Market consolidation and the red meat processing sector

Submission to the Senate Rural and Regional Affairs and Transport References Committee

9 July 2015
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EXECUTIVE SUMMARY

Livestock production and red meat processing are significant contributors to the Australian economy. In 2013–14, the farm level gross value of red meat livestock production (beef cattle, sheep, lambs and goats) was $11.4 billion, 49 per cent of the gross value of all livestock production and 22 per cent of all farm production in Australia (ABARES 2015). The red meat processing industry is highly export focussed, with 70 per cent of beef, and 69 per cent of lamb and mutton produced in Australia in 2013–14 being exported (by volume). Over the same period, beef, lamb, mutton and goat meat exports together were valued at $8.7 billion (ABARES 2015).

A range of buyers compete for Australian livestock to supply domestic and international red meat markets, with meat processors also facing competition from large supermarkets (which may have direct supplier arrangements in place with some farmers), other producers (for lot feeding and restocking) and live exporters. Competitive pressures on the Australian meat processing sector have resulted in a reduction in the number, and consequently geographic distribution, of abattoirs over a long period of time. During this period however, some companies in the sector have expanded their operations through consolidation and growth. Scale efficiencies through expansion, investment in new technology and greater security of access to cattle through vertical integration into lot feeding have helped to address some factors that have adversely affected the international competitiveness of Australian beef processors in the past. Nevertheless, it is reasonable to expect these competitive pressures to remain and industry rationalisation to continue.

More than 150 meat processing facilities kill and process a range of species in Australia, including cattle, sheep, goats, pigs and game. These facilities may supply the domestic market only, both domestic and export markets, or only the export market. In 2014, more than 8.9 million cattle, and more than 29.3 million sheep and lambs were slaughtered at one of 77 processing establishments that are registered to export. When considering individual companies, the top five cattle processors accounted for 57 per cent of throughput in such establishments in 2014, based on the number of cattle slaughtered. Similarly, the top five sheep and lamb processors accounted for 52 per cent of throughput in 2014, based on the number of sheep and lambs slaughtered. In addition, National Livestock Identification System data, which include facilities that process for domestic and/or for export markets, show that the top five processing plants in Australia accounted for 25 to 30 per cent of cattle sent to abattoirs between 2008 and 2012, while the top 50 plants accounted for more than 90 per cent of such movements. Such statistics indicate that numerous facilities are processing Australian cattle, sheep and goats, and that processing companies beyond the top five account for a significant proportion of throughput.

Data show that there are multiple buyers and destination abattoirs in most regions. For example, cattle sourced from remote areas in northern Queensland are not only sent to abattoirs in that region but also in significant numbers to abattoirs in south-eastern Queensland, suggesting that no one buyer is dominating sales. In addition, given the high proportion of Australian red meat that is exported, world prices are a major factor influencing the prices buyers pay for domestic livestock. This is reflected in saleyard prices that are highly correlated with export prices.
1. THE RED MEAT SUPPLY CHAIN

Livestock production and red meat processing are significant contributors to the Australian economy. In 2013–14, the farm level gross value of red meat livestock production (beef cattle, sheep, lambs and goats) was $11.4 billion, 49 per cent of the gross value of all livestock production and 22 per cent of all farm production in Australia (ABARES 2015). In 2012–13, the meat processing industry employed more than 34,000 people and achieved a sales and service turnover of around $13.9 billion. This contributed an industry value-add of $2.8 billion to the Australian economy in that year (ABS 2014a). The red meat processing industry is highly export focused with beef, lamb, mutton and goat meat exports together valued at $8.7 billion in 2013–14 (ABARES 2015).

Red meat production has several stages. The production stage involves converting grass into beef, lamb, mutton or goat meat, through the grazing of native or improved pastures. Focussing on beef, the process begins on-farm where calves are produced (Figure 1). If not turned off as vealers, calves will be weaned and, if not kept for breeding, will be finished on grass to be sold through saleyards or direct to processors; or grown and conditioned to enter a feedlot for grain finishing. This conditioning, or “backgrounding”, involves grouping and acclimatisation of animals to prepare them for the intensive environment of a feedlot. This improves their socialisation and feed intake, and allows vaccination to minimise health issues in the feedlot. Following this, cattle will be transferred to abattoirs for slaughter and, after processing, to container terminals for export or to domestic markets. Not all cattle will be finished or slaughtered in Australia, with some animals being transported to terminals for live export.

Figure 1 Red meat supply chain

Source: Goesch et al. (forthcoming)

1.1 Beef cattle production

Australia has around 71,300 beef cattle producers and, as at June 2014, had an estimated herd of around 25.7 million head (ABS 2015, ABS 2014b). More Australian farms are engaged in running beef cattle than are involved in any other form of agricultural activity, with around 55 per cent of all
Australian farms carrying beef cattle. These farms manage more than 75 per cent of the total area of agricultural land in Australia (Martin et al. 2013).

Cattle production systems in northern and southern Australia vary because of differences in climatic conditions and soil quality. Northern Australia—generally above the Tropic of Capricorn—accounts for around 45 per cent of the national herd and comprises mainly *Bos indicus* cattle breeds suited to tropical climates (Map 1). The cattle in southern Australia are mainly *Bos taurus* breeds such as Angus and Hereford, which are more suited to the temperate southern climate.

**Map 1 Broadacre zones and export abattoirs**

Cattle farming operations in northern Australia are generally larger than those in southern Australia. This offsets lower productivity from poorer pasture conditions caused by a harsher climate and low soil quality. For example, in northern Australia 87 per cent of the beef cattle herd is on properties with more than 800 head of cattle, compared with only 38 per cent in southern Australia (Martin et al. 2013).

While southern Australian production systems are mainly oriented toward finishing cattle for slaughter and processing domestically, the live export trade is the primary focus of the beef cattle industry in the upper Northern Territory, and the Kimberley and Pilbara regions of northern Western Australia. In northern Australia, strong live export demand in the early 1990s resulted in cattle being diverted from domestic processing to live exports, and a number of abattoirs closed. Production in the northern live export region is based on a breeder/feeder production system, where cattle are turned-off younger for export or sold/transferred to fattening properties elsewhere in Australia. Cattle from the Northern
Territory and northern Queensland that are not destined for live export may be transferred to fattening properties where they are grown to slaughter weight on grass or to backgrounding properties and/or feedlots before eventual processing in south east Queensland. Cattle from the Kimberley and Pilbara region of Western Australia not destined for live export may be transported south to finishing or backgrounding properties for eventual processing nearer to Perth. Cattle from central Australia may be transported to South Australia for processing.

1.2 Sheep and lamb production

Australia has around 42 000 sheep producers and, as at 30 June 2014, had a national flock of around 71.6 million head (ABS 2015, ABS 2014b). The sheep industry has two primary outputs, wool and sheep meat, and market conditions for each commodity affect the size and composition of the national sheep flock. Flock numbers have fallen from around 170 million head in the early 1990s, following the collapse of the wool reserve price scheme. The Australian sheep industry underwent considerable adjustment, with many wool producers responding to falling wool prices by shifting into prime lamb production or cropping (Caboche & Thompson 2013; Dahl et al. 2013). As producers shifted into lamb and increased breeding stocks, the proportion of merino wethers (used principally for wool production) in the adult sheep flock fell.

The Australian sheep flock is mostly concentrated around the wheat–sheep and high rainfall zones in New South Wales, Victoria, Western Australia and South Australia (Map 1). Smaller sheep populations also exist in Australia’s pastoral zones and in various parts of Queensland and Tasmania.

Around two million head of sheep are exported live each year, representing around 6 per cent of total turn-off. Australia’s live sheep exports have declined considerably since the 1980s, when annual exports frequently exceeded six million head.

1.3 Goat production

Goats were introduced to Australia with the first settlers. Some of those goats escaped into the wild and evolved into what are now called Australian rangeland goats (GICA 2014). Today, around 90 per cent of the goats slaughtered for meat production in Australia are rangeland type goats, the majority of which are found within Australia’s pastoral zone. Meat & Livestock Australia (2014a) estimates the rangeland flock at between four and six million head, although an accurate measure of the rangeland goat population is difficult because of the spread of the population and its ability to rapidly reproduce under favourable seasonal conditions. The managed goat flock in June 2012 was around 516 000 head, with the majority of the flock in New South Wales (46 per cent), Queensland (39 per cent) and Victoria (10 per cent) (MLA 2015). In 2014, nearly 2.4 million goats were slaughtered at 13 export registered establishments across Australia. An extensive cross-breeding program using Boer bucks in Australia has led to good availability of Boer–rangeland crossed goats (MLA 2008). Crossing the breeds reduces the time to reach slaughter weight for rangeland goats and introduces hybrid vigour to the goat flock.

1.4 Feedlots

Lot feeding is the process of fattening cattle, sheep or lambs on grain in yards or lots for slaughter. Operators can control feeding regimes, which provides greater certainty of the quality and timing of supply than is possible with grass finishing, which is more reliant on seasonal conditions. Strong demand for premium-grade grain-fed beef (both domestically and overseas) has led to a significant expansion in feedlot operations in some regions with more moderate climatic conditions over the past 30 years. While lot feeding can be opportunistic and responsive to changes in seasonal conditions and grain prices
(see Figure 2 for annual variability in turn-off rates via feedlots), the demand for grain-fed beef has been the main driver of investment in feedlot capacity since the early to mid 1980s (SSCRRRA 1992). In particular, the liberalisation of the Japanese beef market that began in the mid 1980s contributed to a rapid expansion in this sector during the 1990s. The imposition of restrictions on beef imports from the United States into Japan following the discovery of bovine spongiform encephalopathy (BSE) in 2003 further aided this expansion.

Given these developments, growth in the feedlot sector has outpaced growth in other sectors of the broader beef cattle industry, with turn-off via feedlots increasing from around eight per cent in 1992 to 30 per cent in 2012–13 (Figure 2) (SSCRRRA 1992, ALFA 2014). There has also been significant growth in feedlot capacity over this period. The share of cattle turned off via feedlots varies between states, with the share of cattle turned-off via feedlots in Queensland and New South Wales being higher than in other states (42 per cent for Queensland and 34 per cent for New South Wales in 2012–13).

Figure 2 Share of Australian cattle slaughter turned-off via feedlots (2001–02 to 2012–13)

There are currently around 450 accredited beef cattle feedlots across Australia with most located in south-eastern Queensland, the northern tablelands in northern New South Wales and the Riverina in southern New South Wales (ALFA 2013) (see Map 2). Some of the large red meat processors have been vertically integrating feedlots into their business structure to gain greater control over cattle supplies, product quality and cost pressures (Lin 2015).

Lamb feedlots are a small but growing specialised component of the sheep meat industry and can be attributed to the export demand for a consistent supply of lambs that meet market specifications (DEPI 2015). Lot feeding becomes more important for lambs when quality pasture feed is unavailable because of adverse seasonal conditions.

Source: ABS 2014c and ALFA 2014
There are a number of options available to red meat producers for the sale of their livestock. The ability of producers to maximise the return on their livestock is influenced by the extent to which they can meet market specifications, and the sale method and process used (MLA 2014b). Selling systems vary in their efficiency and suitability for individual enterprises and circumstances. As the operating environment changes over time, producers can benefit from adjusting their business activities accordingly.

Cattle, sheep and lambs are sold via:

- saleyard auctions
- direct (paddock) sale
- ‘over the hook’ sales
- online sales e.g. AuctionsPlus
- forward contracts.

Goat sales tend to occur by saleyard auction and direct (paddock) sale.

**1.5 Sale methods**

Saleyards are the first point of aggregation in many beef and sheep supply chains, providing a venue for the auction of cattle and sheep. They tend to be strategically located so as to facilitate the sale and distribution of cattle and sheep to other producers or to abattoirs (Map 3). In the case of beef cattle, cattle are sold to other cattle farmers for fattening or backgrounding for entry into feedlots, to feedlots for grain finishing or to abattoirs for slaughter.
To participate in a saleyard auction, producers transport their livestock to the saleyard for sale to the highest bidder. Prices received by producers reflect supply and demand in the market on any given day. Many larger saleyards have scales and sell on a liveweight basis. This usually involves a curfew where livestock have to be at the saleyard by a specific time before the sale. Animals that meet the curfew time are sold on a liveweight basis of cents per kilogram. Animals that do not make the curfew time are sold on a dollars per head basis.

1.5.1.1 Pre-and post-sale weighing at saleyards

Where cattle are sold on a liveweight basis at a saleyard auction, there is usually a curfew (time without feed and water) before the liveweight of the animal is recorded. A wet curfew removes access to feed but allows access to water. A dry curfew removes access to both feed and water. Saleyards can specify the type and length of a curfew for a class of cattle.

In New South Wales, Queensland and South Australia, the majority of saleyards use post-sale weighing, whereas in Victoria there is a mix of pre and post-sale weighing. Under a post-sale weighing system, the curfew is typically 12 hours. Bidding at auction occurs on a cents per kilogram basis and the liveweight of the animal(s) is then measured and recorded. Where pre-sale weighing is used, there appears to be more variability in the curfew time imposed by saleyards. Some impose a 12 hour curfew but a more typical curfew appears to be three to six hours, following which the cattle are weighed, the liveweight is displayed on the pen or lot, and the auction (on a cents per kilogram basis) is held.

The rationale for most post-weigh saleyards imposing a 12 hour curfew is that cattle lose liveweight most rapidly in the first 12–16 hours without feed, after which the rate of loss decreases. This liveweight loss arises from the loss of gut-fill when faeces and urine are excreted. Table 1 illustrates the expected liveweight loss and increased dressing percentage for cattle depastured from average quality green
temperate pastures, and locked off feed and water. Dressing percentage is the carcass weight after trimming of fat as a proportion of liveweight.

Table 1 Expected liveweight loss and increase in dressing percentage for cattle, according to curfew length

<table>
<thead>
<tr>
<th>Time off feed &amp; water (hours)</th>
<th>Liveweight loss (%)</th>
<th>Increased dressing percentage (%)</th>
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<tbody>
<tr>
<td>1</td>
<td>1.5</td>
<td>0.75</td>
</tr>
<tr>
<td>2</td>
<td>2.5</td>
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<tr>
<td>4</td>
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<td>2</td>
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<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>16</td>
<td>8</td>
<td>4+</td>
</tr>
</tbody>
</table>

Source: NSW DPI (2007)

Under a weighing system with a shorter curfew, there can be greater uncertainty in estimating the dressing percentage of cattle because significant gut-fill may still remain—making it more difficult to accurately estimate the carcass weight, based on liveweight. In this case, buyers may offer a lower bid (when made on a liveweight basis) because of this uncertainty around an animal’s carcass weight.

Livestock weighed after a longer curfew (as for many weighed post-sale) are likely to have voided much of their gut-fill, which improves the ability of buyers to estimate dressing percentage. Processors reportedly prefer the longer curfew associated with most post-sale weighing systems for this reason.

Each system provides differing benefits and costs to the parties involved, and the decision to weigh livestock before or after sale is a commercial matter. It is the responsibility of saleyard managers to determine which weighing system, and length of curfew, will be used at their saleyard and to communicate this clearly to involved parties in advance of the sale.

1.5.2 Direct (paddock) sales

During a paddock sale, livestock are inspected on the vendor’s property by the buyer or agent and are sold directly from the paddock. The price is generally negotiated on a dollars per head or cents per kilogram liveweight basis. Where the sale is by weight, the animals will either be weighed on the property or on scales at a saleyard.

1.5.3 ‘Over the hook’ sales

To make an ‘over the hook’ sale, livestock are delivered from farm directly to the abattoir and can be sold with or without an agent. Change of ownership occurs at the abattoir scales, where the carcass is weighed, following an agreed trim of the carcass. Although the terms of sale vary between abattoirs, the cost of transport to the abattoir and the transaction levy are generally paid by the seller.

The actual carcass weight measured at the abattoir can vary depending on the way the carcass is trimmed, and whether the carcass is weighed when hot or cold. Initially, the carcass is weighed at the end of the chain while it is still ‘hot’. If the abattoir trades on cold weight, around 3 per cent is deducted from the hot carcass weight to calculate the cold weight. The actual shrinkage varies from 2–4 per cent according to the quantity of water lost during cooling in the abattoir.

1.5.4 Online sales

AuctionsPlus began in 1987 as a means of selling livestock by description. Livestock are assessed prior to sale by an accredited assessor who enters a description of the livestock, including photos, into an
electronic catalogue which is publicly available. Potential buyers must register with AuctionsPlus to participate in the auction. The results of the auction are displayed on the AuctionsPlus web site immediately after the sale is completed. AuctionsPlus provides some of the benefits of saleyard auctions—access to a wide range of buyers—while allowing direct consignment to the buyer. Livestock are sold on-farm on the basis of dollars per head, cents per kilogram liveweight, cents per kilogram carcass weight or according to a pricing matrix. Transport costs are paid by the purchaser.

1.5.5 Forward contracts

A standard forward contract is an agreement between a producer and a buyer (processor, feedlot or supermarket chain) for the producer to supply a given product at a given time for a given price. This provides certainty to the producer of the price to be received, and to the buyer of the product quality, quantity and timing. For example, a contract for cattle could include details of:

- the number, age, sex, breed type, weight range and fat range of the cattle
- the fortnight during which they will be delivered
- pricing arrangements.

1.5.6 Comparison of sale methods

1.5.6.1 Beef cattle

The most common sale methods chosen by Australian producers are saleyard auctions and sales in paddock or ‘over the hook’. While around half of all beef cattle sold in Australia were sold via saleyard auctions in 2012–13, ABARES Australian Agricultural and Grazing Industries Survey (AAGIS) data indicate significant differences between the preferred method of sale for northern and southern producers.

In southern Australia, the saleyard auction system remained the main method of sale in 2012–13, representing 66 per cent of total beef cattle sales (Figure 3). Saleyard auction sales are most favoured by producers who have smaller herds and sell in small lot sizes. These producers are generally located closer to settled areas so distances to saleyards and freight costs are relatively small. Hassall & Associates (2007) estimate that around six million cattle are sold through the national saleyard network in an average year, with most being sold in New South Wales and Victorian saleyards.

The Australian Livestock Markets Association claims its 128 saleyard members account for around 70 per cent of Australia’s saleyard throughput (ALMA 2015). Fifty per cent of members are located in New South Wales, 22 per cent in Victoria, 17 per cent in Queensland, 4 per cent in Western Australia, 4 per cent in South Australia, two sites in Tasmania and one site in the Northern Territory.

Producers with larger herd sizes are more likely to sell over the hooks or in the paddock, as they can put together a truckload of cattle of the right specifications. Direct methods of sale, such as ‘over the hooks’, can reduce carcass damage and loss of meat quality caused by additional handling in saleyard and auction sales. In 2012–13, 31 per cent of cattle were sold ‘over the hooks’ and 27 per cent in the paddock in northern Australia. This compares with 41 per cent of cattle sold at saleyard auction (Figure 3). While the proportions of cattle sold via saleyard auctions and direct sales change over time, they were roughly similar in 2012–13 and 1994–95.
Figure 3 Beef cattle selling methods, northern and southern Australia, 1994–95 to 2012–13

Note: Live export cattle sales are mostly paddock sales over the scales. Because of changes in data collected, consistent results cannot be provided for 2002–03 to 2004–05. 2012-13 is a preliminary estimate.
Source: ABARES AAGIS database

1.5.6.2 Sheep and lambs

Auctions and direct sales are also used to sell sheep and lambs. A greater focus over the past decade on production of lambs specifically bred for slaughter, as well as better finishing of lambs before sale, has resulted in some producers changing their method of sale. In the early 1990s, almost all lambs sold by slaughter lamb producing farms were sold at saleyard auction (around 70 per cent) or in the paddock. Between the early 1990s and 2006–07 the proportion sold ‘over the hooks’ increased from less than 5 per cent to more than 30 per cent (Figure 4).

More recently, the proportion of lambs sold ‘over the hooks’ has dropped while the proportion sold at auction increased. This may be because of stronger auction markets during favourable seasons between 2007–08 and 2011–12, supported by restocker and finisher demand and reduced lamb availability.

There have also been changes in sale methods for adult sheep, with the proportion of sheep sold at auction trending upward in recent years (reached 69 per cent in 2012–13). This follows a decline in the use of auctions in the late 1990s. Paddock sales were used extensively over this period, although they have declined in recent years.
Figure 4 Lamb and sheep selling methods, 1994–95 to 2012–13

Note: Because of changes in data collected, consistent results cannot be provided for 2002–03 to 2004–05. 2012-13 is a preliminary estimate.
Source: ABARES AAGIS database

1.6 Livestock agents and buyers

The Australian Livestock and Property Agents Association Limited (ALPA) is the national peak industry body representing the interests of livestock and property agents throughout Australia. ALPA claims to represent around 1,200 agent outlets, consisting of 400 private agent businesses and 800 pastoral house branches (for example, Elders and Landmark) across all states. Most Association members are involved in both livestock and rural real estate sales.

Livestock agents typically sell livestock on behalf of the producer/vendor on a commission basis. The livestock agent’s charter is to market, present and sell livestock on behalf of their vendor clients. Livestock agents are licensed under state government regulations with requirements varying between jurisdictions.

In its submission of June 2014 to the Review of the Personal Property Securities Act 2009, ALPA states that its members sell approximately 10 million cattle, and 55 million sheep and lambs annually for around $11 billion. These figures do not include sales of pigs, goats, horses and other livestock in which agents were involved.

ALPA publishes and provides to its members a recommended list of terms and conditions for livestock sales. The ALPA ‘Livestock Auction Terms and Conditions of Sale’ includes chapters on ‘Standard Terms of Sale’; ‘Vendor Warranty For Correct Presentation and Declaration’; ‘Owners risk for condition of cattle’; and Notices Required by State Legislation’. It also has a recommended ‘Livestock Private Sales Contract’ form.

There appears to be no public information describing the operations of livestock buyers. The Department understands that buyers are usually engaged directly by a meat processor or retailer on a salaried basis or engaged as a commissioned buyer. For example, on its web site JBS Australia notes that
it ‘maintains its livestock supply requirements through a network of specialist cattle and sheep buyers located throughout Queensland, New South Wales, Victoria, South Australia, King Island and Tasmania.’

1.7 Meat processors

Meat processing involves transforming live animals into a range of edible and non-edible products. Processing usually involves stunning, and may include bleeding, removing the hide and internal organs, trimming excess fat, washing the carcass, chilling, boning and freezing or holding in cold storage. Boning involves cutting a carcass into smaller pieces called primals (for example, whole rump). In addition to primal cuts, processing also leads to the production of by-products (such as edible offal, tallow and blood/bone meal) which have a commercial value. Meat is chilled or frozen depending on its destination market, be it domestic or export. It is then transported in refrigerated trucks to domestic outlets or for further processing, or in refrigerated containers to ports. Although meat processing establishments can include boning rooms, cold stores and facilities for further processing (for example), this submission focuses on abattoirs.

The Australian Meat Processor Corporation (AMPC) currently has 124 members that operate 150 meat processing facilities (AMPC 2015). These facilities process a range of species, including cattle, sheep, goats, pigs and game, and account for more than 97 per cent of Australia’s red meat processing capacity. These facilities may supply the domestic market only, both domestic and export markets, or only the export market. Of all red meat processing facilities in Australia, 77 abattoirs were registered by the Department of Agriculture (as at April 2015) to slaughter cattle, sheep and goats for the export market. Among these, 37 abattoirs process cattle only; 20 process sheep and/or goats only; and 20 process a mixture of cattle, sheep and/or goats (Map 1).

Around 70 per cent of beef processing in Queensland occurs in the south east, including some cattle from the Northern Territory and New South Wales being slaughtered in Queensland abattoirs (Sd+D 2008). Most beef processing facilities in New South Wales are located on the eastern side of the grain belt or near the coast, closer to domestic populations and export infrastructure. The bulk of processing capacity in New South Wales is located in the northern regions, close to the highly productive New England region, with road access to Brisbane and the major New South Wales population centres via the New England and Pacific highways. The AACo owned Livingstone Beef abattoir, located near Darwin in the Northern Territory, opened in late 2014. This facility will enable cattle to be processed in northern Australia, reducing transport and freight costs, as well as carcass weight loss for northern producers who currently transport live cattle long distances to southern processing plants (AACo 2015).

The major beef abattoirs in Queensland include those owned by JBS Australia, Teys Australia and NH Foods Australia (known as Nippon Meat Packers until 2014) (Sd+D 2008). These three companies own multiple establishments and have a combined slaughtering capacity of nearly 12 000 head of cattle a day (Figure 5). In New South Wales, the largest beef processor is located in Casino and is owned by the Northern Cooperative Meat Company, with a total throughput of 520 000 head of cattle a year (Figure 6). Teys Australia owns the largest abattoir in southern New South Wales (located in Wagga Wagga), which has a capacity of more than 300 000 head of cattle a year. According to Sd+D (2008), the focus on the domestic market in New South Wales tends to encourage small scale processing facilities, compared with Queensland, which is highly export oriented.
In 2014, more than 8.9 million cattle (calves, steers/heifers, cows/bulls) were slaughtered at 51 export registered establishments across Australia (figures from the Department of Agriculture’s Export Production and Condemnation Statistics (EPACS) database). Queensland accounted for almost half of all throughput, with Victoria and New South Wales together accounting for nearly 45 per cent (Table 2).

The top five cattle processing companies accounted for 57 per cent of throughput in 2014 (based on slaughter figures). These five companies slaughtered cattle at 18 different abattoirs across the country. Of these abattoirs, 10 were located in Queensland, four in New South Wales, two in Victoria and one each was located in both South Australia and Tasmania.

In 2014, more than 29.3 million sheep and lambs were slaughtered at 34 export registered establishments across Australia (slaughter figures from the EPACS database). Victoria accounted for more than 40 per cent of all slaughters, with New South Wales, South Australia and Western Australia accounting for approximately 23 per cent, 17 per cent and 13 per cent respectively (Table 3).
Table 2 Share of throughput by state for beef, 2014 (based on slaughter)

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<th>State</th>
<th>Throughput share (%)</th>
<th>Number of abattoirs</th>
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</table>

Source: Export Production and Condemnation Statistics (EPACS) database, April 2015

The top five sheep and lamb processing companies accounted for 52 per cent of throughput in 2014 (based on slaughter). These five companies slaughtered sheep and lambs at 11 different abattoirs across the country. Of these, four were located in Victoria, three in South Australia, two in New South Wales and one in both Queensland and Tasmania.

Table 3 Share of throughput by state for sheepmeat, 2014 (based on slaughter)

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<thead>
<tr>
<th>State</th>
<th>Throughput share (%)</th>
<th>Number of abattoirs</th>
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<td>TAS</td>
<td>2.20</td>
<td>2</td>
</tr>
<tr>
<td>NT</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ACT</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Export Production and Condemnation Statistics (EPACS) database, April 2015

IBISWorld releases regular market research reports on the meat processing industry. Figures from their January 2015 report (Table 4) indicate that the major meat processing companies in Australia are JBS Australia and Teys Australia (see Box 1 and Box 2, respectively).

Table 4 Major processing companies by market share, May 2015

<table>
<thead>
<tr>
<th>Name</th>
<th>Market share (% of revenue)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JBS Australia Pty Ltd</td>
<td>16.5</td>
</tr>
<tr>
<td>Teys Australia – A Cargill Joint Venture</td>
<td>12.1</td>
</tr>
<tr>
<td>NH Foods Australia (formerly Nippon Meat Packers)</td>
<td>4.0</td>
</tr>
<tr>
<td>Midfield Meat International Pty Ltd</td>
<td>3.0</td>
</tr>
<tr>
<td>Fletcher International Exports Pty Ltd</td>
<td>2.5</td>
</tr>
<tr>
<td>Thomas Foods International Consolidated Pty Ltd</td>
<td>2.5</td>
</tr>
</tbody>
</table>


Note: IBISWorld categorises the meat processing industry as including those that mainly slaughter livestock (except poultry); bone, freeze, preserve or pack red meat; pack meat into tins (except poultry, bacon, ham or corned meat); manufacture meals from abattoir by-products (except from products of poultry slaughter); and render lard or tallow. The industry excludes beef feedlot operations.
Retailers

Following processing, beef and sheepmeat are distributed to domestic markets or to ports for export via refrigerated trucks or containers. The beef and sheepmeat industries are highly export focussed, with 70 per cent of beef, and 69 per cent of lamb and mutton produced in Australia in 2013–14 being exported (by volume). Domestically, beef consumption is dominated by meat purchased at retail outlets. According to ACCC estimates, just over two-thirds of domestically produced beef consumed in Australia is delivered to retail outlets, including supermarkets and butchers (ACCC 2007). A significant volume (27 per cent) is also delivered to the food service industry (including restaurants), while a small volume (5 per cent) is sent for further processing.

The ACCC (2007) also found that the retail sector accounts for a significant proportion of the retail price of beef, with retail services— including trimming, packaging, promotion, advertising and shopkeeping— making up roughly 30 per cent of the retail price of beef. This proportion may be higher for some outlets, for instance independent butchers preparing boutique products.

According to the monthly Nielsen Homescan retail sales tracking information released recently, the domestic retail beef market is dominated by Woolworths and Coles with a combined market share of approximately 57 per cent (Condon 2015). Woolworths was the largest domestic beef retailer with 32.5 per cent while Coles was second-largest with 24.8 per cent. The IGA supermarket group accounted for 8.8 per cent and Aldi accounted for 8.2 per cent of retail market share. The ‘other’ retail category reported in the Nielsen survey consisted mostly of independent supermarkets, but also included Costco. This segment accounted for 4.1 per cent in the last quarter of 2014. For domestic lamb sales, the retail sector retains the dominant share and captures just under 90 per cent of total lamb sales, while the food service sector accounts for the remaining share of domestic lamb sales (ABARES 2012).

Despite the considerable size of the major supermarkets, their influence on activities further up the supply chain is limited by the export opportunities available to red meat producers. The major supermarkets operate vertically integrated supply and service agreements with producers, feedlots and processors (ACCC 2007). However, the ACCC (2007) found that while Woolworths and Coles had a
significant presence in the domestic market, the larger export market limited their capacity to lower prices paid to producers, feedlots and processors.

For the last quarter of 2014, independent butchers accounted for 21.7 per cent of national retail beef sales (Condon 2015). According to the Nielsen survey, independent butchers’ total share of beef retail sales increased in each of the four months to December 2014, taking share away from Woolworths and, to a lesser extent, Coles. This follows an 18 month period of independent butchers losing share to the two major supermarkets primarily through the two major supermarkets’ price cutting campaigns involving popular beef and lamb cuts, but also because of the growing number of major supermarket outlets being built in Australia.
2. THE REGULATORY ENVIRONMENT

Regulation, at all levels of government, is a key component of the business environment in which all parties along the supply chain operate. Governments use regulation to shape incentives that influence how enterprises and people behave and interact to improve economic, social or environmental outcomes (Productivity Commission 2009). Table 5 describes key stages at which Australian Government and state or territory regulation may affect participants in the agriculture supply chain.

The saleyards in which agents and buyers often operate are required to comply with a variety of regulations, including those that relate to biosecurity, animal traceability, environmental protection and animal welfare. In recent years, there has been a rationalisation of saleyards and private investment in saleyards with larger capacity (Goesch et al. forthcoming). For example, Regional Infrastructure Pty Ltd recently built the Central Tableland Livestock Exchange to replace outdated saleyards at Orange, Blayney and Bathurst (RIPL 2014). The new saleyard cost around $18 million and can house around 4000 head of cattle undercover, with sales expected to grow to 160,000 head per year.

A variety of regulations affect red meat processors and other businesses in the manufacturing sector (Table 6). All red meat processors must comply with relevant state and territory government legislation (Table 7) and those processors wishing to export their product must comply with additional Australian Government regulations and importing country requirements. Such regulation is fundamental to securing market access for Australian red meat exports. Government regulation allows Australian exporters to demonstrate the safety and integrity of Australian red meat products to importing countries.

The Australia New Zealand Food Standards Code is applied through state and territory regulation to red meat processors across Australia and includes food safety requirements for programs, practices, premises and equipment. All red meat processing establishments must also meet the Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS4696:2007), which is enforced by state and territory governments, and harmonises standards for the production and transport within Australia of all meat and meat products (whether for domestic use or export). The standardised treatment of health and hygiene issues in Australia is consistent with the principles and objectives of world standards, as defined by the Codex Alimentarius.

In addition to domestic regulations, the Australian Government Department of Agriculture uses regulation to verify that establishments processing red meat for export meet importing country requirements. For example, the Australian Meat and Live-stock Industry Act 1997 provides the department with the power to grant export licences and administer export quota arrangements. The Export Control Act 1982, also administered by the department, allows goods to be exported subject to conditions specified in the legislation. This Act provides the department with the authority to inspect goods, premises and records; sample and assess export consignments; require conformity with importing country requirements; register premises for export; and issue export certification.
Table 5 Regulation in the agriculture value chain

<table>
<thead>
<tr>
<th>Key Australian Government involvement/regulation</th>
<th>Key stages of agricultural cycle</th>
<th>Key state/territory government involvement/regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Aboriginal land rights/native title</td>
<td><strong>Acquisition of arable land</strong></td>
<td>- land use and planning regulation</td>
</tr>
<tr>
<td>- environmental protection and biodiversity</td>
<td></td>
<td>- Aboriginal land rights/native title</td>
</tr>
<tr>
<td>conservation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Aboriginal and Torres Strait Islander</td>
<td><strong>Preparation of land</strong></td>
<td>- land use and planning regulation</td>
</tr>
<tr>
<td>- cultural heritage</td>
<td></td>
<td>- native vegetation legislation</td>
</tr>
<tr>
<td>- natural heritage, world heritage</td>
<td></td>
<td>- water regulation</td>
</tr>
<tr>
<td>- international treaties and conventions</td>
<td></td>
<td>- weed and vermin control regulation</td>
</tr>
<tr>
<td>- covering natural and cultural heritage</td>
<td></td>
<td>- laws relating to Aboriginal and Torres Strait Islander cultural heritage, archaeological and Aboriginal relics, sacred sites</td>
</tr>
<tr>
<td>- licensing and approval of chemicals, fertilisers and pesticides</td>
<td></td>
<td>- use of chemicals, fertilisers and pesticides</td>
</tr>
<tr>
<td>- environmental protection and biodiversity</td>
<td></td>
<td>- natural heritage</td>
</tr>
<tr>
<td>conservation</td>
<td></td>
<td>- environmental protection/assessment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- building regulations</td>
</tr>
<tr>
<td>- chemical and pesticide supply and registration</td>
<td><strong>Farming</strong></td>
<td>- animal welfare regulation</td>
</tr>
<tr>
<td>- access to drought support</td>
<td>- <strong>cropping</strong></td>
<td>- transport regulation affecting use of farm machinery</td>
</tr>
<tr>
<td>- fuel tax regulation</td>
<td>- <strong>animal husbandry</strong></td>
<td>- vehicle and machinery licensing</td>
</tr>
<tr>
<td>- national pollutant inventory</td>
<td></td>
<td>- livestock regulation and identification</td>
</tr>
<tr>
<td>- biosecurity regulation</td>
<td></td>
<td>- access to drought support</td>
</tr>
<tr>
<td>- immigration regulation</td>
<td></td>
<td>- WHS regulation</td>
</tr>
<tr>
<td>- water access and use regulation</td>
<td></td>
<td>- fire control regulation</td>
</tr>
<tr>
<td>- research and development funding</td>
<td></td>
<td>- weed and vermin control regulation</td>
</tr>
<tr>
<td>and support</td>
<td></td>
<td>- livestock disease control regulation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- livestock movement regulation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- water access and use regulation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- chemical and pesticide use</td>
</tr>
<tr>
<td>- export certificates</td>
<td><strong>Processing</strong></td>
<td>- building regulations</td>
</tr>
<tr>
<td>- immigration regulation</td>
<td></td>
<td>- machinery operations</td>
</tr>
<tr>
<td>- environmental regulation</td>
<td></td>
<td>- certification and labelling</td>
</tr>
<tr>
<td>- industrial relations regulation</td>
<td></td>
<td>- industrial relations regulation</td>
</tr>
<tr>
<td>- national pollutant inventory</td>
<td></td>
<td>- WHS regulation</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- national land transport regulatory frameworks</td>
<td><strong>Transport and logistics</strong></td>
<td>- transport regulations</td>
</tr>
<tr>
<td>- shipping and maritime safety laws</td>
<td></td>
<td>- government owned public/private transport infrastructure</td>
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<tr>
<td>- international maritime codes and conventions</td>
<td></td>
<td>- access regimes</td>
</tr>
<tr>
<td>- competition laws/access regimes</td>
<td></td>
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</tr>
<tr>
<td>- animal welfare</td>
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<tr>
<td>- marketing legislation (mandatory codes and acquisition)</td>
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<tr>
<td>- food safety regulation</td>
<td><strong>Marketing</strong></td>
<td>- interstate certification arrangements</td>
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<td>- biosecurity regulation</td>
<td>- boards</td>
<td>- taxation</td>
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<td>- export controls</td>
<td>- customers</td>
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<td>- export incentives</td>
<td></td>
<td></td>
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<tr>
<td>- WTO obligations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- market access and trade agreements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- taxation</td>
<td></td>
<td></td>
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</tbody>
</table>

*Source: Updated from Productivity Commission (2007)*
Table 6 Regulation in the manufacturing value chain

<table>
<thead>
<tr>
<th>Key Australian Government involvement/regulation</th>
<th>Key stages of cycle</th>
<th>Key state/territory government involvement/regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>environmental protection and biodiversity conservation financial sector (access to finance)</td>
<td>Acquisition of site and manufacturing plant</td>
<td>land use and planning building code environmental protection</td>
</tr>
<tr>
<td>industrial relations national pollutant inventory immigration water access superannuation industrial and agricultural and veterinary chemicals</td>
<td>Operation of plant</td>
<td>Occupational Health &amp; Safety (OHS) food safety machinery operations local government rates and charges</td>
</tr>
<tr>
<td>export certificates national land transport regulatory frameworks shipping and maritime safety laws international maritime codes and conventions trade practices product regulation (labelling etc)</td>
<td>Distribution of output</td>
<td>transport food safety OHS land use and planning building code local government rates and charges hazardous goods handling and transport product safety consumer protection</td>
</tr>
<tr>
<td>corporation law redundancy provisions</td>
<td>Cessation of operations</td>
<td>contaminated sites land use and planning</td>
</tr>
</tbody>
</table>


Subordinate legislation to the Export Control Act 1982 specifies how administrative arrangements are applied to commodity groups. For the red meat processing sector, this includes:

- the Export Control (Prescribed Goods—General) Orders 2005, which allows establishments to be registered; export permits and government certificates to be issued; official marks and marking devices to be declared; and information and documents to be transmitted.
- the Export Control (Fees) Order 2001, which sets fees and charges for the registration of premises and for departmental inspection and audit services.
- the Export Control (Meat and Meat Product) Orders 2005, which ensures that meat and meat products intended for export are wholesome, have an accurate trade description, meet importing country requirements, and are traceable and can be recalled if required.

Under the Export Control (Meat and Meat Product) Orders 2005, establishments that process red meat for export must be registered and have approved arrangements in place. The department provides routine inspection and veterinary supervision, and conducts regular audits, in accordance with AS4696:2007 and relevant importing country requirements. Export registered establishments must comply with both domestic requirements (state and territory government regulation) and export requirements (Australian Government regulation). The department has established agreements with relevant state regulatory authorities to ensure that the objectives of Australian Government inspection are met, while minimising duplication of regulatory involvement at establishments.
## Table 7 Current state and territory regulatory arrangements for red meat processors

<table>
<thead>
<tr>
<th>State / Territory</th>
<th>Public Health Acts</th>
<th>Industry Acts</th>
<th>Animal Health Acts</th>
<th>Other</th>
</tr>
</thead>
</table>
| New South Wales   | • Food Act 2003  
                    | • Food Regulation 2010 | • Meat Industry Act 1989 | • Stock Disease Act 1923  
                    |                     |                       | • Livestock Disease Control Act 1991  
                    |                     |                       | • Livestock Act 1997  
                    |                     |                       | • Livestock Regulations 2013  
                    |                     |                       | • Agricultural and Veterinary Chemicals Act 1994  
| Victoria          | • Food (Amendment) Act 1997  
                    | • Meat Industry Act 1993 | • Livestock Disease Control Act 1994  
                    | • Agricultural and Veterinary Chemicals Act 1994  
| Queensland        | • Food Act 2006  
                    | • Food Regulation 2006  
                    | • Food Production (Safety) Act 2000  
                    | • Food Production (Safety) Regulation 2002  
                    | • Meat Industry Act 1993 | • Stock Act 1915  
                    | • Agricultural and Veterinary Chemicals Act 1994  
| South Australia   | • Food Act 2001  
                    | • Food regulations 2002  
                    | • Public and Environment Health Act 1987  
                    | • Agricultural and Veterinary Chemicals Act 1994  
                    | • Primary Produce (Food Safety Schemes) (Meat Industry) Regulations 2006 | • Livestock Act 1997  
                    | • Livestock Regulations 2013  
                    | • Agricultural and Veterinary Chemicals Act 1994  
| Western Australia | • Food Act 2008  
                    | • Food Regulations 2009 | • Biosecurity and Agriculture Management Act 2007  
                    | • Agricultural and Veterinary Chemicals Act 1995  
                    | • Meat Authority Industry Act 1976 | • Animal Health Act 1995  
                    | • Agricultural and Veterinary Chemicals Act 1994  
| Tasmania          | • Food Act 2003  
                    | • Primary Produce Safety Act 2011  
                    | • Primary Produce Safety (Meat and Poultry) Regulations 2014  
                    | • Agricultural and Veterinary Chemicals Act 1994  
| Northern Territory| • Food Act 1986  
                    | • Meat Industry Act 1996 | • Livestock Act 2008  
                    | • Agricultural and Veterinary Chemicals Act 1994  
| Australian Capital Territory | • Food Act 1992 | • Stock Act 1991  
                    | • Animal Disease Act 1993 | • Agricultural and Veterinary Chemicals Act 1994  

Australia is one of only a few countries with specific legislation to regulate the export of goods, including meat and meat products. A 1999 review of the *Export Control Act 1982*, conducted to ensure compliance with National Competition Policy, found that it fulfils its purpose, provides recognisable economic benefit, presides over expanding agricultural sector exports, effectively guards against the threat of market failure and provides a framework for introducing progressive practices in the export sector (Frawley et al. 2000). As a result of this review, a series of legislative changes were introduced to address identified issues, including, for example, dual systems (export and domestic) for managing food safety and the development of information and transaction management through electronic databases and documentation.
3. CONSOLIDATION IN THE RED MEAT PROCESSING INDUSTRY AND IMPACT ON COMPETITION

In a perfectly competitive market there are multiple buyers and sellers where no one individual or entity can influence the market price. As is the case with most agricultural activities in Australia, there are many red meat producers. One of the issues being investigated in this inquiry is whether red meat processors have a degree of market power that allows them to reduce the price they would otherwise have to pay for livestock. This type of market power can generally only occur if there are few buyers in a market, or if buyers collude so as to reduce competition for livestock.

3.1 Competition in the red meat processing market

In Australia, a range of buyers compete for livestock to supply domestic and international red meat markets. These buyers can also face competition for livestock from other producers (for example, as feeder cattle into a feedlot or to restock after a dry period).

There is a lack of current studies on competition in the red meat processing sector. The ACCC released a report in 2007 that explored the potential for large retailers to exert undue influence on livestock and retail meat prices. The ACCC found that Australian livestock and retail meat markets were reasonably competitive, with the major supermarkets facing competition from other buyers (for both domestic and export markets) when purchasing livestock, and on the retail side, with Coles and Woolworths facing significant competition from each other, independent supermarkets and around 3000 independent butchers (ACCC 2007).

Processors represent another major buying group for livestock. They purchase much of the livestock used to supply red meat to domestic butchers and other retailers, and play a major role in exporting to international markets. For example, JBS Australia is Australia’s largest meat processing company, exporting around 85 per cent of its output each year (Lin 2015). In terms of market share (measured by revenue), the top three processing companies in Australia collectively earned around a third of total industry revenue in 2013–14 (see Table 4).

In this submission, National Livestock Identification System (NLIS) data for cattle have been used to gain additional insights into the degree of market concentration within the processing industry. While there are confidentiality issues in identifying specific abattoirs and companies, NLIS data on cattle movements to individual abattoirs indicate that the top five processing plants in Australia accounted for around 25 to 30 per cent of cattle sent to abattoirs between 2008 and 2012, while the top 50 plants accounted for more than 90 per cent of these movements (Figure 7). It should be noted that coverage of the NLIS data over this period is incomplete, although it has improved since 2013. Prior to 2013, movements to abattoirs from the property of birth did not need to be recorded in the Northern Territory and Western Australia. There are also some locations receiving very small quantities of animals that are identified as abattoirs in the NLIS database.
The price received by farmers is affected by the distance cattle travel to abattoirs because of the associated transport cost. Map 4 links each abattoir and the location from which cattle were directly transported to that particular abattoir, as recorded in the NLIS data for 2012. These locations could be feedlots, saleyards or farms and are aggregated by Local Government Area (LGA). The NLIS data indicate that in most instances sources from a given region sent cattle to several abattoirs. This is even the case for cattle sourced from remote areas in northern Queensland. While Map 4 shows that some of these cattle are sent to abattoirs in northern Queensland, it also shows that a significant number of cattle are sent to abattoirs in south-eastern Queensland.
Map 4 Direct cattle movements to abattoirs by Local Government Area of origin, 2012

2012 NLIS Cattle movements
to abattoirs by LGA of origin

Animals
- 100 - 1,000
- 1,001 - 5,000
- 5,001 - 10,000
- 10,001 - 20,000
- 20,001 - 100,000

Note: Only PICs identified as abattoirs in the NLIS database or PIC code and receiving at least 1,000 head during 2012 are included. Aggregate flows of less than 100 animals from an LGA to these abattoirs are also not represented. PIC locations were approximated using regional identifers, postcodes and auxiliary facility type location information.
3.2 Returns to farm gate

The previous section outlined that there are numerous buyers for cattle in most regions and no one buyer dominates sales. It is also useful to examine the degree to which meat processors could exert sufficient market power to reduce prices at the farm gate. By comparing saleyard prices with beef export returns and retail prices, and applying appropriate conversion factors, we can determine the share captured by farmers and any changes in this share over time.

3.2.1 Farmers’ share of export returns

The potential for red meat exporters to influence livestock prices is constrained because the prices received for these meats are largely determined in international markets. In 2014, 71 per cent of Australian beef, lamb and mutton (by volume) was exported. World prices are a major factor influencing the prices these buyers pay for domestic livestock. This is largely reflected in Figure 8, which shows that saleyard prices for cattle are highly correlated with beef export prices. Figure 8 also highlights that drought-induced supply increases or other supply shocks—such as occurred in 1973 when Great Britain joined the Common Market—result in falls in both saleyard and export returns when international demand fails to rise commensurately.

Figure 8 Saleyard prices vs export unit values and supply shocks

Nevertheless, while there is a correlation between saleyard and export price movements, the margin between saleyard prices and beef export prices has varied over the past several decades (Figure 9). During periods of drought, high feed costs mean that the number of animals available for slaughter increases and prices will fall as competition between buyers for livestock falls. During times of favourable seasonal conditions and periods of herd rebuilding, the opposite occurs in that the number of animals available for slaughter decreases and prices rise. In the latter situation, price competition for cattle is stronger among live cattle exporters, restockers and lot feeders, all competing with meat processors for beef cattle.
Figure 9 Margin between real saleyard prices and unit export values

Figure 9 also shows a significant downward trend in this margin over the period since the 1970s, an indicator of tightening profit margins for meat exporters. Increasing production over the period and limited growth in domestic demand has meant an increasing reliance on finding new export markets, not all of which are high value markets.

In 2013–14, margins widened when saleyard prices fell because of record slaughter as a result of drought in Queensland. Unusually though, export prices rose supported by strong overseas demand. Saleyard prices have been rising in 2014–15 as the rate of cattle turn-off has slowed and strong export demand has continued supporting export prices. ABARES estimates that beef saleyard prices will rise by 19 per cent in 2014–15 (ABARES 2015).

The margin between saleyard prices and beef export prices was at its largest in real terms in 1973–74 (417 cents a kilogram in 2014–15 dollars), during the price crash that ensued after Britain joined the Common Market; and its smallest in 2010–11 (151 cents a kilogram in 2014–15 dollars) when producers commenced herd rebuilding after extended drought throughout the 2000s. The margin has generally trended down over the past several decades. However, over the past three years, the margin has been rising and, in 2014–15, is estimated to average around 300 cents a kilogram—the highest since 1980–81—as slaughter remains relatively high and beef export demand is strong.

Caution must be used in comparing producer prices directly with export returns as a number of factors can cause them to diverge. Saleyard and ‘over the hooks’ prices are measured in carcass weight equivalent whereas beef exports are in dollars per kilogram shipped. That is, no account is taken of the value added component of the beef which may be shipped as a variety of bone-in or bone-out cuts or carcass (frozen or chilled). Also, drought-induced turn-off results in higher numbers of cattle offered for sale; an increased share of (lower value) cows in total sales; poorer condition of animals offered for sale; and reduced demand for restocker cattle—all factors leading to downward pressure on the average saleyard price. Additionally, there is a lag between sale of cattle, their slaughter and eventual export, particularly if a period on feed is required.

3.2.2 Farmers’ share of beef retail prices

Retail meat prices are significantly higher than saleyard prices and export unit values, but they are not directly comparable, as retail sales of meat entail a further component of value added (trimming, packaging, promotion, advertising and shopkeeping) (ACCC 2007). Saleyard prices are reported either on a liveweight basis (cents per kilogram of the live animal) or a carcass weight basis (cents per kilogram of
the carcass—where the hide, head, feet and gut are removed). Export unit values are on a shipped weight basis—they may consist of a variety of bone-in or bone-out cuts or carcass (frozen and chilled) from a range of animals. Retail prices are on a retail weight basis, butchered into ready-to-cook cuts.

Saleyard prices can be compared with retail prices by taking account of the proportion of the animal sold at retail to determine a retail weight equivalent saleyard price. Figure 10 presents the beef retail price, medium steer saleyard prices in both liveweight and retail weight equivalent, and beef export prices (shipped weight equivalent).

**Figure 10 Retail, export and saleyard prices**

Source: ABARES unpublished estimates

Comparing the live weight medium steer saleyard price (400–500 kilogram) with the weighted average retail price of primal cuts from a 450 kilogram medium steer on a cents per kilogram basis, the producer’s share of the retail price was 14 per cent in 2013–14. This share, which ranged from 13 to 15 per cent over the past ten years, has declined from around 20 per cent in the early 1970s.

However, measuring the producers’ share of retail price using the live weight saleyard price does not take into account that only a proportion of the animal is sold at retail. To do this we need to convert the saleyard price to a retail weight equivalent by determining the cut out of the primal cuts from the animal. The breakdown of the carcass is around 60 per cent primal cuts, 20 per cent bone, 10 per cent fat and 10 per cent trim—this breakdown provides around 170 kilograms of primal cuts from a 450 kilogram medium steer. Comparing the saleyard price of this steer in a retail weight equivalent with the retail value of primal cuts from the steer results in the farmer’s share of the retail price being 36 per cent in 2013–14.

This share has also trended downward over the past four decades from more than 50 per cent in the early 1970s. This downward trend can largely be explained by the increasing amount of value added to retailed meat over the past several decades through additional preparation of meat cuts into ready-to-cook meals, involving more labour and materials. Labour costs have contributed to this increasing margin, increasing faster than food prices over the period.
While movements in retail values appear to track saleyard values relatively closely, there is still some variation in the margin between saleyard and retail prices. Over the period 1969–70 and 2013–14, this margin has varied from as low as $1200 and as high as $1700 per animal in real terms and this can be related to variations in livestock supplies as discussed previously. Note the total retail value of the carcass as derived does not include the value of offal, which may be retailed or included in mince, sausages or other meat products, or the value of hides.

3.2.3 A case study of the United States

Anecdotally, Australian producers refer to the farmers’ share of farm gate returns in the United States as being markedly greater than in Australia. Margins in the US industry tend to be more transparent than those in Australia where lack of appropriate data—at both sector level and firm level—makes it difficult to analyse pricing through the value chain. In contrast, in the United States, several research companies and equities analysts perform packer margin assessments on a daily or weekly basis. Additionally, the US Department of Agriculture’s Packers and Stockyards Program received powers from the Packers and Stockyard Act 1921 to collect information on industry-wide margins for the meat industry.

Figure 11 indicates the different margins (spreads) between producer, wholesale and retail prices in the United States in real terms between 1970 and 2014 (in 2014 US dollars). This figure shows the farm share of retail value averaged 55 per cent in 2014, but this share has varied over the period shown from as high as 68 per cent in 1973 to a low of 42 per cent in 2010.

Figure 11 US farm, wholesale and retail beef prices

Source: USDA-ERS 2015

US beef production is largely grain-fed as opposed to the largely pasture-based Australian production system; therefore cattle production costs are higher in the US than in Australia (Deblitz & Dhuyvetter 2013). The difference in the shares of beef retail sales between Australia and the United States may be also be attributed to higher labour costs in Australia, in both the meat processing sector and retail. Another differentiating factor is the United States’ much larger domestic market. Greater domestic demand lifts the farmgate share as wholesalers and retailers compete for the limited US beef supplies, leading to a lower margin per kilogram of retail sales. Only 14 per cent of US beef production was
exported in 2014, compared with 70 per cent of Australia’s beef production (USMEF 2015). The US beef that is exported tends to be higher value grain-fed cuts.

Similar to the situation in Australia, export and domestic retail prices are not directly comparable because of the differing extent of value adding. For example, beef at the retail level is ready to cook, while beef exports are in bulk. There are also no retail margins in the export trade.

3.3 Processing costs

There is little up-to-date data available on the costs of processing in Australia. The most recent comprehensive studies were undertaken in the 1990s, and include reports by Booz Allen Hamilton and the Industry Commission (now the Productivity Commission). Booz Allen Hamilton (1993) found that while Australia was competitive in terms of the cost of sourcing cattle, it had the highest processing costs when compared with the United States, Argentina, New Zealand and Ireland. The study showed that labour costs were the single largest area of cost disadvantage. A number of factors contributed to this cost disadvantage, including work practices such as single shifting which reduced plant utilisation; smaller, less well utilised facilities (less throughput to spread overhead costs); and smaller, leaner animals (less finished weight for the same amount of labour input). Australia was also more expensive in terms of energy (particularly electricity) and water.

More recent figures released by JBS Australia show that labour accounts for around 21 per cent of total input costs (including livestock component) and 70 per cent of their processing costs (excluding livestock component). Of the processing costs other than for livestock purchases, packaging and consumables comprised 15 per cent, repairs and maintenance comprised 10 per cent, and energy comprised 4 per cent (Condon 2011).

Data from the US Bureau of Labour Statistics on labour costs in various countries show that Australian labour costs in the food and beverage manufacturing sector were significantly higher than in competing countries, particularly low-cost producers such as Brazil and Mexico (Figure 12).

Figure 12 Hourly labour costs for food manufacturing industry

![Graph showing hourly labour costs for food manufacturing industry from 2008 to 2012 for various countries including Australia, United States, New Zealand, Brazil, and Mexico.]

Source: Bureau of Labour Statistics 2015

Lin (2015) reported that Australia still suffers a cost disadvantage, arguing that the local industry is not taking full advantage of economies of scale, with many abattoirs still operating single shifts whereas
overseas processors tend to operate double shifts. Similar to Booz Allen Hamilton (1993), Lin also identifies utility costs for energy and water as being significant, with energy and water use in abattoirs being necessary to meet strict food safety requirements that ensure market access is maintained. Energy for refrigeration and sterilisation of equipment is especially important. Water is used to hydrate and wash incoming stock, and to clean livestock carcasses, processing equipment and work areas. Effluent must also be discharged safely, with processors facing heavy fines for non-compliance with environmental laws. While regulatory measures impose compliance costs on industry, they underpin Australia’s reputation for a high standard of food safety and product integrity in its exports.

Overall, processors maintain that beef processing costs in Australia have been and continue to be high by world standards. According to the MLA, Australian processors face the highest processing costs in the world, with costs of around $300 to process a beast because of high labour, power and regulatory charges, compared with $150 a head in the United States, $80 in Argentina and $25 in China (Beef Central 2013).

### 3.4 Rationalisation of processing facilities

Competitive pressures on the meat processing sector have resulted in a reduction in the number, and consequently geographic distribution, of abattoirs over a long period of time. Between 1980 and 2002, the number of red meat processing plants roughly halved from 475 to 236 (MLA 2002; Bindon & Jones 2001) (Map 5). Martyn (2014) states that the 1980s was characterised by processing plant closures, as reduced slaughter numbers followed the very low beef prices of 1974, and low margins encouraged rationalisation. There has been further rationalisation in the meat processing sector in recent years, and it is estimated there are around 150 abattoirs currently in operation. This trend is consistent with other agricultural sectors and other industries, and it is reasonable to expect these competitive pressures to remain and industry rationalisation to continue.

However, some companies in the sector, through consolidation and growth, have expanded their operations (Bindon & Jones 2001; Qld DEEDI 2010). Scale efficiencies through expansion, investment in new technology, coupled with greater security of access to cattle through vertical integration into lot feeding, have helped to address some of the factors that have adversely affected the international competitiveness of Australian beef processors in the past.

The recent purchase by JBS Australia of Hunter Valley Quality Meats (Primo Smallgoods) is an example of consolidation in ownership, while the commencement of operations at the AACo Livingstone Beef processing facility in October 2014 is an example of new investment and expansion to meet an identified geographic need. Interest in other ‘greenfield’ developments continues, with a number of proposed new sites reported recently in the media:

- Yeeda Australian Rangeland Meat is reportedly seeking investment in a smaller abattoir near Broome, Western Australia.
- NorthBeef, a consortium of graziers in inland Queensland, has produced a feasibility study for an abattoir in North West Queensland.
- FK Gardiner and Sons recently submitted a plan to the Toowoomba Regional Council to build a new abattoir on a site at Charlton, on the outskirts of Toowoomba, Queensland.
- The Central Highlands Regional Council has recently commissioned independent consultancy company, GHD to investigate the feasibility of a new abattoir at Emerald, Queensland.

- The East Gippsland Food Cluster, a consortium of growers and processors, has produced a feasibility study for a new abattoir in Bairnsdale, Victoria and has recently sought approval for the development of a business model.

Map 5 Export abattoirs that have closed since 1980

Source: ABARES. Data sourced from Martyn (2014)
GLOSSARY

Abattoir: A building or place where animals are slaughtered for food.

Backgrounding: Growing program for feeder cattle from the time calves are weaned until they enter a feedlot to be finished on a high protein ration. Also known as conditioning.

Carcass: The body of an animal after being dressed (removal of head, feet, hide and internal organs).

Curfew: Time for which an animal is not allowed access to feed and/or water. A wet curfew removes access to feed but allows access to water. A dry curfew removes access to both feed and water.

Dressing percentage: The carcass weight after trimming of fat, as a proportion of liveweight.

Export registered establishment: An establishment to be used for operations to prepare meat or meat products for export for food that has been registered for this purpose by the Department of Agriculture under the Export Control (Meat and Meat Product) Orders 2005. (Establishments may also prepare meat or meat products for domestic consumption).

Feedlot: Where cattle are fed a high protein grain based diet to reach exact market specifications.

Finished: Once cattle reach market specifications and are ready for processing, they are described as ‘finished’. Cattle can be either grass or grainfed.

Gut-fill: The amount of an animal's total body weight that is composed of food, faeces and urine.

Liveweight: The weight of a live animal.

Lot feeding: The process of fattening cattle, sheep or lambs in yards or lots for slaughter.

Meat processing establishment: An establishment to be used for operations to prepare meat or meat products for food including, for example, abattoirs, boning rooms, cold stores and facilities for further processing.

‘Over the hook’: refers to the marketing of cattle/sheep/lambs directly from the farm to an abattoir where a producer is paid for the value of the carcase based on a sliding grid. The skin is also evaluated for length and quality and is purchased by the processor. The seller generally pays for the animal’s transport from the farm to the abattoir. The grazier generally gets paid within a 7 day to 14 period.

Primal: Major component of carcase. For beef these include ribs, butts, chuck and rumps, and loins.

Rangeland goats: Goats which are harvested and have never been confined to a feedlot or subjected to any chemical treatments.

Steer: A castrated male bovine showing no secondary sex characteristics.

Throughput: Number of animals slaughtered.

Turn-off: Sell or use for food.

Vealer: Female or castrated male with no evidence of eruption of permanent incisor teeth. Not weaned for more than seven days.
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