THE UNIVERSITY of ADELAIDE

Capacity building for research: promoting inclusive development of agricultural value-chains, 1-3 September 2014

# Analysing Costs and Margins

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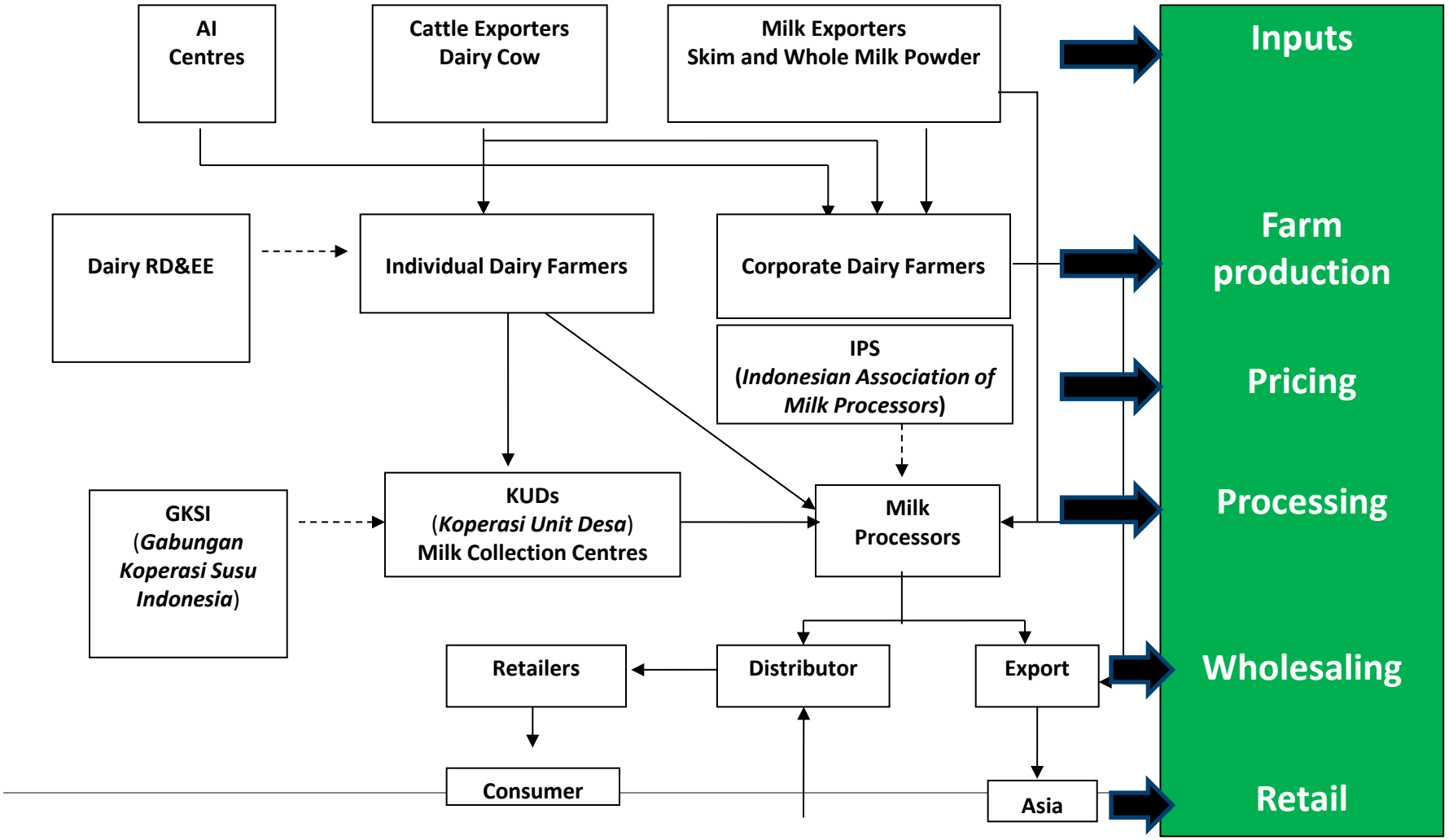
IFE IMPACT

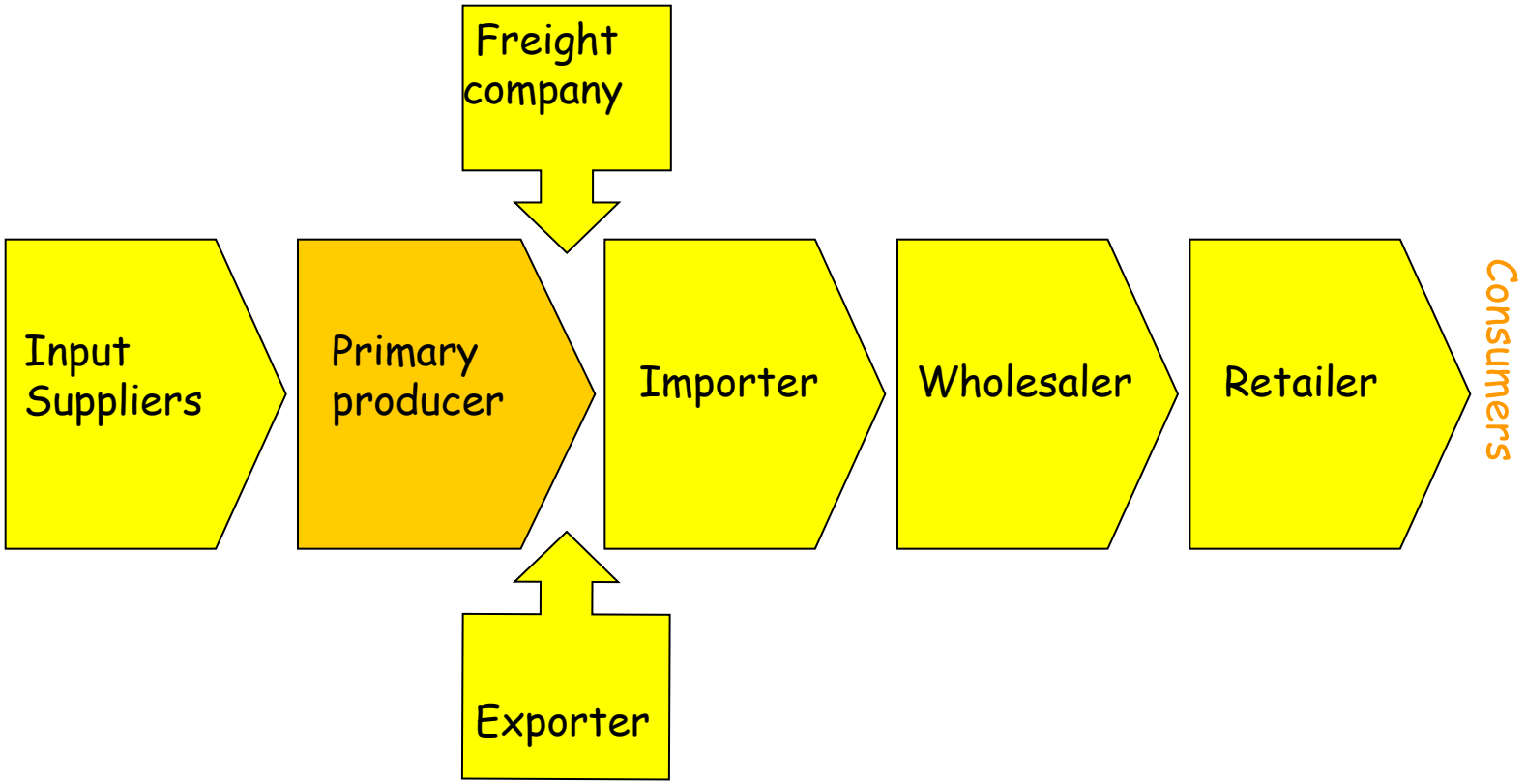
# Overview

- Understanding the drivers of profit within and between supply chains
- Understanding terms used in analysing profitability
- Applying this knowledge to analysing a supply chain
- Applying these within dairy and horticulture case studies

# Supply Chains – e.g. Dairy



# Supply chain – Indonesian mangoes




Source: ACIAR

# Key terms

- **Costs**
- **Revenue**
- **Margin**

# Key things to consider


- **Changes over time due to things beyond a business's control (Risk)**
- **Changes that fall within a business's control**

# What makes a business profitable?

# Costs

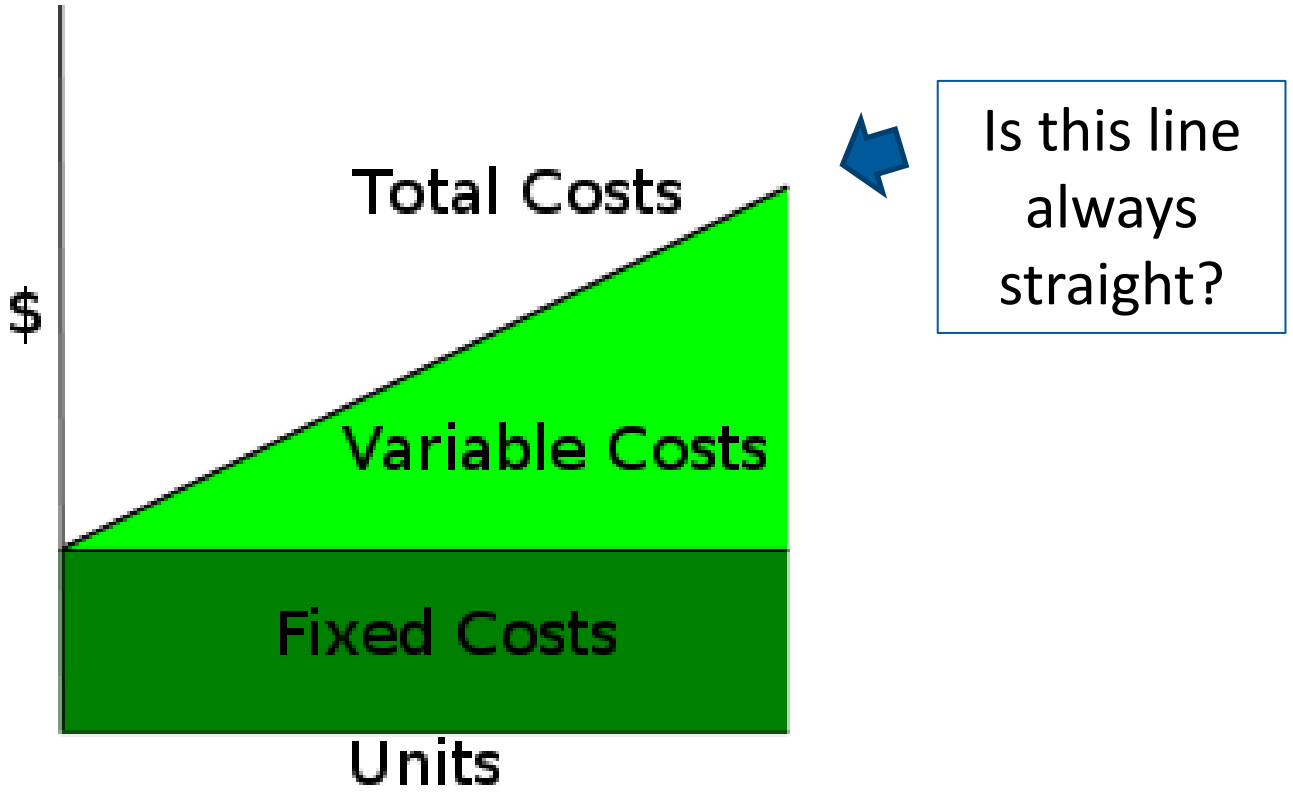
- Two main types: **Fixed** and **Variable**
- Both of these can be cash and non cash
- Others include: **Transaction** and **Regulatory**

# Fixed costs

Business costs that are constant whatever the amount of goods produced

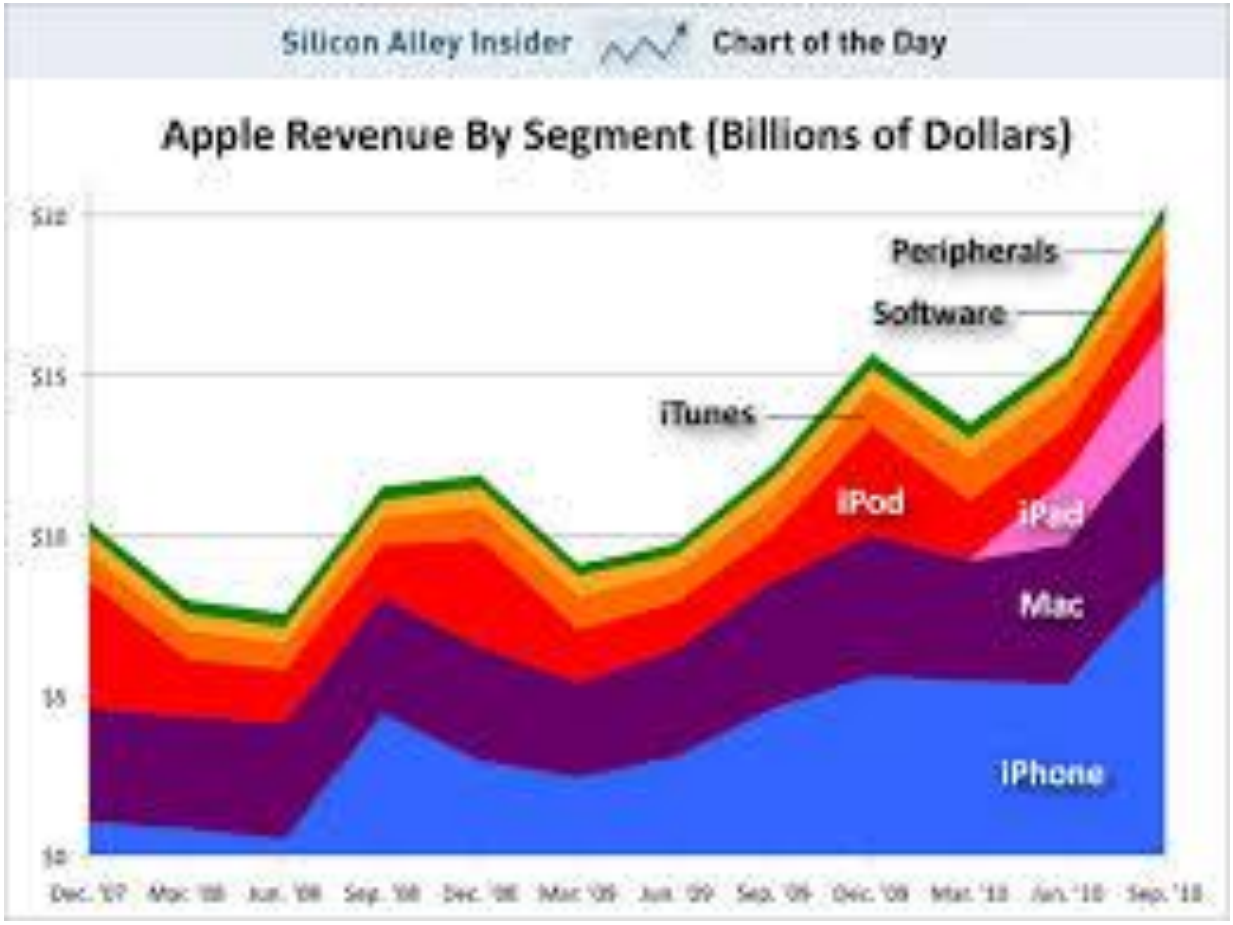
# Variable costs

- **Variable costs** are costs that change in proportion to the good or service that a business produces



# Revenue (per business or actor)

**Revenue = Volume sold x selling price**



# Margin

- Margin = Revenue – cost
- Can be low or high margin
- Most agriculture is low margin

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# Various financial ratios

- **Net income** = revenue –(variable costs+fixed costs)
- **Net Margin** = Net income divided by number of products
- **Break even point** = Fixed costs/margin per unit
- **Return on investment**

# Applying costs and margins within supply chains

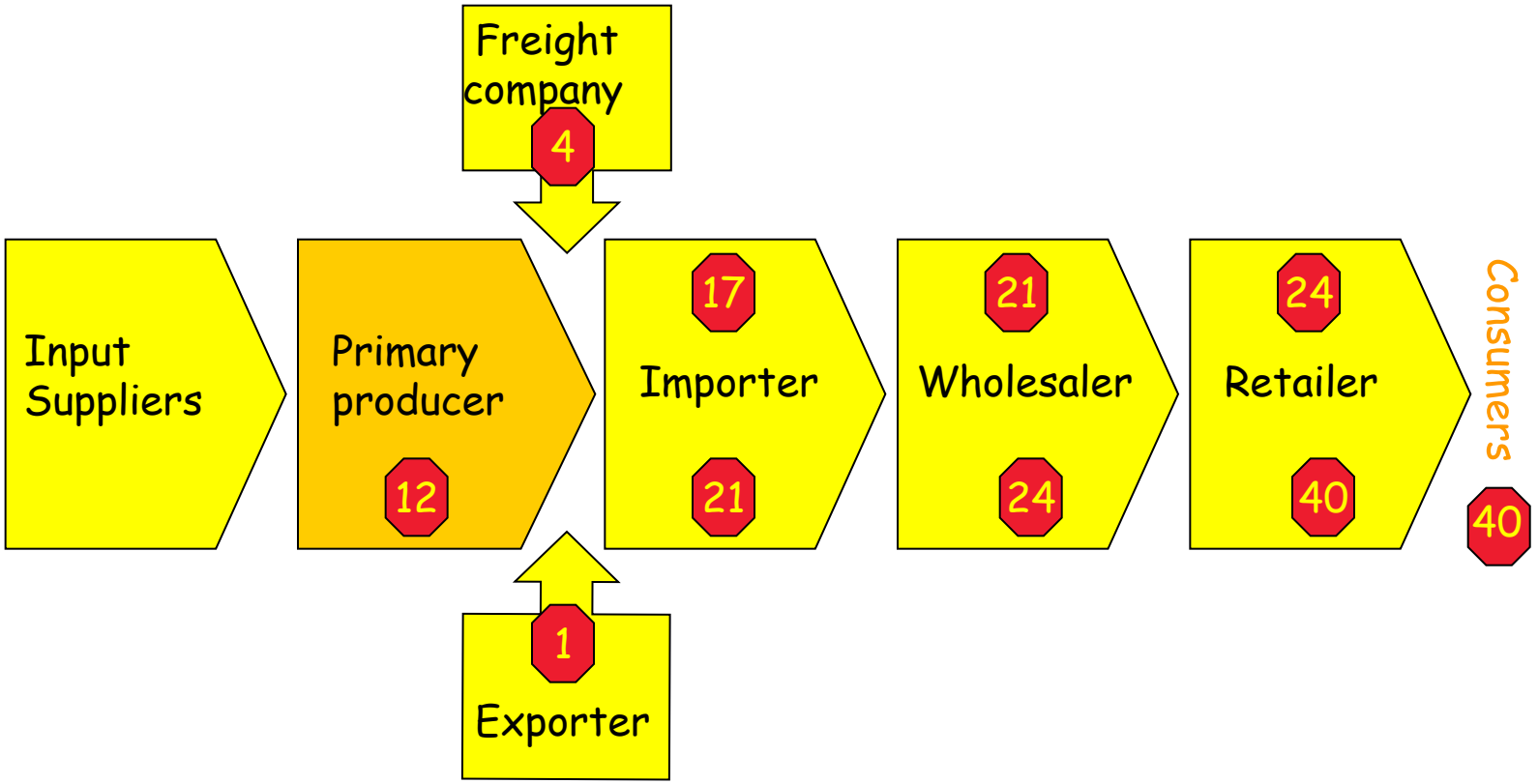
- **Some options:**
  - Compare businesses with a supply chain (per unit basis) e.g.  farm vs processor
  - Compare the same business type within different supply chains e.g. two farms in different supply chains

- **Two biggest aspects to consider:**
  - What share of the final revenue  (i.e. the final sale price to consumer) does each business get?
  - What is the total business profit per investment within the supply chain?

# Costs and margins within a supply chain

| | IDR per litre | | | |
|---|---|---|---|---|
| | Costs | Revenue | Profit | Margin % |
| Farmer | 3500 | 3700 | 200 | 5.4 |
| Processor | 3800 | 5500 | 1700 | 30.9 |
| Wholesaler | 8000 | 11000 | 3000 | 27.3 |
| Retailer | 13000 | 18000 | 5000 | 27.8 |

# Supply chain – Indonesian mangoes




For one tray of 20 pieces of fruit, retailed at $2 each, consumers pay a total of $40. This is the *total value* created, thus available to be distributed within the chain.

Source: ACIAR

# Costs and margins – comparing businesses in different supply chains

The cost of producing (COP) milk was calculated by Andri and Shiratake (2003) for three groups of farmers supplying different dairy cooperatives in East Java in 2002. The information can be summarised in the table below.

| | Group 1<br>Rp / L | Group 2<br>Rp / L | Group 3<br>Rp / L |
|---|---|---|---|
| COP* | 1,102 | 1,247 | 1,623 |
| Milk returns | 1,521 | 1,247 | 1,208 |
| Net Profit | 419 | 47 | -343 |

*All on-farm costs (including family labour)

# What is the law of diminishing return?

# Case studies – Improving revenue pre-farm gate - Adopting profitable technologies

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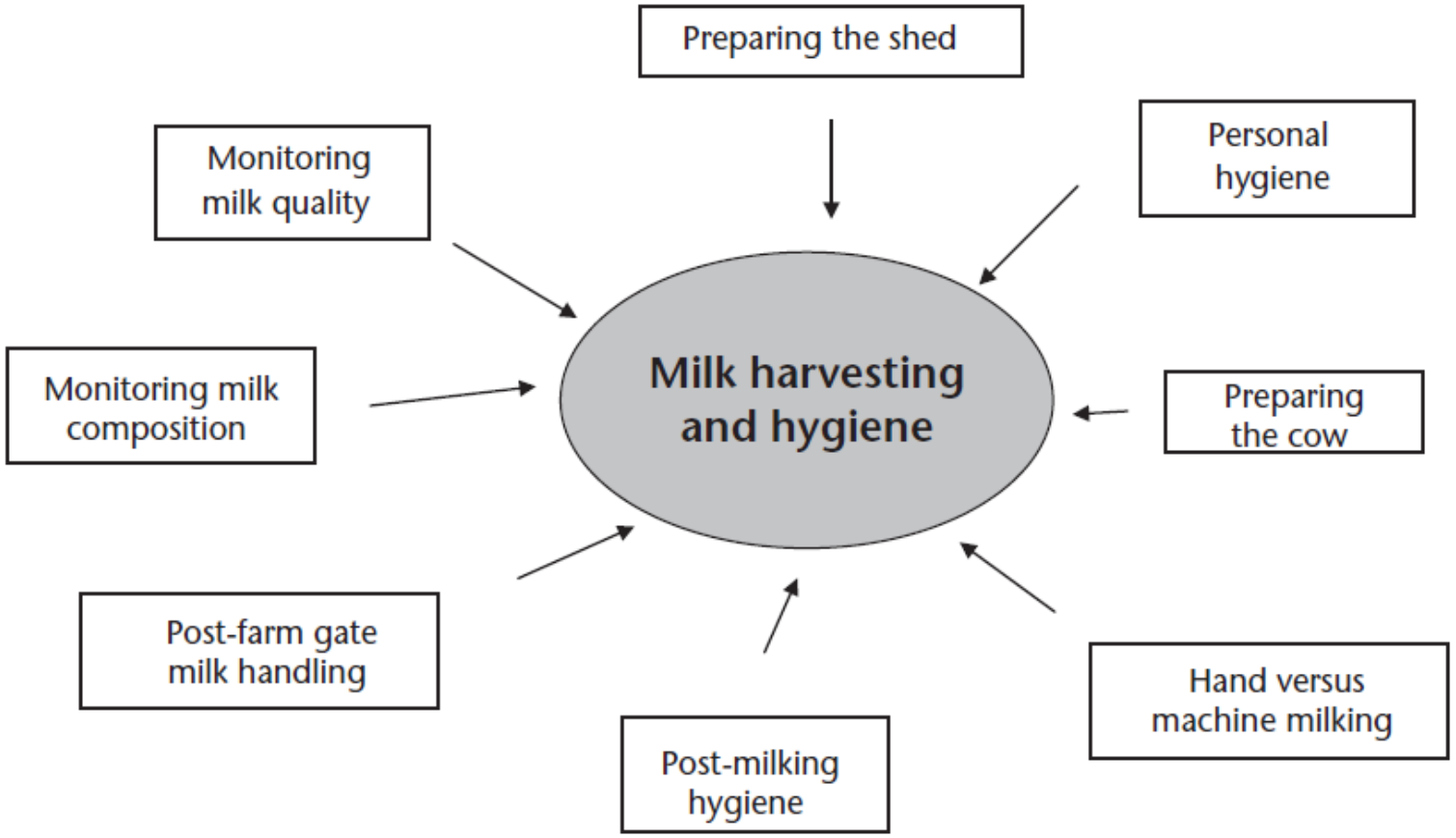
## Milk quality – bacterial quality

# Technical options to improve milk quality during milking

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# Milk quality – improving margins

- Various processors pay more for lower bacterial quality milk e.g. 200 IDR per litre **(revenue)**
- What are the **costs** to improving milk quality ?
  - Infrastructure (Stainless steel bucket) $$$
  - Operating – hot water and detergents $$$
  - Labour – more time spent milking and taking milk to market $$$

  Total costs = $$$

- Additional revenue per litre = xxx IDR/litre

# In summary: Costs and Margins within supply chains

- **Things to compare:**
  - **Costs – variable and fixed**
  - **Revenue**
  - **Margin**
  - **Return on investment**
- **When analysing supply chains:**
  - **Can look at businesses within**
  - **Can compare businesses across supply chains**
- **When comparing supply chains think about:**
  - **What difference will change make?**
  - **What are some costs (and or revenue) that may not be readily apparent?**