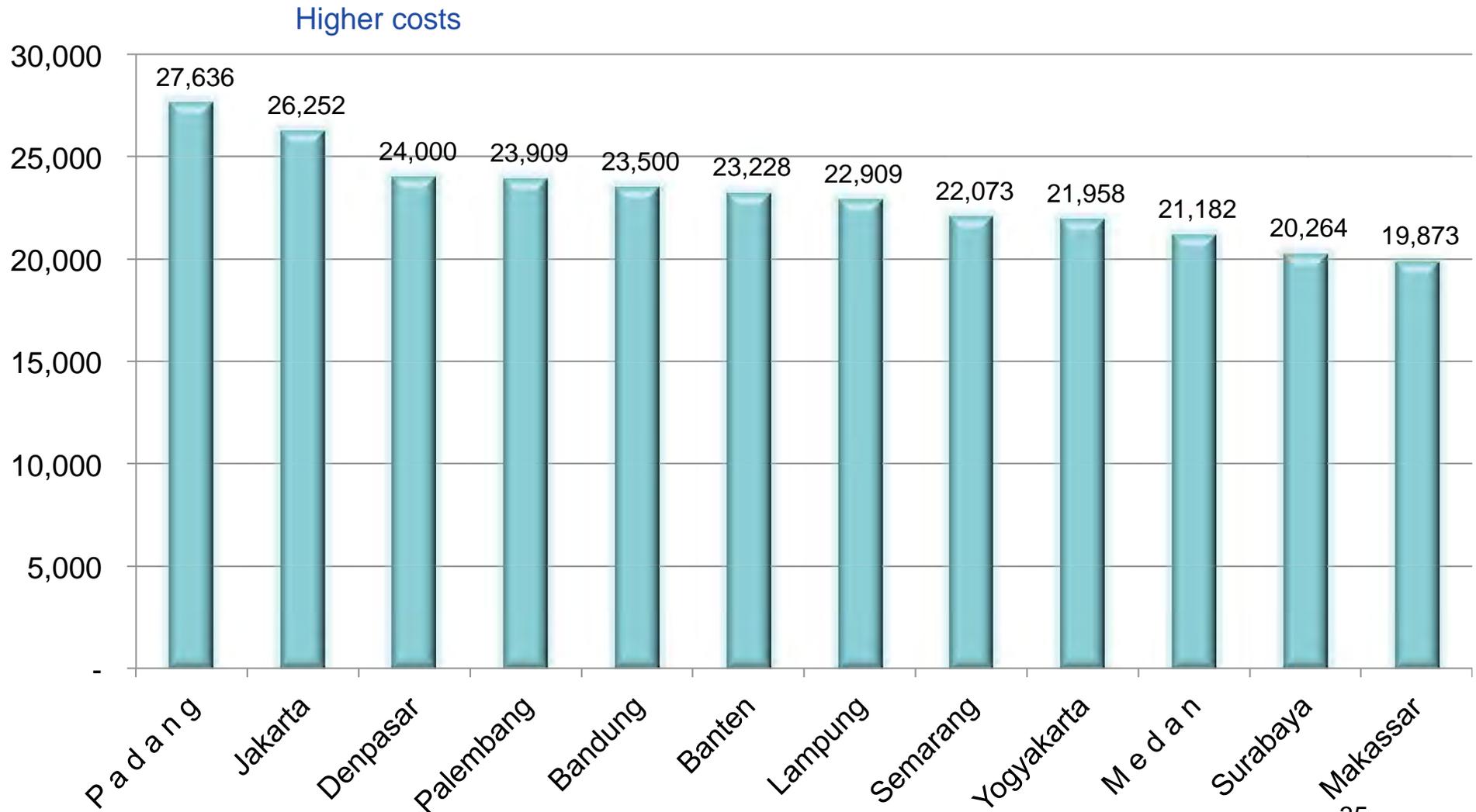
Poultry price increases follow feed cost increases

# Broiler price by province (Rp/kg) 2008-2012



Broiler prices increasing, some variability between provinces and seasonal peaks

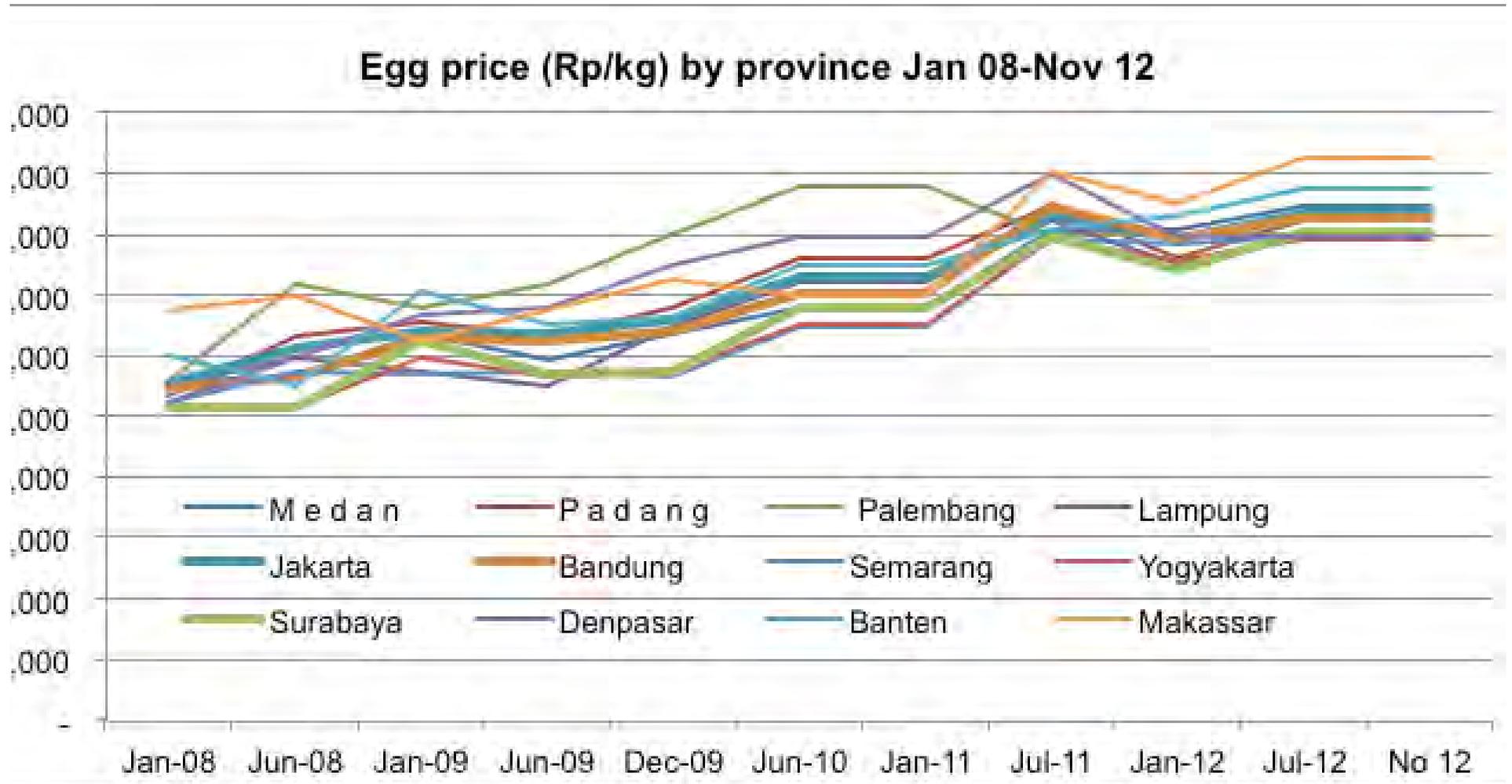
# Average broiler price per province 2005-2012 (Rp/kg)



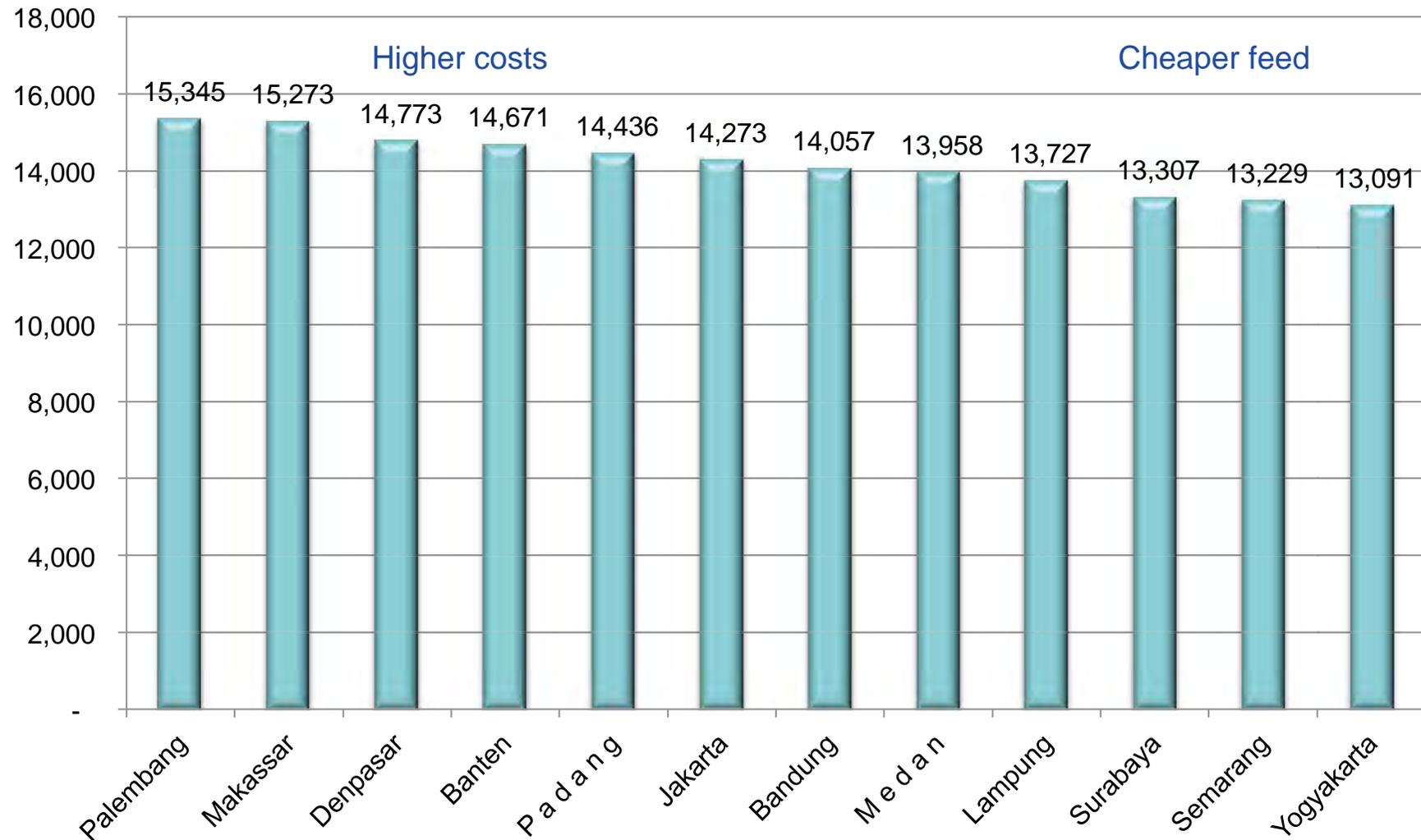
# Broiler prices - possible explanations

Province	% variance from national average over last 5 years	Causes of price variation from mean
Padang	20%	Local supply is limited so birds are transported in at a high transport cost
Jakarta	13%	Higher incomes driving demand and placing more pressure on supply Sourced locally but higher logistics and labour costs and possible higher margin expectations.
Denpasar	4%	Higher transport costs for feed Strong demand based on tourism
Medan	-8%	Data ex industry shows that for 2011-12 the post farm markup (retail price minus live bird cost) was Rp10,826, compared to the average Indonesian markup of Rp10,700 in this study. Ex farm price dropped as low as Rp10,400 in Nov 2011 and Rp12,300/kg in Nov 2012. Industries explanation for this was an influx of HE and DOCs into Medan, increasing supply. This caused to average price reduction
Surabaya	-12%	Lower feed costs based on local corn price
Makassar	-14%	Lower feed costs based on local corn price

# Egg price by province (Rp/kg) 2008-2012



# Average egg price per province 2008-2012 (Rp/kg)



- **Influences and issues**
  - to identify the main bottlenecks along the value chain
  - to identify what could lead to significant cost reductions

# Influences and Issues – Summary 1

## **DOC supply**

DOC supply efficient but S/D somewhat variable due to lack of integration. Will improve with increasing integration.

## **Feed supply**

Modern feed milling technology is used but bagging increases costs. Need improved infrastructure and larger farms for bulk feed

## **Feed cost**

Feed cost is at import parity plus. Increase local corn production to export parity is only solution – but is this the best use of land?

## **Farm infrastructure**

Lack of economies of size. Poor biosecurity. A location / infrastructure issue

## A farm in Indonesia – production 30-120,000 birds per year



**1 farm in Ukraine (20m birds pa) = 200 farms in Indonesia**



# Influences and Issues – Summary 2

## **Bio-security**

Bio-security is compromised. Needs procedures but difficult with current housing.

## **Farm management**

Improvements possible. Address biosecurity, health, housing, water

## **Port and road infrastructure**

76% raw materials imported. Longer term development of port & roads

## **Bird Size**

Small birds preferred but in-efficient. Will change as processing develops

## **Post Farm**

Many traders but probably efficient. Market will drive any change

# Influences and Issues – Summary 3

## **Industry geography**

National production due to local demand and infrastructure Limited cold chain with higher costs. Plan for sites for future production

## **Bird specification**

Indonesian bird not USA bird. Standardise any comparisons

## **Food safety**

Backyard slaughter common. Standards?

## **Industry statistics**

Gaps in data. Need review

## **Sustainability**

Urbanisation, environment, infrastructure, land, water, disease, welfare, imports etc. Be proactive

# Major issue - Feed – raw material imports

High feed raw material costs are the major reason for high production costs in Indonesia

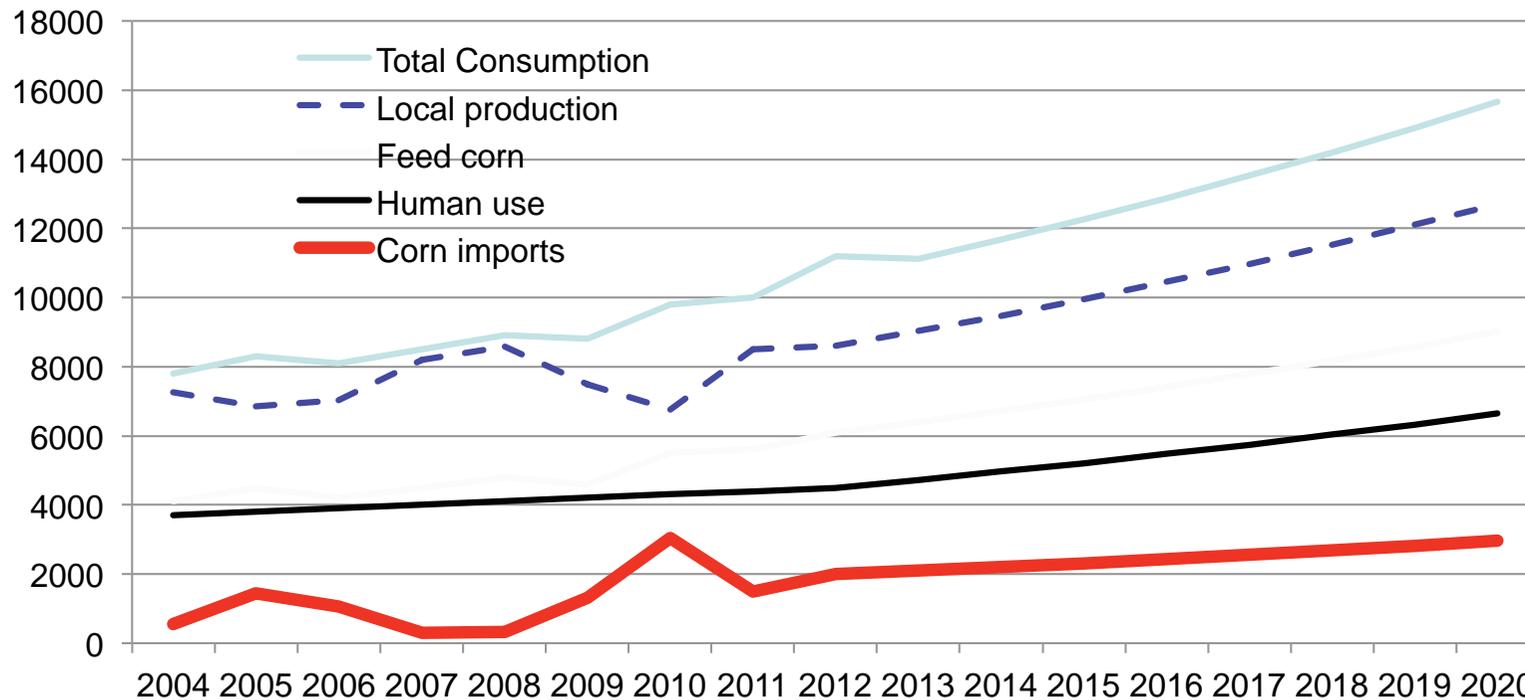
	Volume of Imports	Value of Imports	Protein Import Value
Broiler	76%	69%	85%
Layer	73%	57%	60%

**For broiler feeds 95% of raw material costs are at import parity**

Local corn is priced at import parity plus 5% duty

# Major feed issue – corn supply

A corn supply and demand scenario for Indonesia ('000MT)



Indonesian corn production and the need to import drives high costs

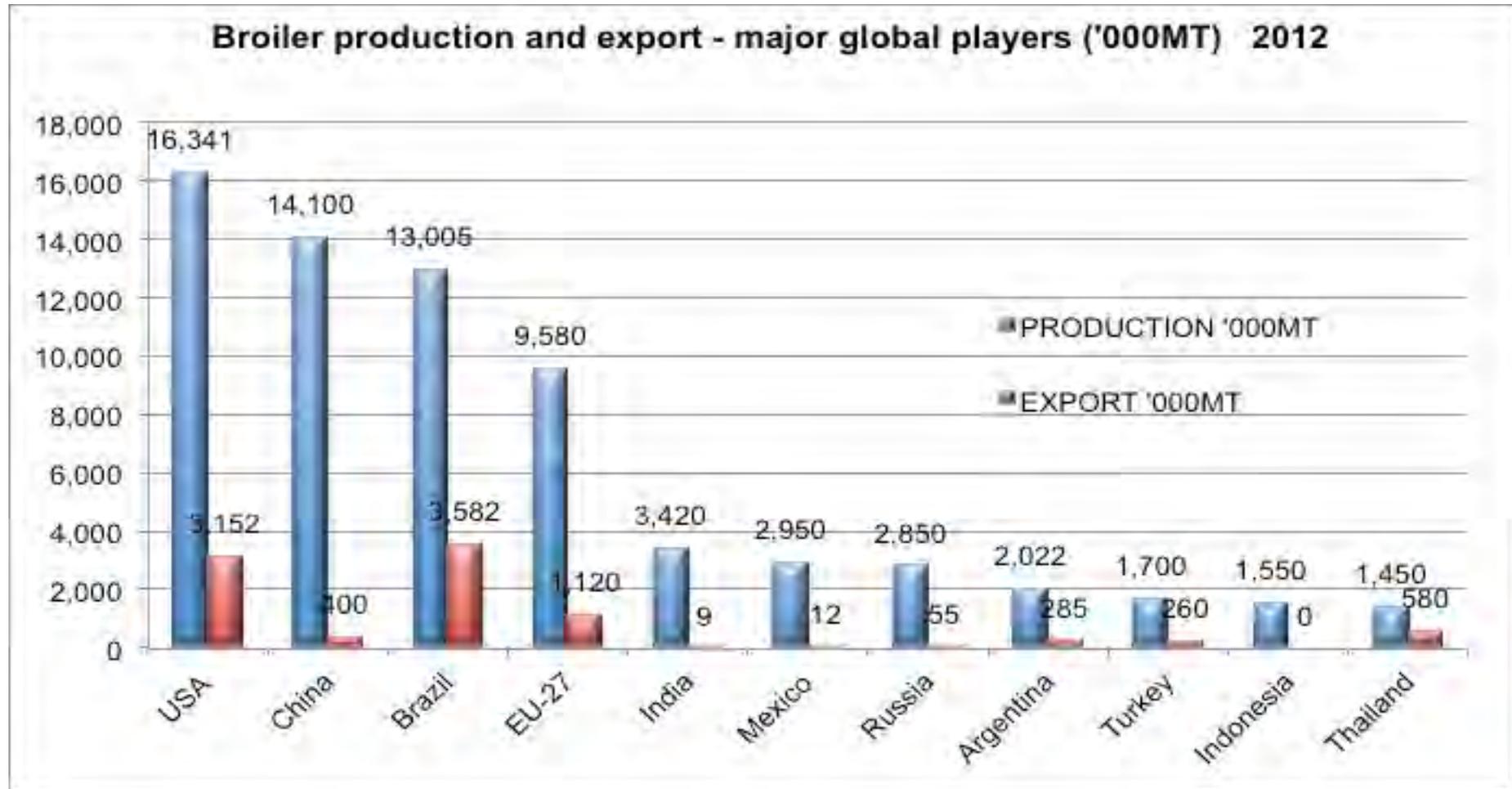
Indonesia likely to remain corn importer

# Indonesian poultry value chain

- **International competitiveness**

- **To understand why the industry is not competitive**
- **to identify the major players of broiler meat in the world market**
- **to reveal the success story of countries experienced in broiler meat export**
- **what are the opportunities for export growth**

# International competitiveness issues

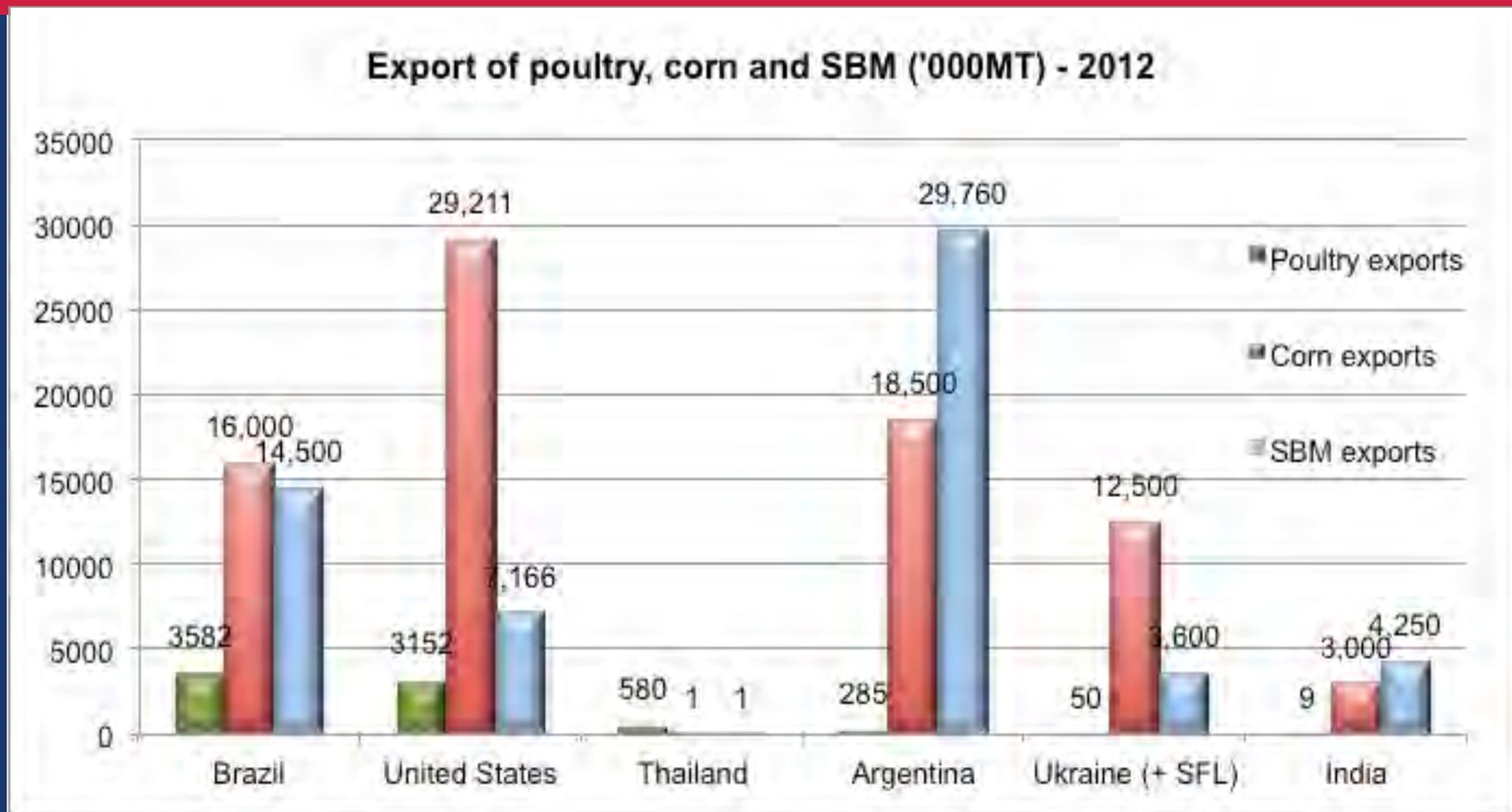


USA, Brazil, Thailand dominate net exports

Malaysia 995,000MT

Major exporters have large domestic markets necessary to ensure export sustainability

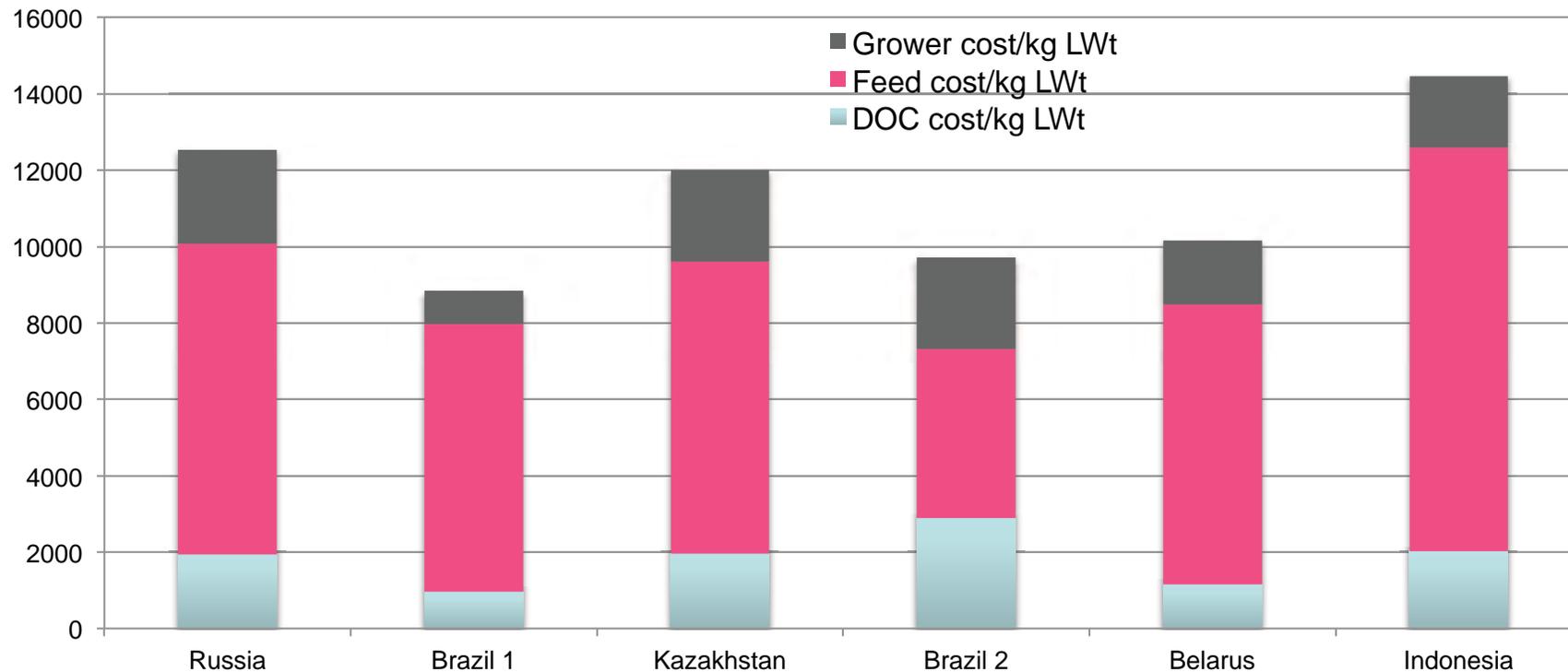
# International competitiveness issues



- Major exporters export corn and SBM – so have export parity costs
- Thailand – based on niche markets (Japan - labour costs, EU cooked product).

# International live bird costs

## International live bird costs Dec 2012 (Rp/kg)



Indonesia has high cost of production (50% higher than Brazil)

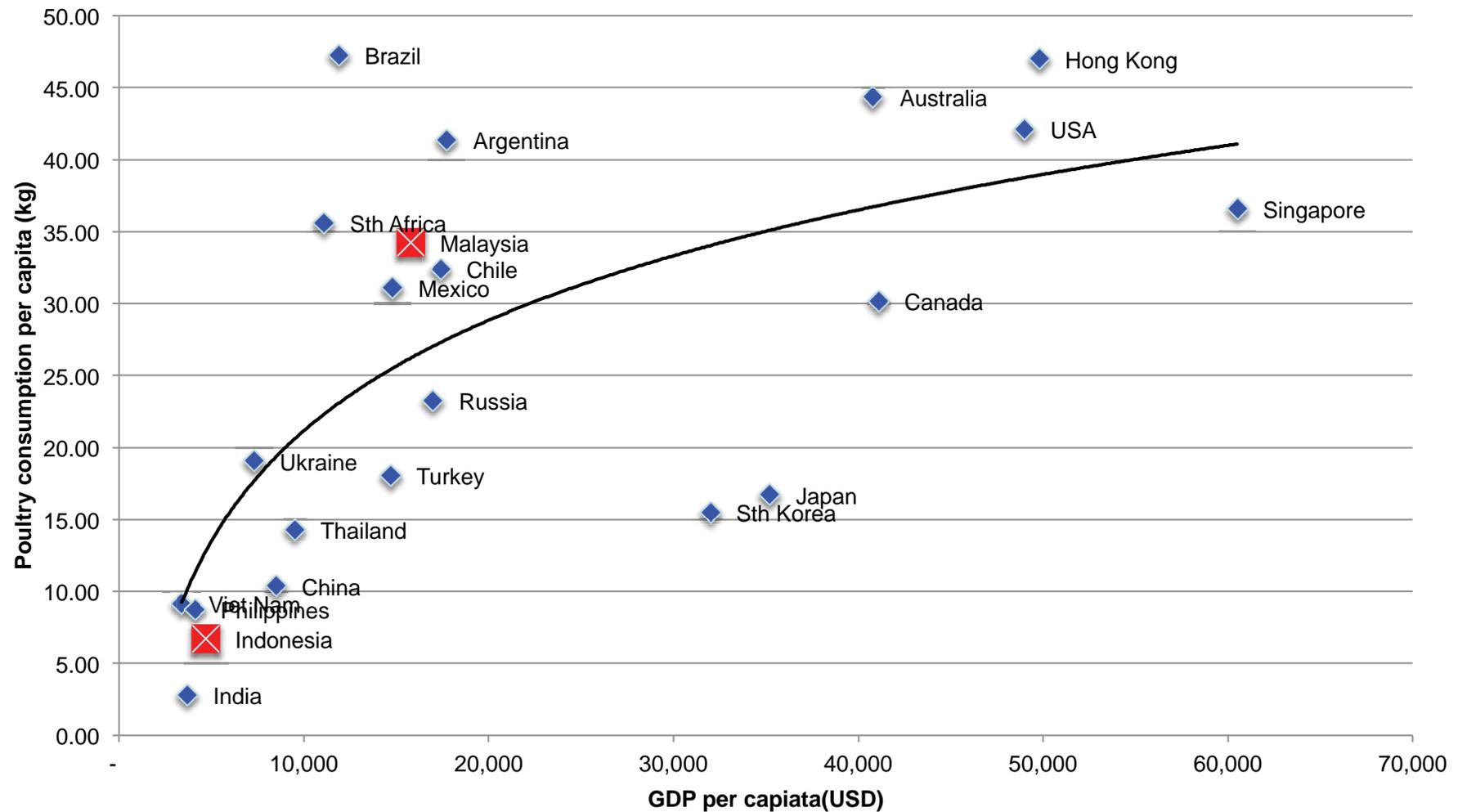
Malaysia slightly less than Indonesia. Ukraine (worlds lowest) is half the cost of Indonesia

Export opportunities for Indonesia niche market frozen product – small volumes. Phyto issues. 50

# Indonesian poultry value chain

- **Industry development**
  - **what are the opportunities for growth**
  - **what is the regional development potential**

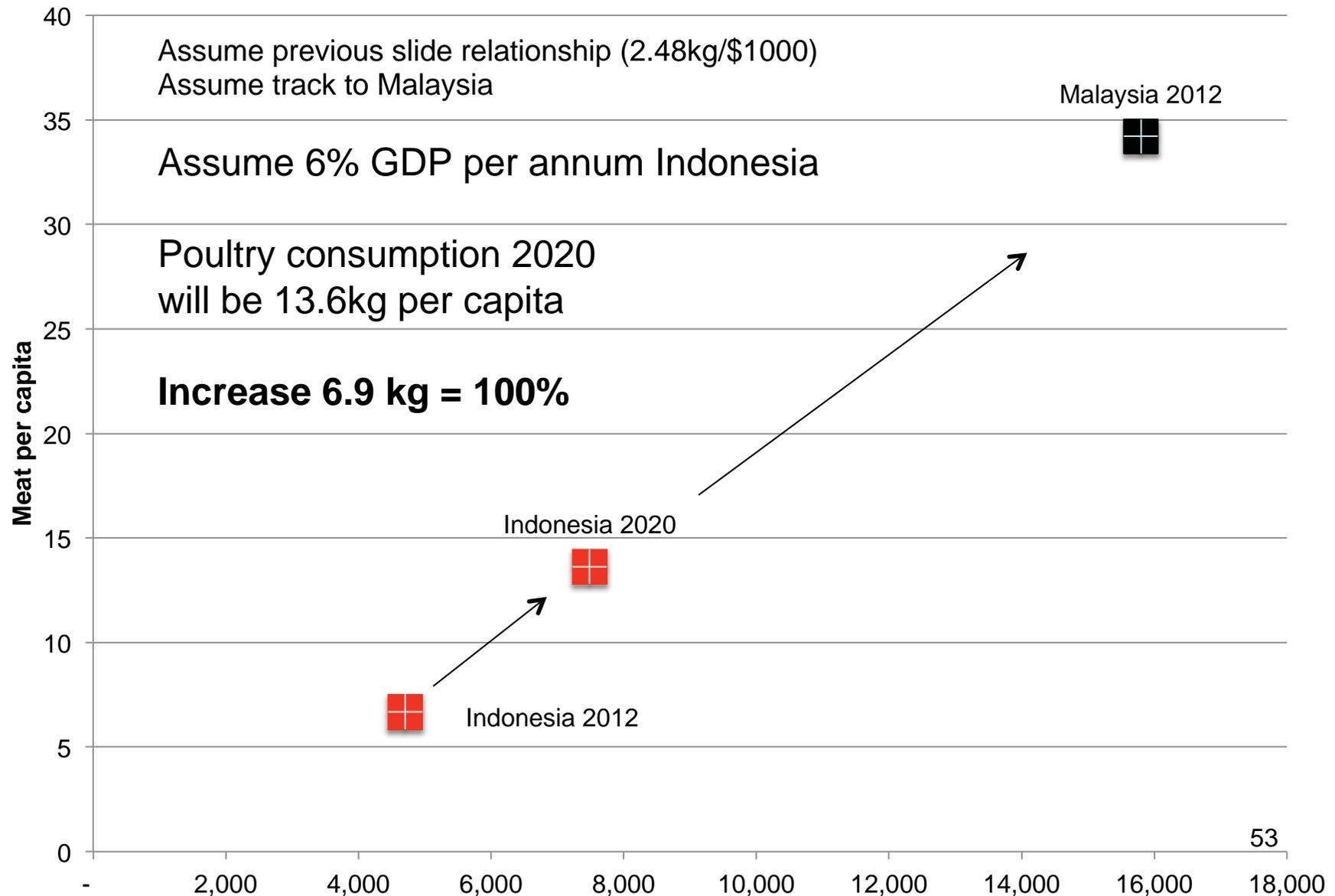
# Poultry consumption versus GDP per capita



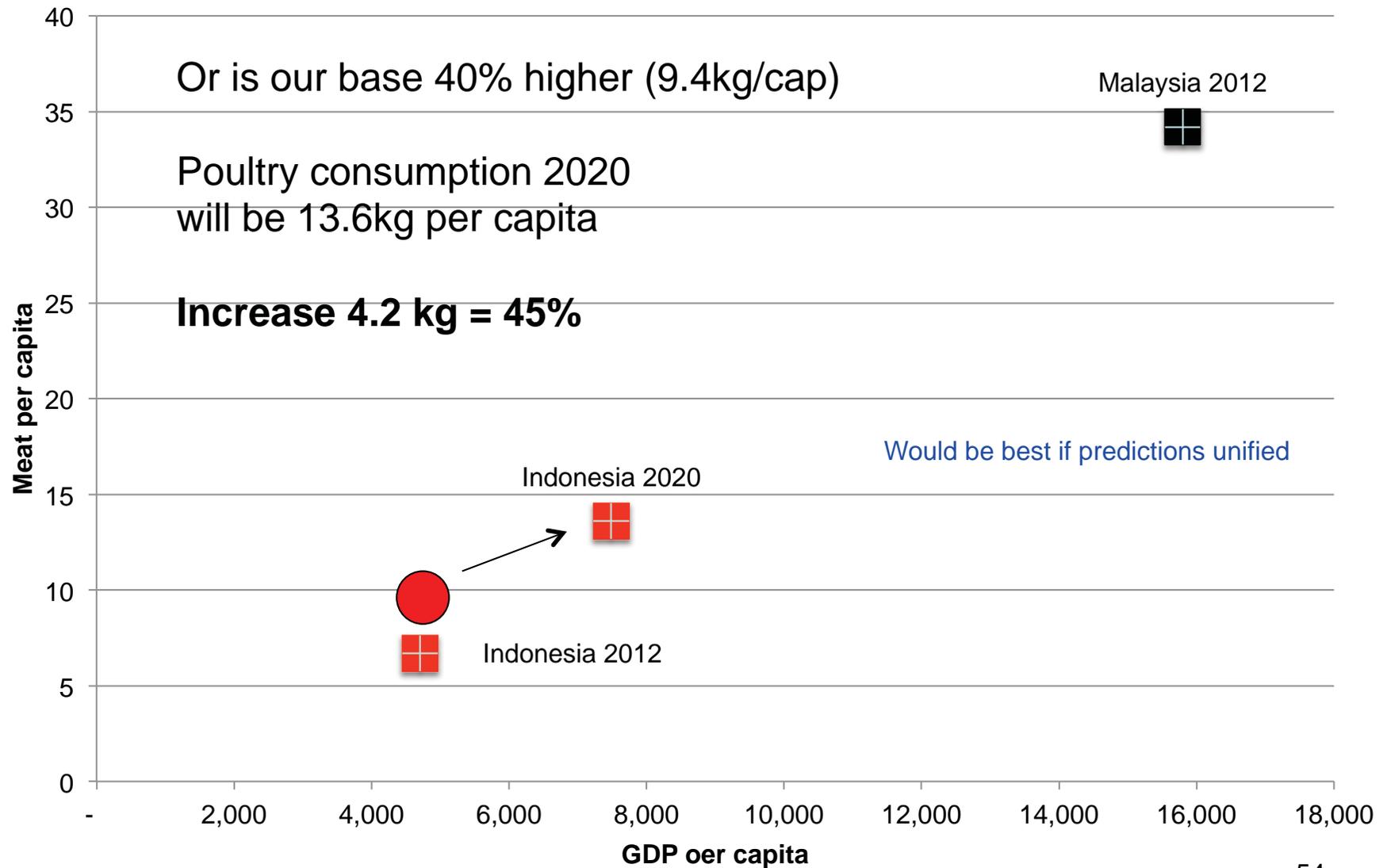
Will Indonesia track towards Malaysian consumption (2.5kg increase /\$1000GDP increase)?????

Example - 6% growth in 2013 GDP would equate to an increase of 696gm per capita or 167,000MT – or a 70% increase hv 2020!

# Poultry meat consumption Kg/cap versus GDP per capita (USD) – illustration - GOI statistics

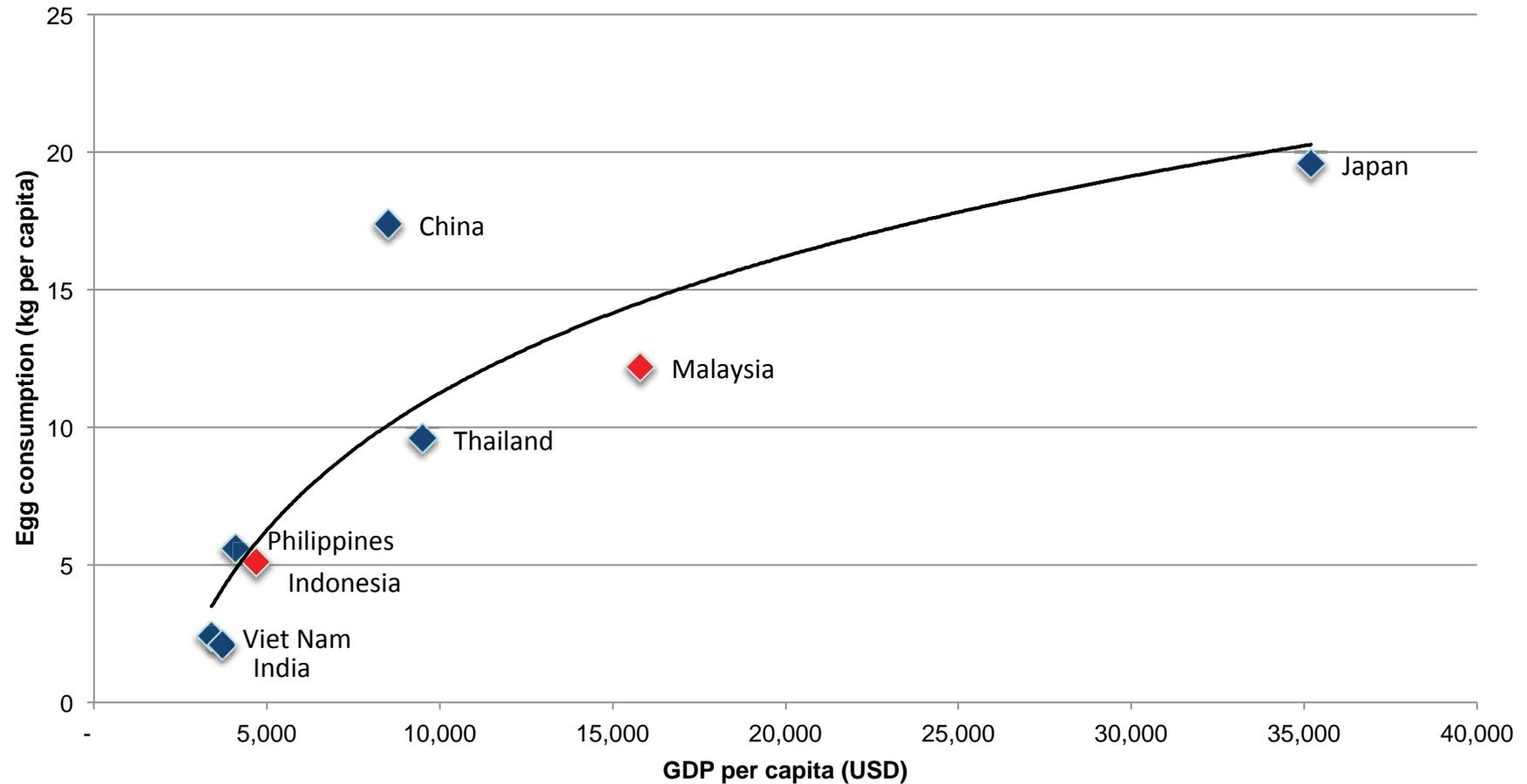


# Poultry meat consumption Kg/cap versus GDP per capita (USD) – illustration – industry statistics



# Egg consumption versus GDP per capita

## Egg consumption (2007) versus GDP per capita (2011)



Growth of layer sector will be less (60%?) compared to broiler sector –esp if current production is higher

# Regional development potential

- Production is spread nationally
- Driven by
  - Demand for fresh (and fry able) product
    - Supply must be by demand
  - Inefficient infrastructure
    - Driving high local transport costs
  - Development of small farms
    - Infrastructure, land, capital
  - Population spread
  - Lack of cold chain
    - Cannot centralise production
  - With feed production needing to be close to ports

# Regional development potential

- Nationwide production will continue - with development influenced by
  - GDP growth
  - Regional demand + A/B/C/D category growth + product, food safety, traceability demand
    - Fastest growing cities are outside Java
    - Alternate food sources (especially beef, fish)
  - Local corn supply
  - Development of integration
  - Retail development
  - Import policy (AFTA et al), exchange rates
  - Funding
  - Sustainability issues (land, environment, water, biosecurity, disease, urbanisation etc) that will pose challenges as industry grows
  - GoI policies and efficiencies (central and local)

# Project major shift in product demand

- While demand volumes will increase significantly
- Retail development will drive demand changes
    - Supermarkets
    - Franchised fresh chicken retail
    - Fast food (KFC, McDonalds, A&W etc)
  - Product development will drive demand
    - Fresh, Frozen, Processed
  - Development of the cold chain
  - Industry investment
  - Food safety/traceability requirements will increase (consumer and GoI)
  - Improved infrastructure/transport would enhance options
  - Brand development and brand loyalty

# Indonesian poultry value chain



- Monitoring the industry
  - **what data collection is useful**

# Monitoring the Industry - summary 1

## Prices

Monitor prices. Review how CV is used.

Traditional market, supermarket volumes (fresh/frozen)

## Production and Consumption

Full evaluation of how data is collected and projected

Growth in production ex modern processing

## Demand elasticity

Strongly recommend studies for broilers and eggs

Use as planning tool to predict growth

Obtain robust data on per capita GDP/PPP

## GDP

Expansion by province /urbanisation

Breakdown of A/B/C/D sectors re demand

## Listed Company health and strategy

Their value chain leadership is critical. Ensure a strong and trusted relationship is maintained with industry leaders.

# Monitoring the Industry – summary 2

<b>Listed Company health and strategy</b>	Their value chain leadership is critical. Ensure a strong and trusted relationship is maintained with industry leaders.
<b>International benchmarking</b>	Benchmark costs (especially via feed) and prices Use standardised data when benchmarking
<b>Price/feed cost ratios</b>	Develop as an indicator of costs and projections
<b>Retail, FS and brands</b>	Monitor developments (supermarkets, FF expansion)
<b>Livestock performance</b>	Understand efficiencies as explanation for costs and potential improvements. External production diagnostics a powerful tool
<b>Corn production</b>	Standardise production statistics to also include “as used” volumes (13-15% moisture) to avoid confusion
<b>Websites</b>	In report

# Conclusion

- Indonesia has a high cost of production for poultry due to import parity feed cost structure
- The industry is relatively efficient given existing housing, environment, disease and infrastructure - But costs could be reduced
- The industry is highly competitive with many players in all sectors - Margins are spread across all sectors
- Regional price differences reflect real cost and supply/demand issues
- As incomes rise poultry consumption will increase posing challenges for the GoI and the industry