

THE MEAT SECTOR

Analysis of the determinants of prices and costs in product value chains

MEAT SECTOR – OVERVIEW

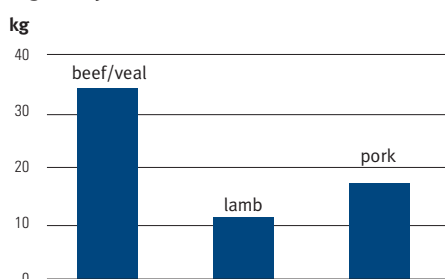
Background

Analysis of the pricing through the chain in the meat sector requires recognition of the diversity of the value chain in each of the major meat industry sectors and major trends that are affecting overall returns to each industry. Industry returns are however in each case driven by international trade, which in each case determines available farmgate returns for the animal carcass.

The analysis has been undertaken across beef, lamb and pork. In terms of total value and volume of industry output and retail turnover, beef is the dominant meat segment.

Australia is one of the largest consumers of processed meat on a per capita basis, yet this has been in decline in recent years due to competition from poultry and seafood. These have increased largely as a result of consumer concerns for diet and health.

Figure 29. **MEAT CONSUMPTION, KG/PERSON, 2002**



Source: MLA

The influence of trade

Industry estimates as to the use of product show the importance of export markets to the beef and lamb industries. In the case of the pork sector, recent imports of frozen product have had a dramatic effect on product returns.

Domestic market

The meat industries feature differing degrees of integration from producer to consumer. The scale of supermarket dominance of the domestic meat category is common to each meat sector, due to a strong focus on the presentation, pricing and product range. The meat industry has focused its promotion and market development activities at improving the information and choices available to the consumer in the form of cuts and eating quality. Major retailers have been best placed to optimise these activities.

Figure 30. **SHARE OF MEAT OUTPUT**

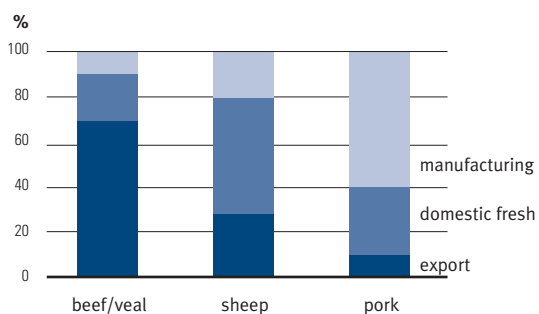
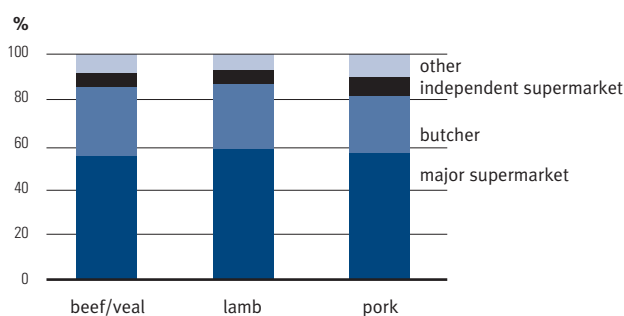


Figure 31. **MARKET SHARE, MEAT, JUNE 2003**



Source: MLA

Approach

The nature of the value chain for domestic retail meat products (covering beef, sheep meat and pork) requires a cautious approach when comparing farmgate returns and the levels of retail pricing. It is invalid to draw direct comparisons between individual retail products and the value of the carcass at the farmgate due to the diverse array of products that are produced from each animal.

Assessments of the share of returns at each stage also needs to take account of the importance of co-products and waste streams which are derived from each carcass. These have a significant influence on the overall recovery from processing.

The quality of data

An analysis of pricing through the value chain in meat industries is made difficult not only by complexity but also by the relevance of available data sources. Increased concentration of processing and the increasing share of retail market share in the hands of major supermarkets, along with the greater role played by direct supply arrangements to those chains, reduces the overall data that is available in the industry. Whilst reported wholesale price series are relevant as a barometer of the marketplace, less business is being conducted through traditional market channels which allow capture of data.

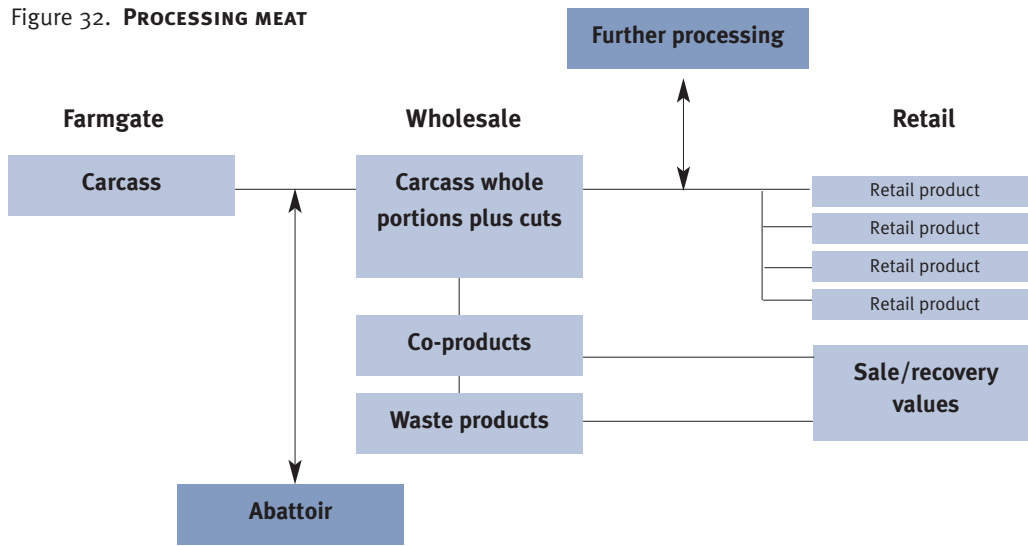
Other than published information from ABS, there are limited time series of retail data across the meat sector. This again limits the ability to draw accurate conclusions as to the relationships over time. Meat industry agencies have in recent times increased the investment in these areas and that data is presented in this report.

Our work has been based on recent time series and an analysis of the value chain in each case.

The approach taken

The pricing analysis will compare typical domestic animal returns at each of the major price points: farmgate, wholesale and retail.

Figure 32. **PROCESSING MEAT**



In so doing, it has taken a whole-of-carcass approach to analysing the structure of prices and costs through the chain. As this report deals with domestic food prices, the work has used case studies based on typical domestic carcass lines.

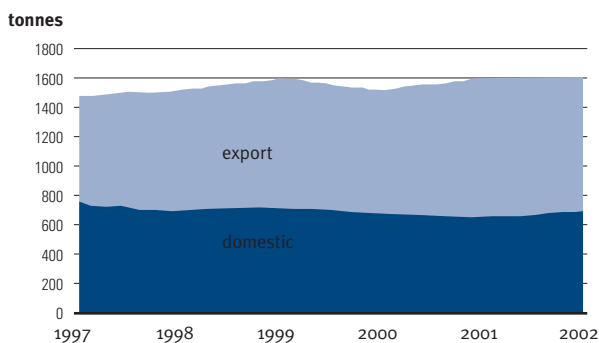
While there is limited detailed retail data that provides sufficient coverage over time of the trends between each of the major price points, this approach nonetheless increases the validity of comparisons and assertions that can be made.

BEEF – OVERVIEW

Background

- Australia, as the world’s largest exporter of beef, accounts for around 22 per cent of total beef exports.
- The industry has the ability to produce a range of low-cost beef by virtue of its production systems allowing beef to be sourced from feedlots, crop and pasture or from rangelands.
- The live trade in cattle remains an important market channel for the industry.
- The feedlot sector has increased in importance over recent years to the extent that 27 per cent of 2001–02 livestock turnoff (from farm to market) was from grain-fed feedlots.
- ABARE has estimated that of the cattle on feedlot operations in March 2003, 46 per cent were destined for the domestic market.

Figure 33. **BEEF PRODUCTION, TONNES, 1997–2002**



Source: ABARE

Major drivers of prices – international

- Global production of beef in the last decade has been steady. This reflects increased competition for land from alternative uses such as grain and urban development.
- The beef industry in Australia is strongly geared for export production, whilst there is static overall domestic consumption. Strong growth in the value and diversity of export markets for the Australian industry has helped underpin the stability of export returns, despite recent food health scares related to beef in major markets.
- International competitiveness is aided by Australia's disease-free status which allows preferential access to the high-priced markets of Japan and the United States. Extensive beef operations have the capability to give overseas customers continuity of supply and consistency of quality which are critical to higher value markets.
- The forces of supply and demand in international beef markets drive the level of returns to the Australian industry. In the short-run, these returns are affected by:
 - seasonal conditions which affect both quality and quantity;
 - exchange rate relativity and volatility;
 - trade policy issues such as import quota systems and tariffs which affect market access for Australian exports;
 - disease outbreaks and general consumer health and safety concerns;
 - competitor meat or protein prices from lamb, pork and chicken; and
 - general economic conditions in consumer markets.
- Meat processors have in recent times faced very tough operating conditions due to the reduction in available livestock slaughtering with the decline in the national herd from drought and the continued build-up of the live trade.

Major drivers of prices – domestic

- Competing sources of meat drive prices at the consumer end of the value chain, while export returns dictate prevailing returns and costs at the other end.
- Consumers are demanding that eating quality of beef is predetermined and consistent – this factor is important to compete with chicken and pork for the protein dollar.
- Buyers of cattle for the domestic market compete at various points of sale against export buyers, processors and marketers.
- The prevailing farmgate price at which a major domestic buyer will purchase cattle will be influenced by:
 - the strength of international demand from time to time;
 - the domestic demand for store and breeding cattle;
 - the level of available supply; and
 - prevailing key export price indicators.
- When export markets are strong, the producer with reliable, consistent quality will retain leverage in domestic transactions.
- Major retail buyers operate with a variety of models to ensure they cover three sets of risks in the face of fluctuations in export demand – price, supply and quality risks.
- Major retailers will attempt to buy at a target (per kg) buying price to maintain target returns for the category, based on carcass usage, processing cost and competing retail prices for the category.
- Over time the major retail buyers vary the mix of product sourcing between dedicated producers, paddock selection and markets (saleyard and over the hooks or OTH), based on market conditions, while processing is outsourced.
- Dedicated supply arrangements are usually structured with medium-term rolling contracts. When buying off-farm or in markets, OTH is the preferred method of buying for processors as it passes risks back to the producer – ensuring that beef is paid on market specifications.

The changing value chains – various integration models

The pages that follow outline the value chain for the sector, although it is necessary to appreciate the complexities with which the beef sector is grappling. The domestic beef value chain sees increasing diversity as the competition within the sector remains strong, and while competing meats and protein sources improve their sophistication. The following points are relevant:

- **Beef production companies** are vertically integrating through the chain (for example, AACo and Stanbroke) to manage breeding, finishing, processing and retailing/branding.
- There are limited barriers of entry for grass-fed beef production. However cattle herds are increasing and rural land prices continue to escalate.
- Producers with feedlot operations – more attractive to the marketplace – achieve sufficient economies of size and better leverage based on their ability to deliver larger numbers of quality carcasses on a more consistent basis.
- Smaller producers, often with limited quality control systems, prefer liveweight and saleyard selling systems where they are not penalised for poor carcass quality.
- **Processors** have high barriers to entry (in terms of required capital, access to export markets and access to sufficient throughput of carcass volumes), experience strong competition and strong exposure to business risk due to the level of invested capital. Processors will tend to absorb the risks associated with fluctuating volumes.
- Processors are looking to embark increasingly on value-based livestock selling and marketing.
- **Retailers** have access to significant contract processing capacity to provide scope to improve their control over the overall returns from the carcass.

Figure 34. **BEEF: MAJOR DRIVERS OF PRICES AND COSTS**

The beef sector is an extremely diverse category with a very wide range of product applications and market/product combinations.

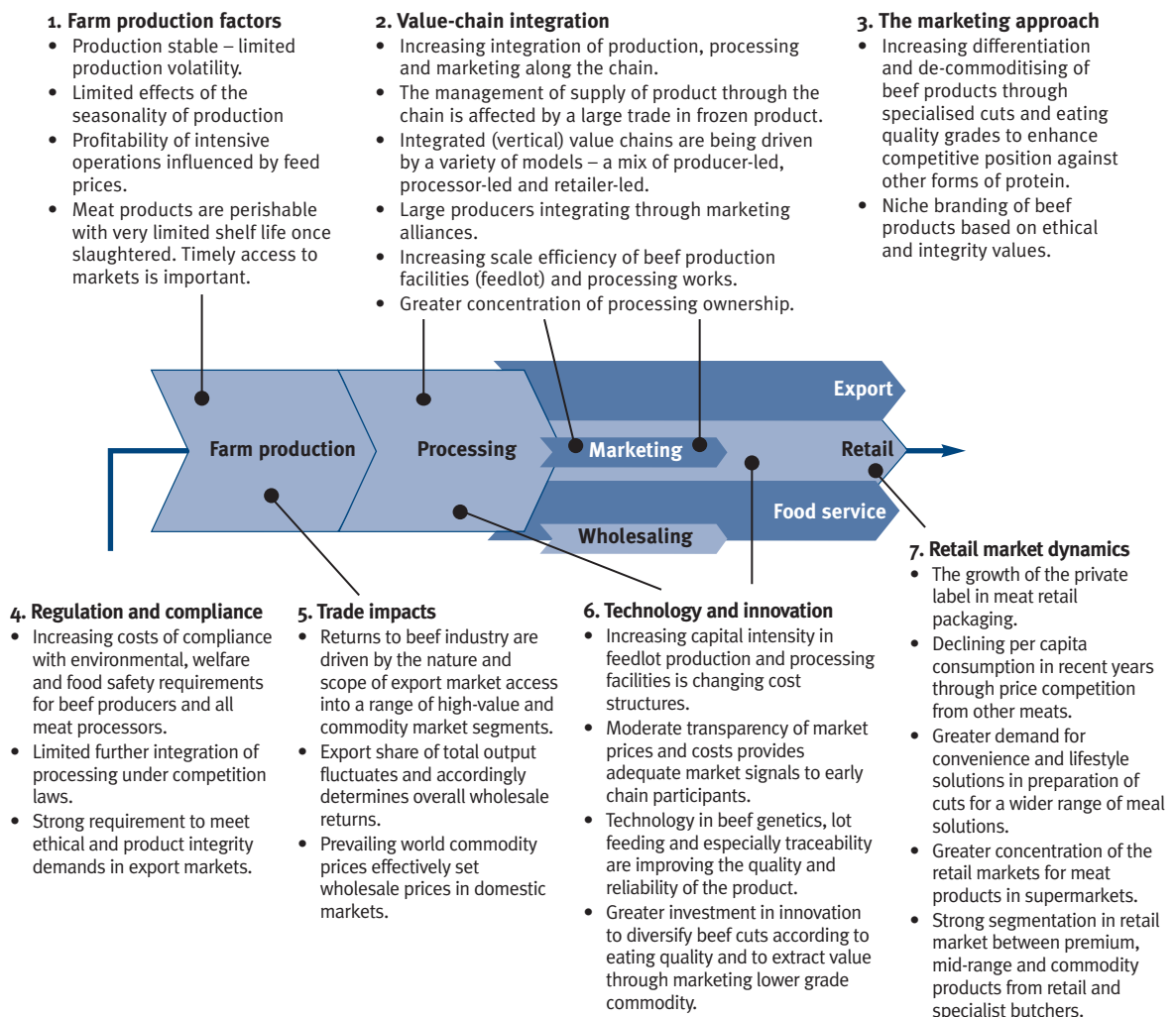
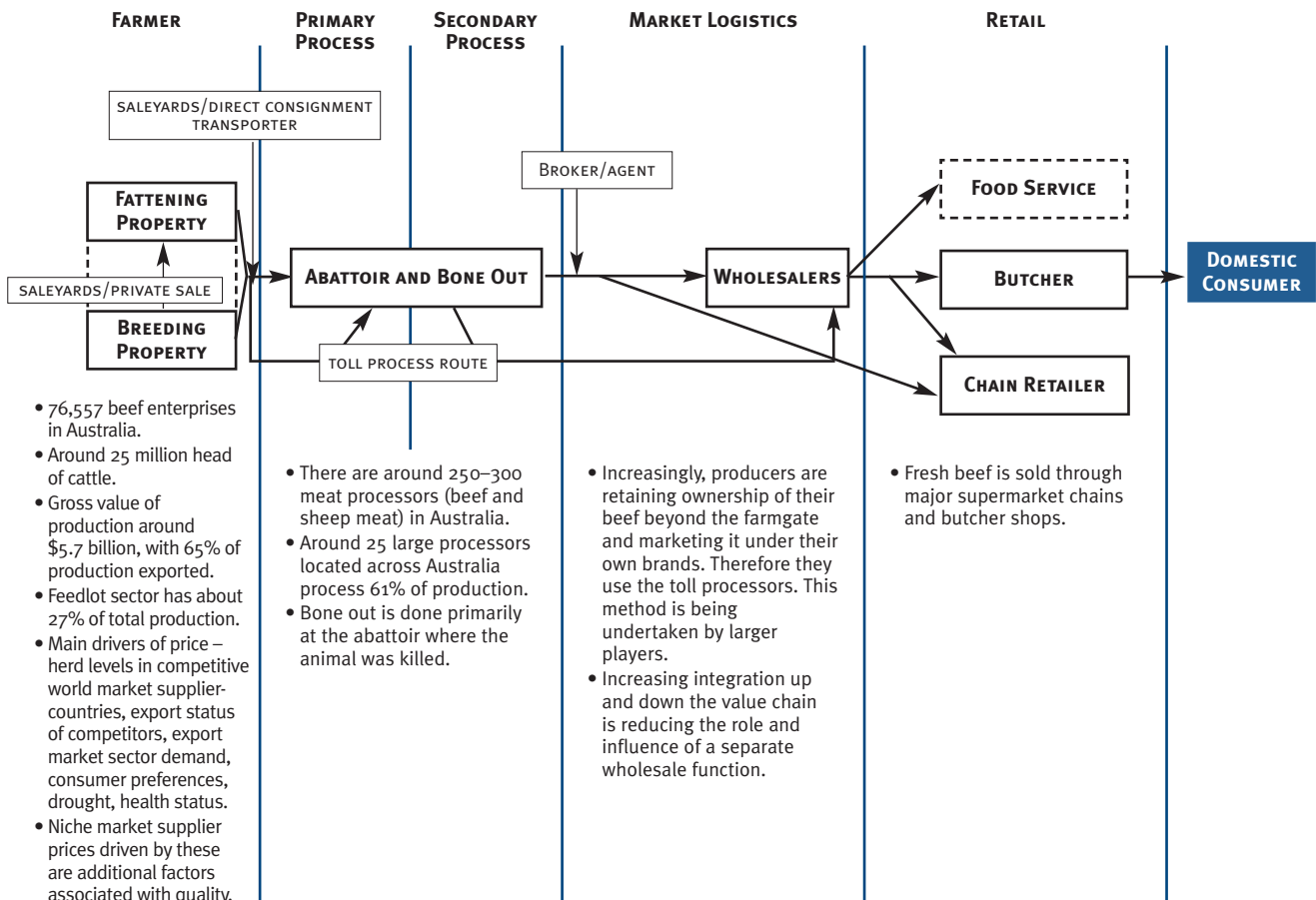


Figure 35. RUMP STEAK, GRASSFED, 1KG, SUPPLY CHAIN MAP



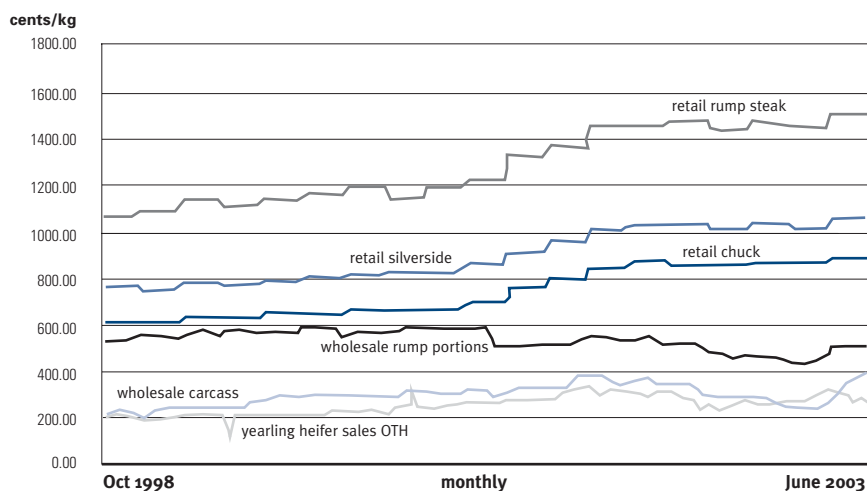
BEEF – ANALYSIS OF PRICING

Retail, wholesale and farmgate

As discussed above, there are dangers in simple comparisons between farmgate and retail prices.

The limited long-term series price data for meat shows that there is little correlation between levels of prices over time.

Figure 36. FARMGATE, RETAIL AND WHOLESALE PRICE TRENDS, CENTS/KG, 1998–2003



Source: MLA and NLRS

The approach taken

Assumptions used in this analysis are:

- over the hooks sales have been based on 230kg yearling heifer sales as reported by NLRs;
- wholesale prices for carcasses and rump portions are based upon NLRs wholesale market data from the Sydney wholesale market; and
- retail prices for rump steak, silverside and chuck steak are based on ABS surveyed data.

Wholesale markets for beef carcasses and portions of beef are used in the minority of cases and provide a valid guide as to the level at which the market is operating. However, the vast majority of volume of meat reaching the market is flowing through integrated arrangements between producer, processor and retailer, in view of the size of the major retail portion of the market and its increasing use of direct supply arrangements with producers.

Observations

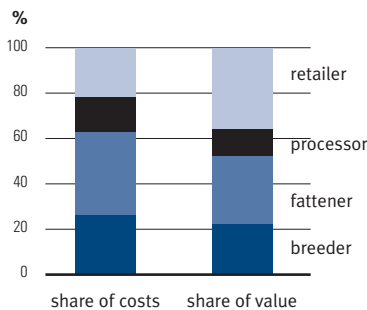
The price comparison shows that there is a general price trend which sees broad consistency in movement across farmgate, wholesale and retail prices. Yet the complexity of carcass usage and diversity of end retail products within cuts renders this type of broad comparison relatively meaningless in terms of an analysis of the drivers of individual retail product prices and livestock prices.

Whole-of-carcass approach to assessing returns

The study has undertaken a measurement of the returns from whole carcasses, based on a domestic animal.

This analysis is valid as a snapshot. It indicates how each major sector is involved in the value chain. It shows the gross returns that are available to each major sector through the chain.

Figure 37. **SHARES OF RETAIL BEEF PRICES, 2003**



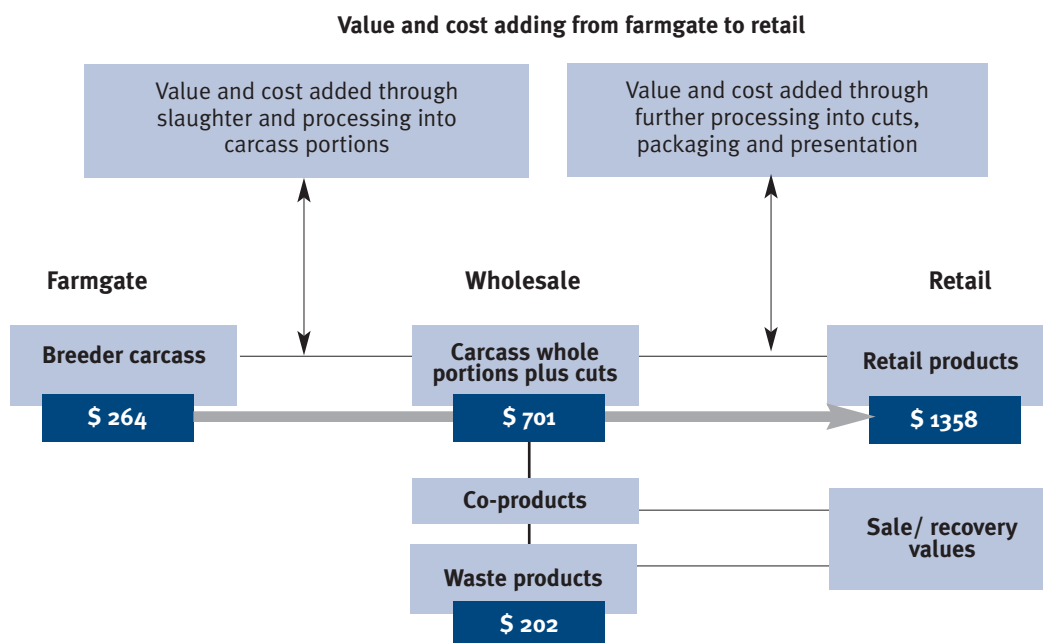
Source: analysis by Macarthur Agribusiness

The analysis in the above chart and in the next map has been based on national average spot retail prices for common cuts prevailing in August 2003, as well as processors estimates of the returns at wholesale for meat and co-products.

The analysis is based on a model of the typical usage of a carcass in the domestic market, across the various meat segments.

Significant value and cost-adding occurs throughout the chain to create retail value from a bred animal. As identified in the assessment, the returns at processor level are driven not only by the prevailing wholesale market for domestic portions but also by the extracted value of co-products and by-products (which in this model makes up more than 20 per cent of the gross returns).

Figure 38. VALUE AND COST-ADDING FROM FARMGATE TO RETAIL, BEEF



This analysis is inherently complex and subject to a large number of assumptions regarding meat quality, market conditions and cost structures. Yet as an approach it remains the only valid means of making comparisons between the returns at each stage in the value chain.

LAMB – OVERVIEW

Background

Lamb is a major element of the red meat sector but its industry fortunes have been historically linked to that of the sheep sector, in view of the dual role of sheep as sources of meat and fibre, and the historical influence of merino genetics in the overall sector. The demise of the total sheep flock with the declining prices for wool has been offset by the focus on the production of lambs for meat.

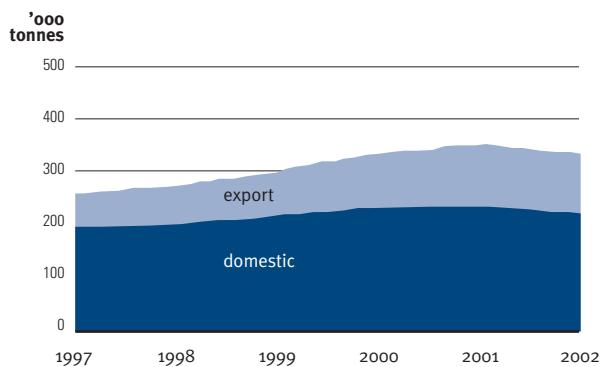
Australia is the largest exporter of lamb and is well placed to capitalise on gaining a greater share of the international lamb market as the lowest cost–highest quality producer of the meat.

Specialisation in prime lamb production is increasing over time as production and feeding systems become more sophisticated.

The industry’s market mix

Total production of lamb meat has grown strongly over time. The domestic market remains the majority destination with 68 per cent of total usage.

Figure 39. LAMB MARKET SALES, '000 TONNES PER ANNUM, 1997–2002



Source: ABARE

Major drivers of price

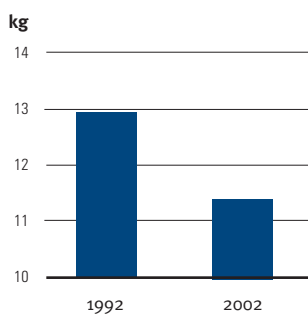
- Despite the high proportion of meat going into the domestic market, returns to the lamb production and processing sector are strongly influenced by world trade through prices demanded by overseas customers. Domestic market consumption is relatively static and subject to price competition from other red and white meats.
- A major influence in recent years has been the decline in product availability on the world market from other major production countries in the face of rising demand in the major markets of the United States, Japan and the European Union. These trends are expected to continue into the foreseeable future.
- With growing export influence on the sector, the supply of lambs and accordingly the prevailing prices over time are driven by other factors which include:
 - exchange rate relativity and volatility;
 - seasonal conditions which affect both quality and quantity of stock. Drought may delay the sale of new season or sucker lambs, causing shortages (as seen in July and August 2003). Rainfall provides good feed and quicker turnoff of lambs which may increase supply and lower prices;
 - as the incidence of feedlots for lamb increases, there will be a greater exposure to commodity risks such as grain prices, import regulations and so on; and
 - the returns from wool – although, with the strong role played by cross-breeds in sheep and increasing specialisation in lamb production, this influence is weakening.
- The behaviour of consumer segments in key markets such as the United States will continue to drive change through the lamb sector and increase the focus on specialisation of production for those markets.
- In recent times, the strength of export demand, coupled with a reduction in the total available lamb production as a result of the drought, has sharply increased prices paid for lambs at producer and processor level.

Major drivers of domestic prices

Domestic retail prices in recent years have been driven by retailers setting prices at sufficient margin over costs, balanced against prices of competing meats at retail.

Domestic market consumption is relatively static and subject to price competition from other red and white meats. The consumer is sensitive to the pricing differentials between the meat choices, whilst also showing greater interest in meat that is tailored to different eating and cooking styles.

Figure 40. CONSUMPTION IN THE DOMESTIC MEAT MARKET, LAMB, KG/PERSON



Source: MLA

Hence the competition between meats is based on price, quality, versatility and convenience.

Whilst consumers have a positive perception of lamb for quality, consistency and taste, they still believe it to be a fatty meat (source: MLA).

Seasonality is a factor that affects different cuts – summer is barbecue season and demand for lamb chops increases at this time. Winter is the prime sales season for roasts including legs of lamb.

Drivers of producer costs

Across the sheep industry, less than 40 per cent of producers derive more than 20 per cent of their income from the production of prime lambs. So production decisions have not, in the past, been driven by returns from lamb alone for the bulk of industry. The specialist lamb production sector is increasing in size, especially in recent times with the higher returns and scope for increased growth from export markets.

A high proportion of fat lamb production in Australia is based on opportunistic behaviour, where the predominant activity of the producer is an alternate farming enterprise. The production of lambs is therefore dependent upon returns from alternate uses of land and available feed, and the availability of adequate breeders. This leads to supply risk for processors and in response they are increasingly buying stock and having them toll fed in feedlots to reduce supply and quality risk.

Genetics for wool production (based on the traditional Merino wool sheep) are not optimum for fat lamb production which requires high growth rates in younger animals. Given that lamb prices are firm and the outlook positive, there is an increasing need to dedicate production specifically to the fat lamb market by changing genetics and production systems. These will provide greater market access, a better product and more market power.

Drivers of retailer costs

As with beef, the major retail buyers operate with a variety of models to ensure they cover price, supply and quality risks. Buyers seek to achieve a target buying price to maintain target returns for the category, based on carcass usage, processing cost and competing retail prices for the category.

Over time the major retail buyers vary the mix of product sourcing between dedicated producers, paddock selection and markets (saleyard and OTH) based on market conditions. With the strong seasonal production surge that usually comes in the spring, the use of market sources increases as a percentage of sourcing intake. In 2002, 37 per cent of lambs were sold OTH, 46 per cent at auction and 15 per cent in the paddock.

Dedicated supply arrangements are less common in lamb than beef and generally structured with medium-term rolling contracts. When buying off-farm or in markets, OTH is the preferred method of buying for retailers and processors as it passes risks back to the producer – ensuring that meat is paid on market specifications.

Figure 41. **LAMB: MAJOR DRIVERS OF PRICES AND COSTS**

To a lesser extent than beef, this sector is a diverse category with a very wide range of product applications and market/product combinations. Our final report will explain drivers of price in more detail based on carcass use in a range of premium and commodity product groups.

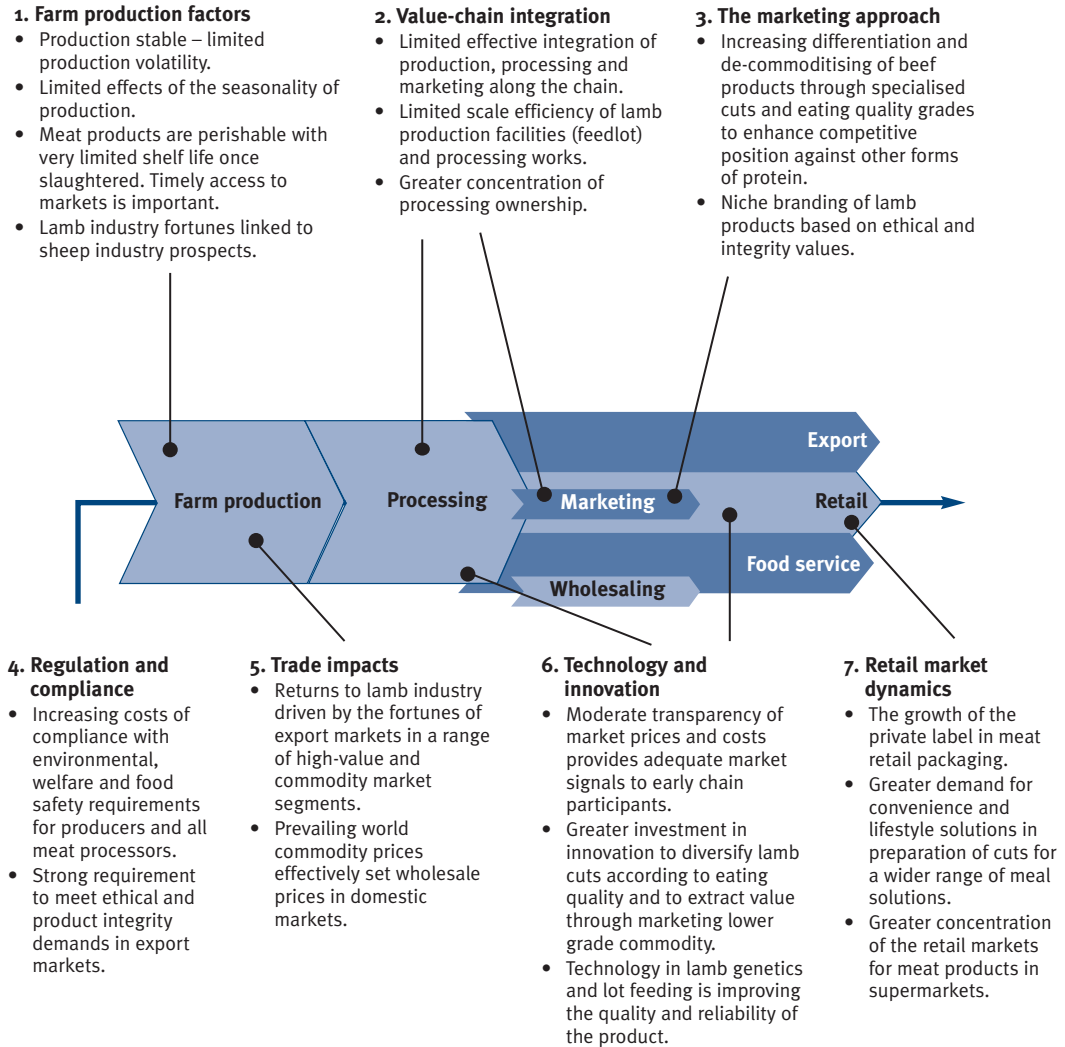
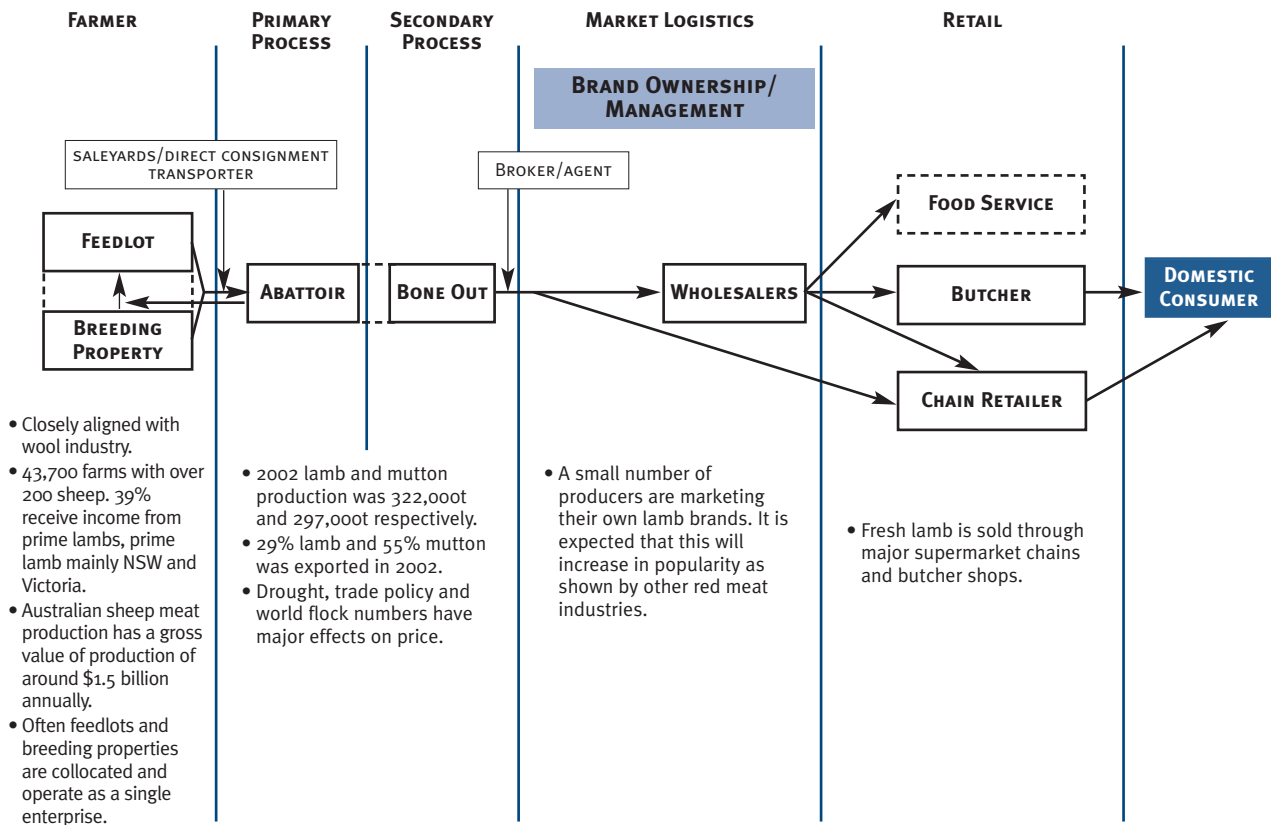


Figure 42. LEG OF LAMB, SUPPLY CHAIN MAP

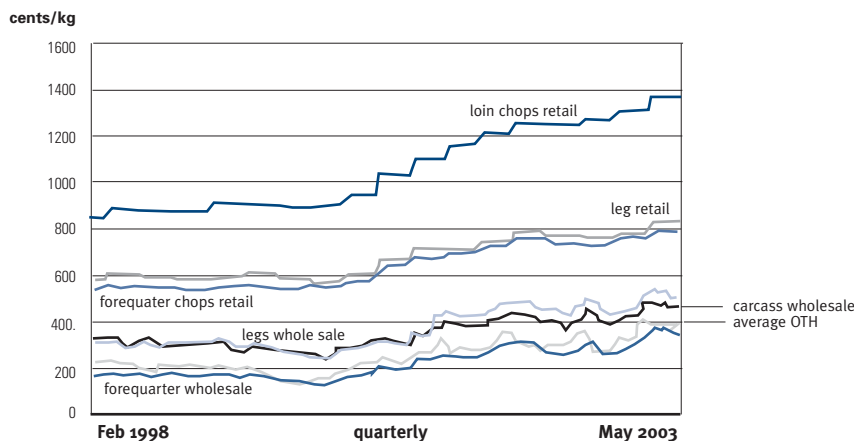


LAMB – ANALYSIS OF PRICING

Retail versus farmgate overview

As discussed above, there are dangers in simple comparisons between farmgate and retail prices.

Figure 43. FARMGATE OTH, WHOLESALE AND RETAIL LAMB TRENDS, CENTS/KG, 1998–2003



The approach taken

Assumptions used in this analysis are:

- OTH sales have been based on 18–20kg with a 2–4 fat score;
- wholesale prices for carcass, forequarters and legs are based upon NLRs wholesale market data from the Sydney wholesale market using 18–20kg carcass with a 3 fat score; and
- retail prices for loin chops, legs and forequarter chops have been based on ABS surveyed data.

Observations

The price comparison shows that there is a general price trend which sees broad consistency in movement across farmgate, wholesale and retail prices compared with that seen in beef. In the past couple of years where export returns have led farmgate prices, prices at retail have generally followed those at wholesale and farmgate.

Higher value cuts have increased at a greater level relative to legs and forequarter chops. This indicates a stronger demand for premium product and cuts as consumers become more conscious of the products they purchase.

PORK – OVERVIEW

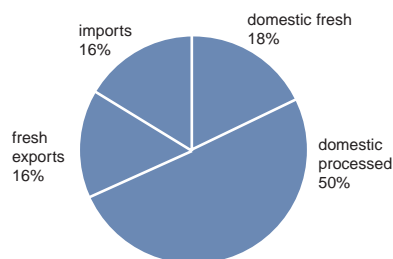
Background

Pork is a major retail fresh meat category, yet its fortunes are largely determined by its end use in processed meats, a market to which other red meats are less exposed. The pork sector has undergone significant adjustment in recent years with the removal of restrictions on the importation of meat. Approximately 60 per cent of Australian pork production is consumed in the manufactured meat and smallgoods sectors – this volume varies according to the competitiveness of local product in the face of commodity imports.

Various factors have affected the pork value chain in recent years. Producers' margins have been squeezed due to cost pressures associated with the drought and high feed prices, and their returns are being negatively affected by increased imports and a higher Australian dollar. Smallgoods manufacturers and retailers, however, have benefited from the increased availability of lower priced imported product and lower domestic prices for fresh pork in comparison to other meats.

Industry response has been to seek greater demand for fresh Australian pork products and cuts in domestic and export markets (which have included chilled pork to Japan and Singapore). These markets are for chilled product which has provided higher returns than domestic end uses, based on the industry's competitive advantages of transport proximity, herd health status and product integrity.

Figure 44. **SHARE OF PORK PRODUCT MARKET, 2002**



Source: ABS

Major drivers of pork prices

- Returns to the production sector of the industry from domestic and export markets for pork are determined by a set of forces affecting various pork cuts in the product-market mix.
- In the domestic market, imports from Canada and Denmark have increased price competition in the smallgoods sector with the import of leg meat from Canada and bellies from Denmark. Imports from these production industries are seasonal and dependent upon currency factors.
- Our industry is at a cost disadvantage to these suppliers due to their production scale, low feed costs and processing costs.

- Export markets have created growth in demand for fresh chilled carcass portions, yet the carcass size sought for export markets is not compatible with domestic fresh markets, forcing a portion of the export carcass into the processed meat market.
- Retail prices for pork products and cuts are subject to competition, in terms of price and consumer preferences for meat use, from other red and white meats.
- The overall impact of these different forces on carcass profitability has been to put downward pressure on net returns for pork processors and producers.
- The upshot of these divergent forces is to break the nexus between fresh meat retail prices and farmgate returns for the industry.
- Feed is the major cost of production representing 60 per cent in pig meat production in normal conditions. The recent surge in feed costs as a consequence of higher world protein costs and the drought in Australia saw producers forced to meet very high costs of production, with no commercial avenue to recoup such costs from the customer due to the pressure on prices from imported product. Imports had enhanced competitiveness due to the rising value of the Australian dollar.

Figure 45. **PORK: MAJOR DRIVERS OF PRICES AND COSTS**

The pork value chain has been under significant cost pressure in recent years due to its greater exposure to imported commodity products which are used in smallgoods processing and the changing consumer product mix.

1. Farm production factors

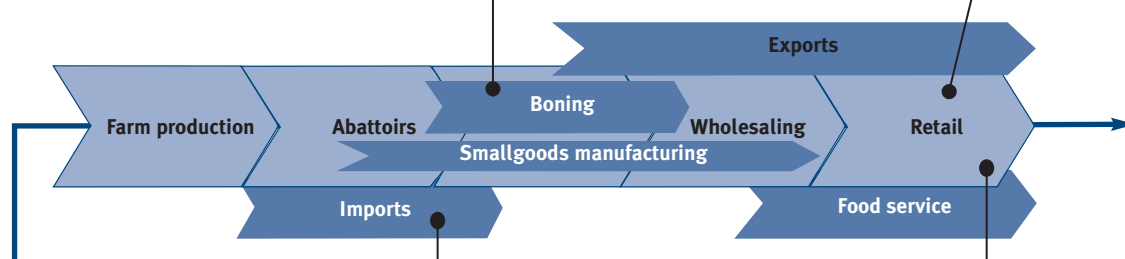
- Production volume displays low short-term volatility.
- Pigmeat production is seasonally based on fertility and economies of feed and pork prices.
- Meat products are perishable with very limited shelf in life once slaughtered.

2. Value-chain integration

- Increasing alliance of production, abattoir and boning activities to more closely align pork to market use – but little or no integration exists beyond processing through to market.
- Returns from pork sector strongly influenced by returns from smallgoods co-products which consume about 60% of pig meat across a diverse set of products.
- Increasing scale efficiency in pig production and processing is rapidly changing cost structures in supply chains across industry.
- Greater concentration of ownership of processing facilities.

3. The marketing approach

- Limited product differentiation or de-commoditising compared to eating quality and new cut marketing innovations undertaken in other red meat categories.
- Limited product branding.
- Greater customisation of carcass and portion use in different markets.



4. Regulation and compliance

- Increasing costs of compliance with environmental, welfare and food safety requirements for pork producers and processors.
- Strong community requirement for new facilities to be located further from residential areas due to environmental factors.
- Strong requirement to meet ethical and product integrity demands in export markets.

5. Trade impacts

- Significant pressure from imported commodity carcass portions (in frozen form) in smallgoods sector of industry affects overall carcass returns.
- Strong influence of prevailing world commodity prices for pig meat (as a threat to domestic market returns).
- Moderate influence of the growth in export volumes in carcass and cuts. This has an impact on the compatibility of residual carcass profitability in domestic markets.
- Strong influence of prevailing commodity prices for feed grains.

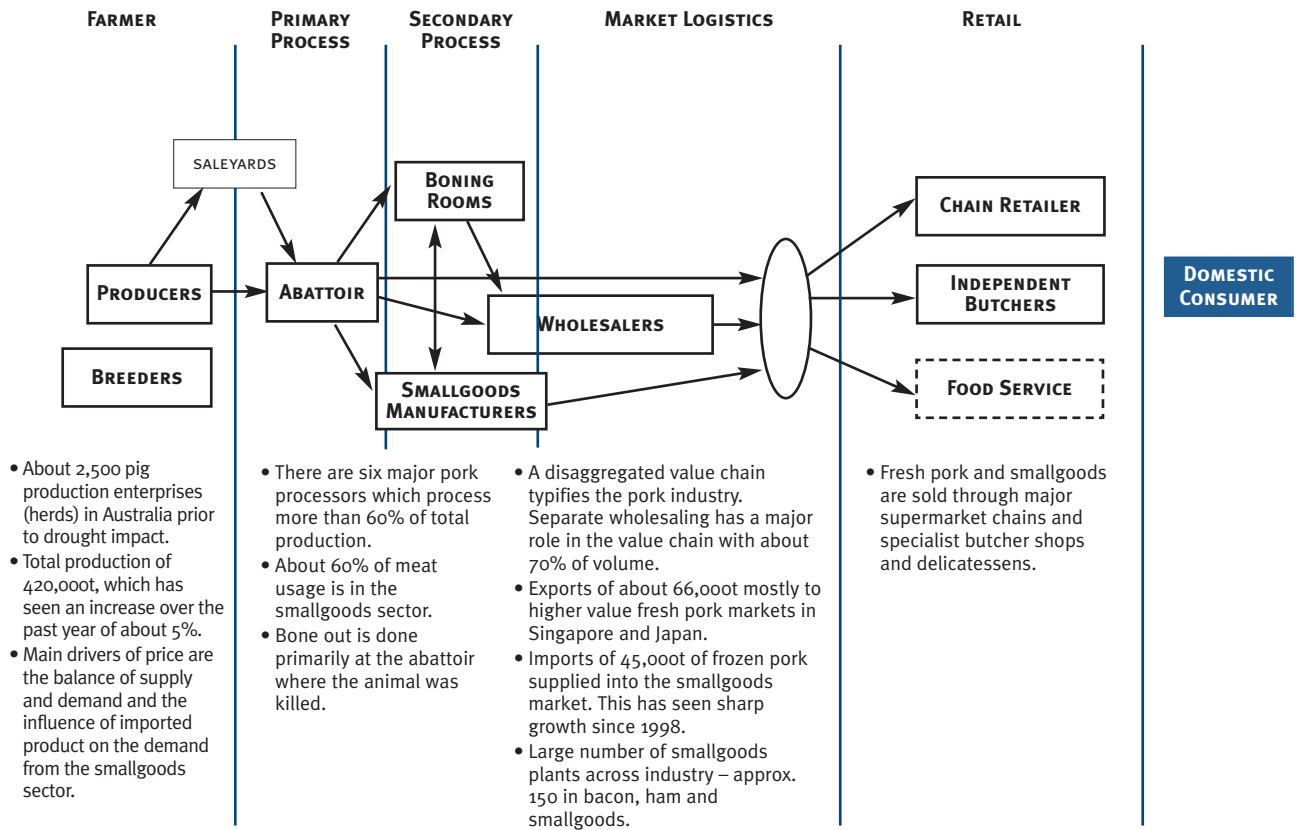
6. Technology and innovation

- Increasing capital intensity is changing cost structures in production and processing.
- Limited transparency of market prices and costs.
- Greater investment in innovation to improve overall carcass return through matching to market requirements.

7. Retail market dynamics

- Greater demand for convenience and lifestyle solutions in the eating grades and cuts of meat products is affecting competitiveness of the pork category.
- Greater specification of retail products requiring smaller carcass size.
- Price competitiveness based on competition between meat cuts.
- Greater concentration of the retail markets for pork products in supermarkets.

Figure 46. PORK PRODUCTS, SUPPLY CHAIN MAP

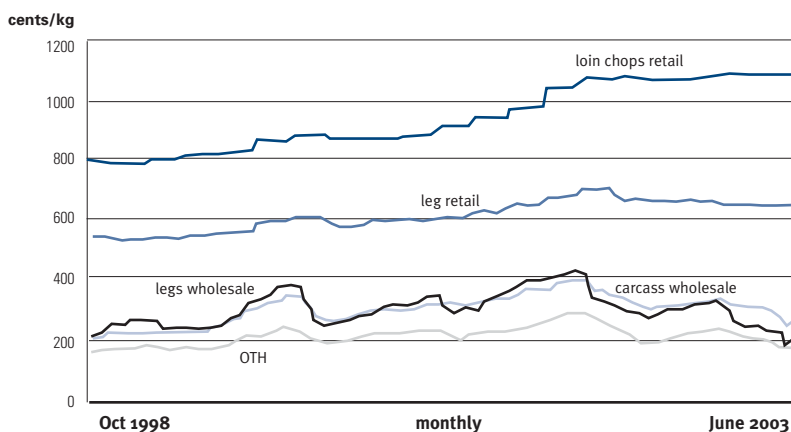


PORK – ANALYSIS OF PRICING

Background

As discussed above, there are dangers in simple comparisons between farmgate and retail prices.

Figure 47. FARMGATE, WHOLESALE AND RETAIL PIG MEAT TRENDS, CENTS/KG, 1998–2003



Source: NLRS and ABS

The carcass return which drives the wholesale and OTH prices is strongly influenced by the returns from the processed meat market which consumes 60 per cent of output and is subject to seasonal import competition. The fluctuations in wholesale prices reflect these forces. Processors have accordingly sought to extract optimum value from the domestic fresh retail segment of the market

by steadily increasing prices (subject to red meat and chicken meat competition). Retail prices above reflect retailers' addition of margins over such buying and further processing costs.

The approach taken

Assumptions used in this analysis are:

- OTH sales have been based on a baconer carcass;
- wholesale prices for carcasses and legs are based upon wholesale market data from the Sydney wholesale market; and
- retail prices for leg meat and loin chops have been based on ABS surveyed data.

Observations

The price comparison gives evidence of the lack of nexus between retail prices of products and the wholesale and farmgate prices for portions and carcasses.

Prior to the last couple of years, where growth in imports increased sharply, prices at retail generally followed the trends at wholesale and farmgate.

Higher value cuts such as loin chops have increased to a greater level than legs. This indicates a stronger demand for premium product and cuts as consumers become more conscious of the eating characteristics in meat products.

Prices and costs

The work in this study has included a measurement of the returns from whole-of-carcass based on a domestic animal.

The analysis of the returns from the carcass shown in the chart is valid as a snapshot. It indicates how each major sector is involved in the value chain. It shows the gross returns that are available to each major sector through the chain. The analysis has been based on national average spot retail prices for common cuts prevailing in July 2003, as well as estimates of the returns at wholesale for pig meat and co-products. Significant value and cost-adding occur throughout the chain to create retail value from the dressed carcass.

No assertions can be made as to which sector captures each of the margins in the sale of pork portions and cuts from such a carcass due to the fact that various potential models may exist as to who value-adds at what stage.

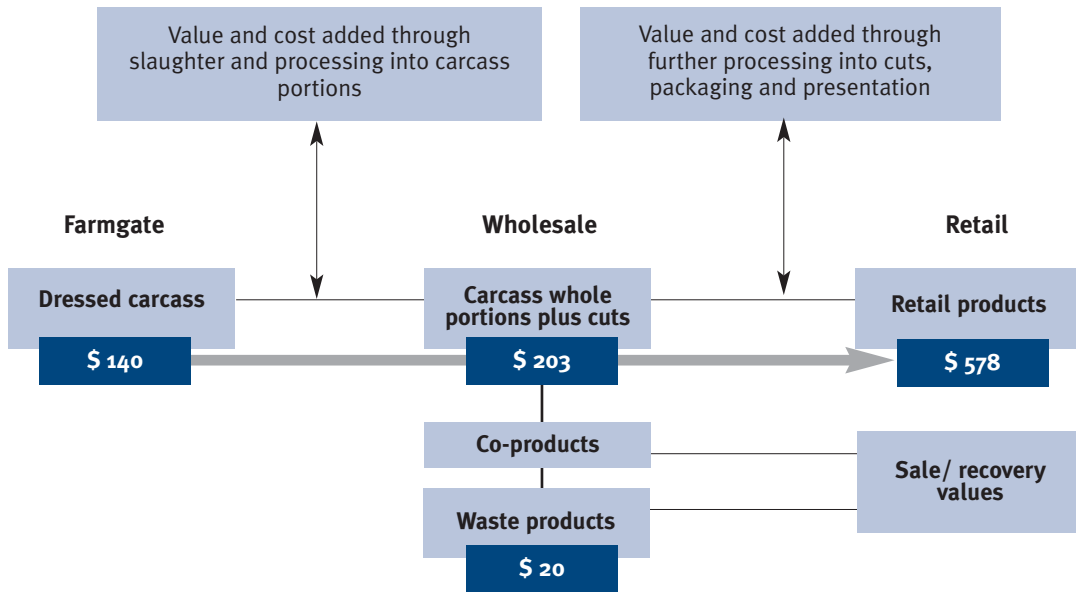
The analysis is based on a model of the typical usage of a 70kg carcass, designed for fresh pork products in a domestic market across the various meat segments.

These assumptions would not hold for baconer and backfatter animals which will have more of their carcass sold to the smallgoods sector, subject to direct import competition.

As in the case of beef, this analysis is inherently complex and subject to a large number of assumptions regarding carcass purpose, market conditions and cost structures. Yet as an approach it remains the only valid means of making comparisons between the returns at each stage in the value chain.

Our analysis of the returns at each stage of conversion from a domestic pork carcass is best performed using the same analysis as undertaken in *Beef – analysis of pricing*.

Figure 48. **VALUE AND COST-ADDING FROM FARMGATE TO RETAIL, PORK**



Co-products include blood, offal, skin and fat which are sold for a variety of end uses.