

Chapter 1 Introduction

1.1 Background

Meat processing is one of Australia's largest food processing industries. In 1992-93, industry turnover was \$6 037.7 million and value added was \$1 687.4 million. In the same year, over 29 000 people were employed in the industry, many in regional areas (ABS, 1996). The industry is Australia's fourth largest export earner, exporting \$4 681.5 million in 1992-93 (Department of Industry, Science and Technology, 1995). This represents over 45 per cent of exports from the food and beverage industry, and nearly 13 per cent of total manufacturing exports. The majority of beef produced in Australia is exported, with over 64 per cent of the volume of production of beef and veal in 1993 sold on export markets. Over 62 per cent of the volume of mutton production and 19 per cent of lamb production was exported in the same year (Industry Commission, 1994). For meat sold on the domestic market, approximately two-thirds are sold through butchers and one-third through supermarkets (Industry Commission, 1994).

Abattoirs purchase livestock inputs from primary producers and sell processed meat products to wholesalers and/or retailers. Over 75 000 farms and pastoral properties produce livestock for slaughter, with an increasing number of cattle purchased by abattoirs finished in feed lots (Industry Commission, 1994). However, by far the majority of cattle slaughtered in Australia are grass finished.

In recent years there has been considerable criticism about the level of efficiency within the meat processing industry. In particular, the nature of industrial relations and the employment conditions within the industry are frequently cited as having contributed to relatively low levels of labour productivity, which in turn has adversely affected industry costs. Labour productivity is a particularly

important issue given that the industry is relatively labour intensive. Livestock purchases account for the biggest single cost component of meat processing firms, accounting for over 60 per cent of total meat processing costs in both domestic and export beef markets. Labour costs account for approximately 10 per cent of total processing costs. Excluding livestock inputs, labour costs (wages and on-costs) account for about 45 per cent of meat processing costs (Industry Commission, 1994). These figures indicate that improving the productivity of labour could potentially have a significant impact on the industry's costs.

Microeconomic reforms that improve the efficiency of the meat processing industry are likely to improve the welfare of both consumers of meat products and livestock producers. Reforms will also be of direct benefit to the industry in terms of increased profitability and competitiveness. In the rural sector, changes to marketing arrangements of primary products have probably been the single most significant aspect of microeconomic reform. However, changes in other markets such as transport and labour markets have also had a significant impact on the rural sector as these are inputs into rural production as well as into downstream processing activities. For the meat processing industry, microeconomic reform can affect the cost of several of its inputs - in particular, transport, labour, and livestock. This dissertation focuses on the potential impact of labour market reforms in the meat processing sector on the cattle and beef industry as a whole. It focuses on meat processing because it is one of the largest food processing industries in Australia. There have also been many studies of the industry in recent years that have identified the need for reform in the industry, particularly labour market reform. These studies provide a valuable source of information that can be drawn on to assess the impact of labour market reforms in the meat processing industry on the cattle and beef industry.

1.2 Research problem

The meat processing industry is an integral part of the production and marketing chain of meat products. How efficient the meat processing industry is will therefore affect the returns to livestock producers as well as the retail price of meat. The efficiency of the industry will be determined by the productivity of resources employed. Productivity has been identified as an issue of concern for the meat processing industry, in particular with regard to the labour input. As labour accounts for a significant share of input costs in the meat processing industry, microeconomic reforms in the industry that improve the productivity of labour have the potential to deliver significant benefits to the cattle and beef industry as a whole.

It is important to study the impact of reforms across the cattle and beef industry as a whole, rather than focusing on just the meat processing industry. Workplace reforms that reduce processing costs are likely to have an impact on both upstream and downstream industries with linkages to meat processing, as well as just on meat processing firms. If all stakeholders in the meat processing industry, including livestock producers, the feedlot industry and meat consumers, are informed of the potential benefits of reform in the meat processing industry, there will be more avenues for bringing pressure on policy-makers and the industry to promote and progress reform.

The distribution of the benefits of reform will depend on a number of factors. A more efficient processing sector has the scope to reduce the retail price of beef, and thereby increase demand, and to increase profits and/or wages in the meat processing industry. It may also result in increased demand for cattle for slaughter and higher returns to livestock producers. However, the extent to which lower processing costs are passed on to consumers or to upstream and downstream industries will depend on the degree of competitiveness in these industries. Also, given that the demand for meat products, including beef, lamb

and pork are all very closely interrelated, the effect of lower prices on the demand for beef would need to be examined in the context of a whole demand system for all meat products.

Labour market reform is an important aspect of microeconomic reform throughout all Australian industries. It is commonly regarded as a problem area due to the importance of labour as an input for many industries and because of the inflexibility inherent in many labour arrangements due to the traditionally centralised nature of industrial relations in Australia. Certain reforms have been implemented in recent years to encourage a move away from centralised wage bargaining to more enterprise-based negotiations. However, there is considerable debate about the extent and success of the reforms undertaken so far.

Labour market arrangements are of particular concern to the meat processing industry. There is a general perception that the industry is lagging other manufacturing industries with regard to reform of its labour arrangements, with a relatively slow take-up of enterprise agreements in the industry, a high level of industrial disputation and relatively low levels of labour productivity compared to similar firms overseas.

1.3 Objectives and hypotheses

The objective of this dissertation is to determine the potential cost savings from workplace reform in the meat processing industry and to assess how this change affects the welfare of producers, consumers and other participants in the cattle and beef industry.

The specific research question is to determine the size of potential reductions in labour costs due to workplace reform and to estimate resulting changes in producer and consumer surplus. This is done by reviewing the literature to

obtain estimates of potential labour cost savings from reforms and using these estimates as inputs into an equilibrium displacement model (EDM) of the cattle and beef industry.

There is a considerable literature discussing the existing industrial relations system in Australia that suggests there is scope for reform to enable more efficient labour market outcomes to be achieved. This is particularly so in the case of the meat processing industry where structural impediments to improved labour productivity have been identified. However, where workplace reform results in a reduction in the costs of meat processing firms, it is expected that participants in the cattle and beef industry, including livestock producers and beef consumers, will benefit. Given this, the specific hypotheses examined in this dissertation are that:

- there is scope for labour market reform in the meat processing industry to achieve improvements in labour productivity and therefore reduce production costs; and
- industry participants, including livestock producers and beef consumers, will benefit from reforms that reduce processing costs.

1.4 Outline of the study

Chapter 2 provides some background information on the meat processing industry. It gives a statistical profile, including data such as the number of establishments, number of employees, and the contribution of the industry to exports and the economy generally. The chapter also provides a brief summary of the composition of input costs to the industry.

Chapter 3 examines the labour market arrangements in the industry. These cannot be separated from the industrial relations scene in Australia as a whole.

Consequently, the chapter begins with an overview of the recent history of industrial relations reform in Australia, focusing on the moves towards a more decentralised wage fixing system in the last decade. Particular attention is given to the role of enterprise bargaining in this process, and the benefits in terms of greater productivity expected from this type of industrial agreement. The particular features of labour market arrangements in the meat processing industry, including the level of industrial disputation, labour costs, skills and the awards that apply to the industry, are then addressed. Finally, a number of recent studies that address labour market issues in the meat processing industry are discussed. From this review estimates of expected cost reductions from labour market reforms are obtained.

Chapter 4 develops an economic framework to analyse the changes in the meat processing industry expected to occur as a result of labour market reform. In particular, the changes to input costs as a result of the reforms, and the consequent changes to supply and demand in the meat processing industry are explained using diagrammatic analysis. The issue of the distribution of the benefits of reforms between market participants is also examined, and the algebra underlying the analysis is outlined.

The EDM of the cattle and beef industry that is used to quantify the changes occurring as a result of workplace reform is described in chapter 5. This model is based on the algebra of the models discussed in the previous chapter. The model is then used to analyse the impact of labour market reform in the meat processing industry on participants in the cattle and beef industry. The model simulation is based on estimates of potential cost reductions derived from the literature review in chapters 3. The results are presented in terms of proportional price and quantity changes and changes to economic surplus. Chapter 6 reports these results and discusses their implications.

A summary of the research is given in chapter 7.

Chapter 2 The Australian meat processing industry

2.1 Introduction

The meat processing industry is one of Australia's largest rural-based industries. It accounts for a large share of Australia's exports and makes a significant contribution to the economy in terms of both employment and turnover. It is also a relatively labour intensive industry, with labour costs accounting for about 45 per cent of total processing costs.¹ This chapter provides an overview of the Australian meat processing industry. A statistical profile of the industry, as well as a discussion on the importance of labour as an input to the industry, is given in section 2.2.

2.2 The meat processing industry

The meat processing industry is one of Australia's most significant rural-based industries in terms of employment turnover and exports. The industry includes all establishments in the ANZSIC² class 2111 (meat processing), which is a subgroup of the ANZSIC category Food, beverage and tobacco. Establishments in the meat processing industry subdivision include pigmeat and sheepmeat processing as well as beef. Although it is strictly beef processing that is the focus of this research, disaggregated data from this industry subdivision are not publicly available. In any case, establishments in this category are frequently multi-product establishments that slaughter cattle, sheep and pigs depending on demand and availability of livestock.

¹ This figure excludes the cost of purchasing livestock.

² Australian and New Zealand Standard Industrial Classification. This was previously ASIC (Australian Standard Industrial Classification) class 2115: meat, excluding poultry and smallgoods.

Table 2.1 outlines some key statistical data for the meat processing industry, the Food, beverage and tobacco industry and Total manufacturing.

Table 2.1 Statistical profile of the meat processing industry, 1992-93

	<i>Number of establishments</i>	<i>Employment</i>	<i>Wages & salaries (\$m)</i>	<i>Turnover (\$m)</i>	<i>Value added (\$m)</i>	<i>Net capital expenditure (\$m)</i>	<i>Exports (\$m)</i>	<i>Imports (\$m)</i>
Meat processing	346	29071	855.8	6037.7	1687.4	124.3	4681.5	57.8
Food, beverage & tobacco	3328	159362	4765.8	37038	13359	1534.6	10261.7	2803
Total manufacturing	38285	881727	7282.9	169925.2	66158	8575.1	37426.1	56316.9

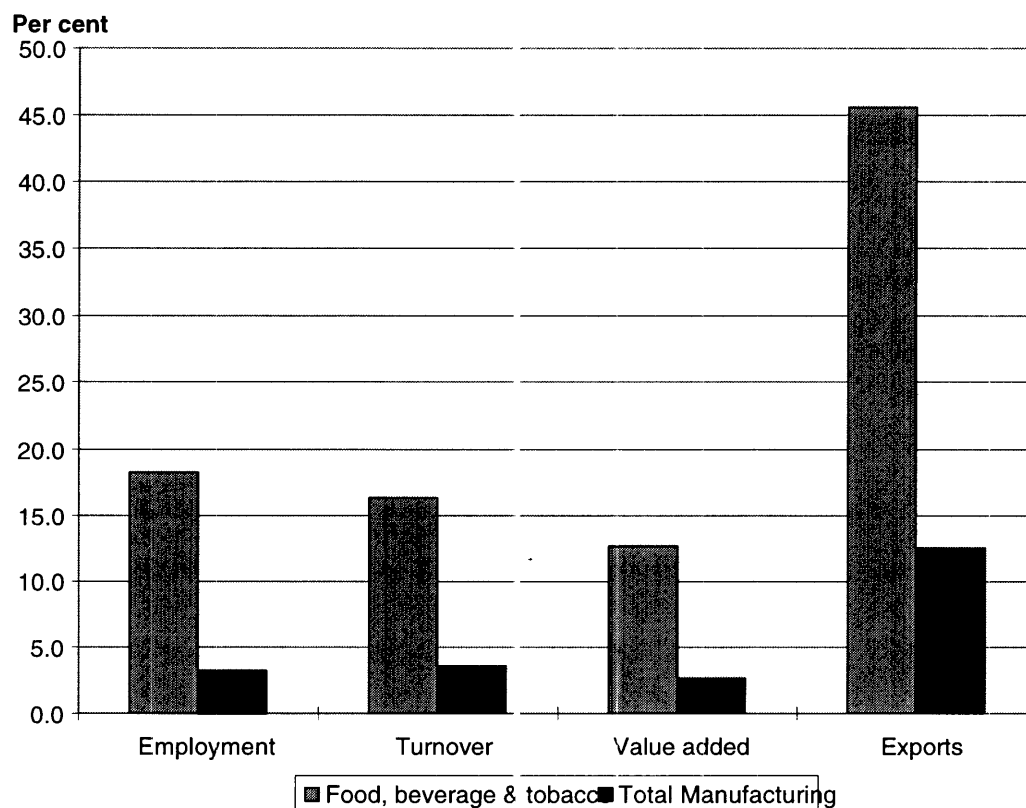
Source: ABS (1996); BIE (1996b, p. 172); Department of Industry, Science & Technology (1995, p. 26-27)

Notes: Export and import data is for Total food and beverage (excluding tobacco)

In 1992-93, the Australian meat processing industry consisted of 346 establishments employing approximately 29 000 people. Direct labour costs (wages and salaries) were \$855.8 million, industry turnover was \$6037.7 million and value added was \$1687.4 million. The industry has a relatively high level of exports, with \$4384.2 million worth of exports in 1992-93, making it Australia's fourth largest export income earner after coal, gold and wool (Industry Commission, 1994). Imports are of considerably less importance to the industry, with \$37.6 million worth of meat products (excluding poultry, bacon, ham and smallgoods) imported in the same year.

The importance of the meat processing industry to the Food, beverage and tobacco industry as a whole and to Total manufacturing on a number of key indicators is illustrated in Figure 2.1.

Figure 2.1 Importance of the meat processing industry relative to Food, beverage and tobacco and Total manufacturing, 1992-93



Source: ABS (1996); BIE (1996b, p. 172); Department of Industry, Science & Technology (1995, p. 26-27)

Notes: Export data is for Total food and beverage (excluding tobacco)

As the above graph shows, the meat processing industry is an important component of total Australian agri food industries. Meat processing accounts for about 18 per cent of employment in the Food, beverage and tobacco industry, 16 per cent of turnover and nearly 13 per cent of value added. It is a major contributor to exports from the industry with meat processing exports comprising approximately 45 per cent of total Food and beverage exports in 1992-93. Meat processing makes a smaller contribution, though still relatively important, to the manufacturing sector as a whole. The industry accounted for about 3 per cent of

total manufacturing employment, nearly 4 per cent of turnover and nearly 3 per cent of manufacturing value added in 1992-93. Meat processing exports also account for a significant proportion - nearly 13 per cent - of total manufacturing exports.

Linkages to other market levels

The meat processing industry purchases livestock inputs from primary producers and sells processed meat products to wholesalers and retailers. According to the Industry Commission, over 75 000 farms and pastoral properties produce livestock for slaughter. Cattle numbers in Australia throughout the 1980s and early 1990s remained fairly stable between 22 and 25 million, with the largest proportion located in Queensland (42 per cent in 1992), followed by New South Wales and Victoria. Since the late 1980s, an increasing number of livestock have been finished in feedlots, with feedlot-finished animals representing 10 per cent of total livestock slaughtered in 1992 (Industry Commission, 1994).

Concentration of ownership in the meat processing industry is not high compared to many other Australian manufacturing industries (Industry Commission, 1994). Table 2.2 shows the level of ownership concentration in the meat processing industry in 1991-92. It indicates that the largest four companies accounted for 7.7 per cent of total establishments, nearly 30 per cent of total employment and about 33 per cent of industry turnover. The largest 20 companies in the industry accounted for about 13 per cent of the number of establishments, about 50 per cent of industry employment and over 63 per cent of industry turnover.

**Table 2.2 Concentration of ownership in the meat processing industry
(per cent)**

<i>ASIC 2115 (Meat, excluding poultry & smallgoods)^a</i>	<i>Establishments</i>	<i>Employment</i>	<i>Turnover</i>
Largest 4 companies	7.7	29.9	33.3
Largest 8 companies	9.1	36.2	44.1
Largest 12 companies	10.8	39.9	51.9
Largest 16 companies	11.9	45.8	58.5
Largest 20 companies	13.1	50.7	63.8
Total companies	100.0	100.0	100.0

Source: Industry Commission (1994, Volume II p. 21)

a: ASIC class 2115 changed to ANZSIC 2111 in the 1992-93 manufacturing census

The majority of Australian beef production is exported, with 64.4 per cent of the volume of production of beef and veal in 1993 sold on export markets. For meat sold on the domestic market, approximately 33 per cent of beef sold in 1992-93 was sold through supermarkets, with the remainder sold through butchers. In 1987, wholesaling and retailing added \$646 million and \$798 million of value to meat industry output respectively (Industry Commission, 1994).

Efficiency in the meat processing industry

The Australian meat processing industry has frequently been criticised in recent years as inefficient, with a low level of labour productivity commonly cited as the major impediment to achieving greater industry competitiveness (see for example National Farmers' Federation Australia (1993); Industry Commission (1994); Sloan (1995); Brown (1995)). A number of recent studies indicate that significant gains can be achieved from improving the efficiency of the meat processing industry in Australia (Industry Commission (1994); ACIL & Centre for International Economics (1991); CIE (1995)). Table 2.3 outlines some operating efficiency measures for meat processing, Food, beverage and tobacco and Total manufacturing.

Table 2.3 Indicators of operating efficiency in meat processing, 1992-93

	<i>Persons employed per establishment</i>	<i>Turnover per person employed (\$'000)</i>	<i>Value added per person employed (\$'000)</i>	<i>Wages & salaries per employee (\$'000)</i>
Meat processing	84	208.6	58.3	29.8
Food, beverage & tobacco	48	230.5	82.0	30.0
Total manufacturing	23	192.1	74.8	31.5

Source: ABS (1996)

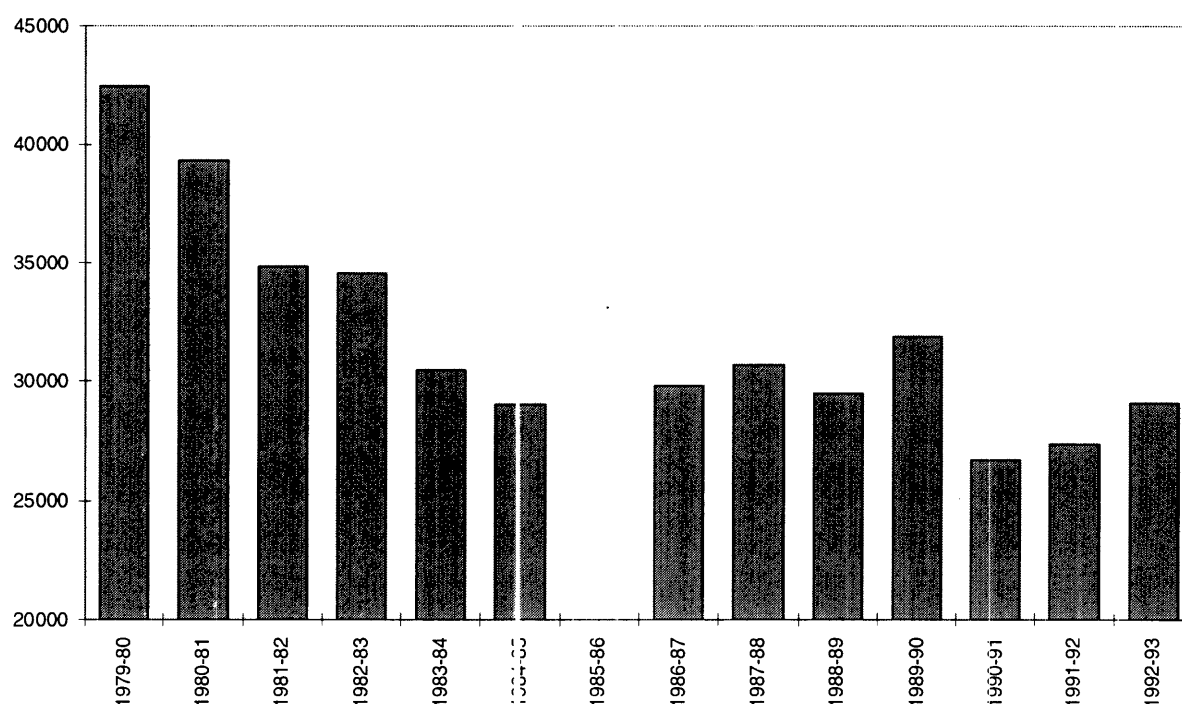
The meat processing industry is very labour intensive compared to both the Food, beverage and tobacco industry as a whole and Total manufacturing. In 1992-93 there was an average of 84 employees per meat processing establishment, compared to 48 employees and 23 employees for Food, beverage and tobacco and Total manufacturing respectively.

Turnover per employee in the meat processing industry is approximately \$208 600, which is lower than for the Food, beverage and tobacco industry as a whole (\$230 500 per employee), but higher than for Total manufacturing (\$192 100 per employee). The value added per employee in the meat processing industry is relatively low at only \$58 000 per employee compared to \$82 000 and \$74 800 per employee for Food, beverage and tobacco and Total manufacturing respectively. Wage and salaries per employee in the meat processing industry are also marginally less than the average for these larger industry groupings.

Employee numbers have declined steadily in the meat processing industry since the late 1970s, stabilising at around 30 000 employees since 1984-85. This decline is attributable to both improvements in labour productivity and to

abattoir closures (Industry Commission, 1994). Short-term lay offs due to drought in the early 1990s also had an impact on employment. Figure 2.2 illustrates this decline in employee numbers.

Figure 2.2 Number of employees in the meat processing industry, 1979-80 - 1992-93



Source: Industry Commission (1994, Volume II, p. 18)

Notes: Manufacturing data for 1985-86 not available

Importance of labour as an input to the meat processing industry

Given that the meat processing industry is relatively labour intensive, with labour costs comprising a significant share of total processing costs, reforms that improve the productivity of labour are expected to bring significant benefits to the industry. In fact, in a recent survey of Australian agri-food firms (covering a

range of food processing industries), the Bureau of Industry Economics (BIE) found that about 30 per cent of respondents believed that industrial relations and workplace reforms had a positive impact on their competitiveness between 1989-90 and 1993-94 (BIE, 1996b). However, results for the meat processing industry in particular were less positive. The study found that labour productivity growth in the meat processing industry was negative for the period 1989-90 to 1993-94, compared to an average for the agri-food industries surveyed of 16.6 per cent in this period.³

A breakdown of the cost structure of meat processing firms shows the importance of labour as an input to the industry. Industry Commission estimates indicate that the main input cost in the meat processing industry is livestock, which represents three-quarters of the value of meat produced. The further along the processing/marketing chain meat products are, the lower the cost of livestock as a proportion of the total value of the meat. It is estimated that, at the retail level, the purchase cost of cattle is about 63 per cent of the retail cost of beef (Industry Commission, 1994). Table 2.4 outlines indicative costs in the beef processing and marketing chain.

³ Although the BIE note that this negative figure for the meat processing industry may partly reflect seasonal differences in volumes and product quality over this period.

Table 2.4 Costs in the meat processing and marketing chain (per cent)

<i>Component</i>	<i>Beef</i>		<i>Sheep</i>	
	<i>Domestic</i>	<i>Export</i>	<i>Domestic</i>	<i>Export</i>
Livestock costs:				
Purchases	67	61	72	68
Procurement costs	5	4	3	3
Processing costs:				
Labour ^a	10	12	10	11
Material and services	11	10	8	8
Fixed costs ^b	2	1	2	1
Total processing	23	23	20	20
Delivery costs	5	12	5	9
Total	100 ^c	100 ^d	100 ^c	100 ^d

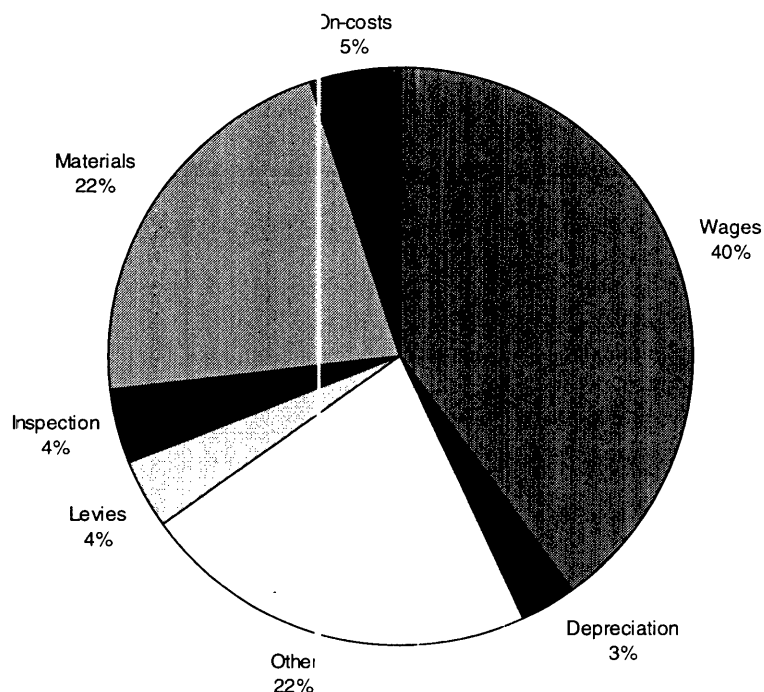
Source: Industry Commission (1994, Volume I, p. 33)

Notes: a-includes labour on-costs; b-Fixed costs includes returns to capital and management; c-Wholesale value, Metropolitan area; d-CIF value, Japan

The above table shows that livestock purchase costs are the largest single component of total processing and marketing costs for both beef and sheep, followed by processing costs and then delivery costs. Processing costs account for about 23 per cent of costs at the point of sale in both the domestic market and in a major export market (Japan). This is slightly higher than the processing sector's share of total processing and marketing costs for sheep.

Labour costs account for a significant share of non-livestock processing costs. The breakdown in meat processing costs is shown in Figure 2.3.

Figure 2.3 Breakdown of meat processing costs (excluding livestock purchases), 1992-93, per cent



Source: Industry Commission (1994, Volume I p. 35)

In the processing sector itself, labour costs are the most significant single cost component, accounting for about 45 per cent of total processing costs (including on-costs). Materials and 'other' costs (such as motor vehicles running costs, repairs and maintenance, bad debts etc) account for the next largest share of costs, both representing 22 per cent of total processing costs.

Figure 2.3 highlights the fact that the Australian meat processing industry is relatively labour intensive. Given this, workplace reforms that enhance labour productivity would be expected to improve industry competitiveness.

2.3 Summary

The meat processing industry is one of Australia's largest rural based industries. The industry is relatively labour intensive, with labour costs comprising the dominant share of total processing costs. Reforms that achieve greater labour productivity are expected to increase the competitiveness of Australia's meat processing industry. The next chapter discusses the Australian industrial relations system, the nature of industrial relations in the meat processing industry and the potential scope for reform of labour market arrangements in the industry. A number of studies that provide estimates of potential cost savings available to the meat processing industry as a result of workplace reform are discussed.

Chapter 3 Labour markets and industrial relations in the meat processing industry

3.1 Introduction

This chapter gives an overview of the industrial relations system in Australia generally, and in the meat processing industry in particular. Given the importance of the labour input in meat processing costs, factors affecting those costs are examined in some detail in this chapter. Section 3.2 discusses the recent history of industrial relations in Australia and the progress of decentralisation, including the growing importance of enterprise bargaining. Section 3.3 addresses the potential impact of this reform on firms and industries. This section includes a discussion of how enterprise bargaining is expected to influence labour market outcomes. Section 3.4 then focuses on the state of industrial relations and microeconomic reform of labour markets in the meat processing industry. It provides an overview of the situation in the industry with respect to the labour input. In particular, it gives an overview of relevant issues such as labour costs, industrial harmony, skills levels and award and pay structures in the industry. Section 3.5 discusses a number of recent studies that examine the potential for workplace reform in the industry and the expected benefits of reform.

3.2 The industrial relations system in Australia

Throughout this century, industrial relations in Australia has been characterised by a high degree of centralisation. Features of the system have included centralised wage fixing, compulsory arbitration and complex award structures. However, there has been a move in recent years towards decentralisation in

industrial relations. Although the extent to which this has occurred is the subject of considerable disagreement and debate, there is little doubt that, in principle at least, moving towards greater decentralisation and enterprise focus in industrial relations is the intention of reforms in recent years (see BIE, 1996 for a discussion of recent changes in the Australian industrial relations system). This section examines the progress of decentralisation in industrial relations since it began in the mid-1980s.

Awards are a prominent feature of the Australian industrial relations landscape. Essentially, they are an agreed minimum set of conditions that apply to workers within a particular group. This grouping is typically skill-based, although industry-based awards are also common. Awards detail the basic conditions, including pay and leave conditions, that apply to workers within a particular industry.

Compulsory arbitration has been a fundamental principle underpinning Australian industrial relations. Traditionally in the Australian industrial relations system, pay rises or changes to conditions were achieved through changes to awards, negotiated between the major unions and employer groups involved, and made official by registering the award with the Australian Industrial Relations Commission (AIRC). The AIRC arbitrated any disputes. These negotiated changes to an award automatically flowed through to all employees, in any industry, subject to that award. This approach had the effect of inhibiting an enterprise focus developing in industrial relations.

This system enabled one of the long-standing principles of Australian industrial relations to be achieved, namely that 'comparative wage justice' be maintained. This meant that workers, regardless of what industry they are in, are paid the same amount for the same work. For example, a metal worker in the car industry would be paid the same rate as a metal worker with the same level of experience in the mining industry. One negative feature of this is the lack of

flexibility inherent in the system as wages bear no relation to the supply and demand conditions for labour that prevail in a particular industry (which in turn depends on the supply and demand conditions in the product market for that industry), nor do wages bear any direct relation to the productivity of labour in a particular workplace or industry. A major criticism of this system is that it has the potential to seriously affect the competitiveness of firms and industries in the traded sector, when award conditions are negotiated in the non-traded sector. It also has implications for inflation, with pay rises negotiated in one industry automatically flowing-on through the economy.

Despite attempts in recent years to shift the focus to enterprise-based rather than industry-wide bargaining through awards, awards continue to play a significant role. Under existing legislation (*Industrial Relations Act 1988* and *Industrial Relations Reform Act 1993*) award conditions and pay rates form the minimum in any enterprise bargain. Enterprise, or workplace, bargains can only introduce above-award changes in pay and conditions.⁴

There has been a gradual shift in opinion in favour of decentralisation as the dominant model for wage fixing in Australia, although there is some disagreement about the paths taken to achieve labour market reform and the pace of that reform (Sloan, 1993). In particular, there is general recognition that the Australian industrial relations system needs to become more enterprise focused. Some fundamental changes that have been identified as necessary include a clearer alignment of union structures with the needs of enterprises (rather than being craft-based), more flexibility in enterprise agreements to achieve a more productive and co-operative culture in the workplace, more

⁴ A 'no disadvantage' test applies to all new enterprise agreements under the federal system.. This test requires the AIRC to be satisfied that an agreement does not, in relation to its terms and conditions of employment, disadvantage the employees it covers. The AIRC will not approve any agreement which results in a reduction of employee entitlements and protections taken as a whole (although there is an exception on 'public interest' grounds). To have access to agreements, employees' terms and conditions of employment must be covered by an award (DIR,1995).

orderly settlement of disputes and remuneration that is both fair and enterprise-specific (Hilmer et al.,1991).

3.2.1 Institutional and legal framework

The various Prices and Incomes Accords, first struck in 1983, dominated the industrial relations scene in Australia throughout the 1980s. The first Accord was aimed at addressing inflation and unemployment while working to restore profit share to business. Parties to the Accord have progressively modified it to meet the changing economic situation (BIE, 1996a). The Accord, particularly in its early years, involved very centralised arrangements, with a continued role for the AIRC in arbitration, in light of the 'National Wage Principles' laid down by the AIRC. These principles, established by the AIRC in 'test cases', provided precedents for subsequent arbitration decisions. Any progress towards decentralisation that has occurred so far has been achieved within the framework set by the Accord.

The 'two-tier' system was the first significant step away from the highly centralised arrangements of the early years of the Accord. Under this system, workers received an 'across-the-board' wage increase, with the potential for an additional productivity-based rise (the second-tier). To achieve this second-tier pay rise, certain conditions had to be met, the main one being the Restructuring and Efficiency Principle (REP). According to Sloan (1993), this system was a crude form of centrally-controlled productivity bargaining, with the payment for the 'trade-off' set at a maximum of four per cent.

The next National Wage Principle to influence the direction of the industrial relations system was the Structural Efficiency Principle (SEP), or Award Restructuring. Changes under Award Restructuring predominantly occurred during the period mid-1988 to mid-1992. Again, there was an emphasis on productivity under this approach, but there was less emphasis on change negotiated at the enterprise level than had been the case under the two-tier

system. The SEP involved restructuring of awards to remove some of their inherent rigidities and inefficiencies. The most common changes were reductions in the number of job classifications in awards, establishment of new skills-related career paths and encouraging multi-skilling. Although other important issues such as removing penalty rates, altering terms and conditions of part-time and casual employment and compensating overtime with time off were on the agenda under Award Restructuring, changes to these matters occurred in only a very few cases (Sloan, 1993).

Sloan argues that Award Restructuring did have an impact on labour market flexibility in some cases, but the general consensus is that very little restructuring actually occurred. Indeed, the AIRC said of the Award Restructuring in 1989 that “progress in some areas is considerable but in the majority it is minimal” (quoted in Harris 1991, p .6).

The National Wage Case decision in October 1991 that introduced the Enterprise Bargaining Principle was another milestone in the move towards a less centralised industrial relations system. The main features of this Principle included wage increases based on actual implementation of efficiency measures designed to effect real gains in productivity; enterprise agreements based on a ‘broad agenda’; agreements negotiated through a single bargaining unit; and no dilution in Commission ‘standards’ in relation to hours of work, leave, etc. However, the impact of the Enterprise Bargaining Principle was effectively undermined by the subsequent amendments introduced by the *Industrial Relations Amendment Act 1992* (Sloan, 1993).

One major change under the 1992 act was that it established that there is effectively no ground for the Commission to refuse to ratify an agreement pertaining to a single enterprise agreement, as long as the ‘no-disadvantage’ test is met. A controversial aspect of the changes was that the act makes it clear that only registered trade unions can be parties to such agreements, with the possible

exception of completely non-unionised workplaces. Under the act, the concept of National Wage Case Principles steering wage determination was basically abandoned. Parties reaching agreement no longer need to pay heed to productivity in order to achieve ratification of an agreement by the Commission (Sloan, 1993). Sloan concludes that the outcome in terms of enterprise agreements since these legislative changes has been patchy, with some agreements being little more than over-award bargaining, whereas others have been genuinely innovative firm-level agreements.

The seventh Prices and Income Accord, finalised in early 1993, continued, in principle at least, this progress towards decentralisation with a commitment to continue the devolution of wage bargaining to the industry and workplace levels. Explicit recognition is also made of the need to link pay rises with productivity improvements. One of the stated objectives of the Accord Mark VII is:

....to increase living standards over time through

- increases in real wages associated with improving productivity, and
- implementing flexibility at industry and workplace levels consistent with the objective of low inflation.

Australian Council of Trade Unions (ACTU), quoted in Sloan (1993, p. 229).

The role of enterprise bargaining in achieving workplace reform envisaged by the Accord partners is revealed in the following quote:

A broad reform agenda should be pursued through workplace bargaining, with the focus on jointly tackling all areas affecting enterprise efficiency, flexibility and productivity....

Australian Council of Trade Unions (ACTU), quoted in Sloan (1993, p. 229).

The *Industrial Relations Reform Act 1993*, the major provisions of which came into force on 30 March 1994, introduced some major amendments to the legislation governing the federal industrial relations system. These major changes include:

- the promotion of registered agreements (particularly those confined to a single business);
- recasting awards as a 'safety net';
- requirement that awards be reviewed by the AIRC at least every three years;
- new provisions for minimum standards, especially in regard to termination of employment;
- creation of a legal 'right to strike'; and
- restructuring the major institution of the federal industrial relations system, including creating the Industrial Relations Court of Australia (Stewart, 1994).

Despite the commitments to achieving more decentralised wage determination based on improvements in productivity that is spelt out in Accord Mark VII, there is not a consensus that these principles have been applied fully in practice.

3.2.2 Progress towards greater decentralisation of industrial relations

Two types of federal enterprise agreements are provided for under the federal government's legislation:

(a) Certified agreements (CAs).

These are negotiated between employers and unions representing employees.

(b) Enterprise flexibility agreements (EFAs).

These are made directly between an employer and his or her employees, provided a majority of employees approve.

CAs presented to the AIRC must be registered by the Commission provided they satisfy certain criteria. These criteria include the need for at least one union to be party to the agreement and the need to satisfy the 'no disadvantage' test. EFAs can be registered on much the same basis as CAs, and subject to similar criteria. However, there are a number of important differences which restrict the availability of EFAs compared to CAs. EFAs can only apply to a single enterprise, the employer must be a corporation, the workers must be covered by one or more federal awards and all of the employees in the enterprise who are covered by federal awards must be brought within the operation of the agreement. There is no requirement that unions be a party to the agreement, provided that a majority of employees have agreed to it. Although unions have no right to veto an agreement, unions may intervene when the agreement reaches the AIRC for certification and present arguments why certification should be denied (Stewart, 1994).

Stewart questions the likely effectiveness of the government's efforts via the 1993 amendments to foster greater reliance on negotiated agreements at the expense of awards. This is because the provisions relating to both CAs and EFAs are extremely complex and contain many potential areas of uncertainty. In relation to EFAs, the quite restrictive conditions that must be met before an EFA can be certified and the possibility of union intervention when an agreement reaches the AIRC present considerable barriers to the take up of enterprise agreements.

It was estimated that by 1993, 700 000 workers (less than ten per cent of the workforce) were covered by an enterprise agreement (Sloan, 1993). In 1994, there were 2886 federal enterprise agreements covering approximately 21 per cent of all Australian employees. These figures suggest the growth in enterprise agreements has been fairly high, however, this growth has been from a relatively low base and coverage of Australian employees by formal enterprise agreements is still fairly limited. In particular, there has been a very limited spread of EFAs.

The low spread of formalised agreements in non-unionised workplaces may reflect a number of factors, including lack of experience in bargaining (BIE, 1996a).

Agreement coverage of enterprise bargains was generally lower in the State jurisdictions than in the federal system. Since formal agreements were introduced in 1991, the take up rate in the federal industrial relations system has steadily increased. By the end of 1994, about 57 per cent of all employees in the federal industrial relations system were estimated to be covered by formal federal agreements (DIR, 1995). DIR also note that enterprise bargaining and agreements were more common in larger, unionised workplaces, and in the public sector. Agreements were also more common in workplaces with some federal award coverage.

In terms of industry coverage of agreements, the spread of enterprise agreements is stronger in manufacturing than in service industries. Over 61 per cent of federal agreements beginning before 30 March 1994 were in manufacturing, with the service sector accounting for only 36 per cent of federal agreements. Factors such as differences in workplace and organisational size, bargaining histories, and employer and union strategies are likely to have influenced the extent of agreement coverage (DIR, 1995).

A 1993 survey undertaken by the Australian Chamber of Commerce and Industry (ACCI, 1993) of the federal enterprise agreements ratified in the period January to June 1993 provides some useful insights into the labour market outcomes being achieved under enterprise bargaining. Their main findings were that

- a relatively small proportion of the private sector workforce was covered by enterprise agreements;

- most agreements were 'add-ons' to multi-employer awards and dealt mainly with over-award matters;
- there were some innovative agreements, especially in relation to working hours arrangements;
- changes to award conditions had to be 'bought', sometimes at considerable cost;
- all federal agreements had a union as party to the agreement; and
- there was a wide spread in the pay increases agreed on.

The fact that the majority of agreements so far have been add-ons to awards can be explained to a large extent by the 'no disadvantage' test that applies under Section 134 of the act. The slow take up rate of agreements may also be partially explained by the requirement that CAs can only be made with a registered trade union. Given that about 60 per cent of all workplaces do not have any union members (Callus et al, 1991), this requirement is likely to impose some restraint on the take up of agreements. Although EFAs allow for non-union agreements, in practice the take up of EFAs has been very slow.

DIR cite some evidence of productivity improvements in workplaces directly linked to enterprise agreements (DIR, 1995). Although the direct contribution of enterprise agreements to productivity improvements is difficult to assess, this evidence suggests that in 1994, nearly 80 per cent of workplaces with new federal agreements (CAs or EFAs) reported improvements in productivity. Only 56 per cent of workplaces without an agreement reported productivity improvements. In addition, managers at the majority of workplaces with new federal agreements reported that they believed their agreement had a direct effect on improving productivity. Moreover, the same research by DIR found that the majority of workplaces with new federal agreements reported that wage increases in their agreements were largely based on productivity improvements at the workplace, with only 12 per cent reporting that wage increases were related to industry-wide factors.

Many groups in Australia however, are critical of the pace at which labour market reforms have occurred. These critics argue that the industrial relations policy of the federal government fails to address the structural and institutional impediments to achieving greater efficiency in labour markets. A study commissioned by the Business Council of Australia (BCA, 1993) identifies the following structural problems with the existing industrial relations system in Australia:

- the pattern of employee representation, whereby most workplaces must deal with a multiplicity of centrally managed unions. This has the effect of inhibiting labour and capital productivity, slows skill development and tends to be an impediment to change;
- registered unions and employer associations have a legislated “monopoly” in making and changing awards. This means that the interests of those external to the employment relationship in a particular workplace may be given precedence over the enterprise and its employees; and
- a compulsory arbitration system which determines minimum employment conditions at an industry, occupational or national level, has the effect of undermining the incentives of individual enterprises and their employees to maintain their agreements or awards.

The study found that, despite efforts in the late 1980s and early 1990s to restructure unions in Australia and to rationalise union and award coverage in enterprises, these reforms have failed to produce more enterprise-focused bargaining structures in the industrial relations system. In summary, the report concludes that the problem has been that workplace reforms in recent years have been process-related, whereas what is needed is fundamental reform to the structures of the industrial relations system.

The main principles the BCA study identifies as being critical in achieving improved industrial outcomes can be summarised as follows:

- there should be greater scope for enterprises and employees to leave the award system and reach agreements on their relationship at the enterprise level. This should extend to the content of agreements, how they are adjusted and whether they are individually based or collective;
- employees should have greater say in who can best represent their interests in dealing with employers; and
- there should be statutory minimum conditions of employment and means for redressing unfair treatment to safeguard the welfare of employees.

The above summary shows that there has been some changes to the process of wage fixing towards a less centralised system since the mid-1980s. However, it is apparent that progress towards decentralisation has not been as comprehensive or as rapid as many would have wished. Sloan (1993) concludes that progress towards decentralisation has been far too slow, superficial and incremental, with enterprise agreement coverage being disappointingly low in the workforce and with awards remaining pervasive.

3.3 The case for labour market reform

Although industrial relations is only one factor that influences enterprise efficiency and productivity, reforms to labour markets that increase productivity will be of benefit to industry. Firms will benefit by either increasing output for the same level of input costs, or achieving the same level of output at lower cost. Either way, the profitability of firms in the industry will be increased, as long as wage rises are linked to productivity increases. The BCA (1988) estimated that the impact of industrial relations on the efficiency and competitiveness of Australian firms was significant. The productivity difference between Australian

firms and comparable overseas firms due to industrial relations factors was on average 25 per cent.

3.3.1 Improving productivity

According to a study by EPAC (1989), there are a number of potential sources of productivity improvement. These are:

- (a) Improving the skills of workers and managers.

This is achieved through multi-skilling and training of both the workforce and management.

- (b) Eliminating unnecessary and undesirable work practices.

In Australia, this has been pursued to some extent through award restructuring and the introduction of the SEP. This process has removed most demarcations and introduced broad-banding of work classifications, thereby increasing efficiency in the workplace (Easson, 1989).

- (c) Improving technology.

This is achieved through investment and engineering and technical skills.

- (d) Reducing machine down time.

Obviously, the longer machinery is operating the more productive it will be. To manage this, there needs to be greater flexibility in shift work by employees, perhaps with recompense in the form of higher pay for later/longer shifts.

- (e) Reducing industrial disputes.

This can increase productivity through fewer work days lost to strike activity. There may also be indirect benefits from improved, less adversarial workplace relations between employees and employers. Fewer

disputes may be a sign of a more co-operative workplace culture which may itself contribute to on-going improvements in productivity.

- (f) Making more efficient use of infrastructure.
- (g) Eliminating unnecessary government interference and regulation.
- (h) Strengthening the forces of competition.
- (i) Developing community attitudes that are conducive to greater productivity - a 'productivity culture'.

The first five of these potential sources of productivity improvement identified by EPAC are generated in the workplace. They may be achieved through changes such as investment in plant and equipment and training, or through greater flexibility in work practices. The removal of rigidities introduced through a multiplicity of awards operating within an industry will increase flexibility, and hence, productivity in the workplace. However, it is enterprise bargaining that has emerged as the major vehicle intended to achieve productivity gains in labour markets. The nature of enterprise bargaining and the benefits expected to flow from it are discussed in the next section.

Enterprise bargaining

To understand the move in Australian industrial relations towards enterprise bargaining and why it is expected to deliver productivity gains it is first necessary to examine further the more traditional style of industrial relations that has predominated in Australia in the past (and arguably, is still predominant) and compare this with more modern approaches to industrial relations. This more modern approach is exemplified by the move towards enterprise bargaining.

Matthews (1994) compares and contrasts the industrial relations of the *mass production system* (MPS) to the industrial relations of the more modern *lean production system* (LPS). A MPS typically has a standardisation of labour, with a “.....‘Tayloristic’ work organisation that breaks jobs down into meaningless fragments calling for task coordination to be provided through...supervisory hierarchies” (P. 262). Mathews identifies a number of features of the industrial relations system typically associated with a MPS. These are:

- narrow and numerous job classifications;
- wages geared to individual performance and job classifications;
- standardisation and specification of conditions of employment, with anomalies handled through complex grievance procedures;
- concentration of skills formation in one-off training programmes such as apprenticeships, and defence of skills through union demarcations; and
- limitations to the role of collective bargaining, with union interventions typically limited to dispute resolution and grievance procedures.

In contrast, Mathews characterises the industrial relations associated with the LPS as possessing the following features:

- broad, skill-based job classifications (providing greater flexibility in the allocation of workers to tasks and teams);
- enterprise unions (thereby eliminating demarcations within the enterprise);
- seniority wages system;
- career paths for workers (ie ‘internal labour markets’);
- worker involvement via work teams or quality control circles; and
- employment security guarantees.

In essence, the industrial relations of this system involves a commitment to the enterprise and an emphasis on quality, productivity and product and process innovation.

Mathews considers that 'best practice' industrial relations systems are an extension of the LPS to what he refers to as the industrial relations of the *sociotechnical production system* (SPS). This system involves broadening the arena of industrial relations to include skills, work organisation, technology and culture, and building a co-operative workplace culture. Features of this 'best practice' system include:

- broad job classifications linked to skill levels rather than to a particular machine or technology;
- skills formation a central feature of negotiated outcomes (eg. career paths, training);
- work organisation arrangements and participative structures a feature of negotiated outcomes (ie. formation of teams);
- wages based on skills acquired, as well as on group performance;
- single bargaining units at the enterprise level and enterprise-specific agreements; and
- national and sectoral standards providing a framework within which enterprises reach their own agreements.

Some of these features are present in the emerging industrial relations systems in Australia. Certain principles established by the AIRC through its various decisions reflect elements of LPS and SPS industrial relations systems, in particular, the REP ('second tier') decision in 1987, and the SEP decision (centred around award restructuring) in 1989. It was the SEP which provided the framework for new skills-based job classifications which were subsequently negotiated and implemented (Mathews, 1994). More recently, the Enterprise Bargaining Principle of 1992 established the central role of 'single bargaining units at the enterprise level' in the emerging industrial relations culture.

An important basic feature of the more 'advanced' or modern industrial relations systems that makes them preferable to more traditional systems is their flexibility. Greater flexibility has been achieved to some extent in the reforms to the Australian industrial relations system discussed above. Mathews argues that in low value-added, standardised production systems, industrial relations is primarily concerned with matters to do with labour costs, with little incentive for parties to identify common interests. In this environment, negotiation in industrial relations is characterised as a 'zero sum game'. In the more modern systems (such as LPS and STPS identified by Mathews), emphasis in industrial relations is more on measures to enhance and reward productive efficiency. Negotiations tend to be much more of a continuous improvement, enterprise-based process.

Another benefit of these more modern industrial relations systems is that they are likely to result in less industrial action. This is in part due to the contractual nature of enterprise agreements, and partly due to the more co-operative culture that is expected to develop under such a system. Industrial action is costly in terms of lost output and possibly damaged relations between management and employees. The evidence on Australia's industrial relations system to date shows a high propensity to engage in short-lived industrial action rather than following formal grievance procedures. Enterprise bargaining is expected to reduce the reliance on this form of resolving disputes by providing more workplace-focused bargaining arrangements and greater management attention to resolving differences before they become disputes (Hilmer et al., 1991).

The expected benefits from labour market reforms in Australia that increase flexibility are supported by research indicating that inflexibility is a very important factor affecting the competitiveness of firms. Research by Drago, Wooden and Sloan (1992) comparing a number of case study firms surveyed in Australia and overseas concluded that inflexibility in the ability to deploy workers and the pattern of union representation were important factors

inhibiting the performance of the Australian firms surveyed. The particular factors listed as most critical were shift and overtime premiums, restrictions on hours worked, overstaffing and demarcation restrictions resulting from multiple union coverage within firms. Sloan (1993) states that the major impediments to enterprise efficiency appear to be mostly the result of restrictions on work methods and working hours arrangements. These restrictions arise through the provisions of awards and through multiple union coverage.

In summary, although the intention of industrial relations reforms in Australia in recent years has been to promote enterprise bargaining, the actual spread of enterprise bargaining has been relatively slow, with coverage of agreements varying considerably between industries. The state of industrial relations in the meat processing industry and the potential scope for productivity-enhancing reforms is discussed in the next section.

3.4 Industrial relations and labour markets in the meat processing industry

Labour arrangements are commonly identified as a major impediment to achieving improvements in productivity and efficiency in the meat processing industry. In a recent submission to the AIRC (AIRC, 1995), the National Farmers' Federation (NFF) concluded that a serious loss of competitiveness occurs between the farm gate and the customer. A number of recent studies have also identified work practices in abattoirs as one of the most important factors (if not the most important) contributing to this problem. These recent studies include the Industry Commission (1994), AACM (1992), the AIRC (1991) and Booz Allen and Hamilton (1993). Many of the issues to come out of these studies are addressed below, including labour costs, industrial harmony, skills levels and occupational health and safety. The predominance of awards and the effects of particular aspects of meat industry awards, in particular the 'tally' system, are discussed.

Labour costs

Other than the cost of purchasing livestock, labour costs account for the greatest proportion of total meat processing costs. A number of recent studies have estimated the share of total abattoir costs attributable to labour (Booz Allen & Hamilton (1993); AACM (1992); Industry Commission (1994)). These studies estimate that labour represents between 43 per cent and 58 per cent of total abattoir costs. On this basis, labour accounts for between 10 and 15 per cent of the total costs of producing meat (Industry Commission, 1994).

Although this represents a reasonably small proportion of the total cost of meat production it is a significant element of direct processing costs. Labour costs and productivity are therefore important factors in determining the productive efficiency of the processing sector. According to Industry Commission (1994) estimates, labour costs represented half of the average value of transformation in the industry in 1992-93, and about three quarters of its value added.⁵ These two measures take into account the fact that higher quality outputs may require more time and effort and consequently, increased costs, with the benefits reflected in selling prices.

The cost structures of meat processing establishments will differ depending on a number of basic factors such as the different types of animals that can be processed by abattoirs (beef and sheep), the different markets for their output (export and/or domestic) and the degree of processing (for example, some abattoirs have a killing floor only and some have a boning room). The Industry Commission found that average labour, capital and all other cost components differ significantly as a proportion of total processing costs between groups of

⁵Value of transformation is the difference between the value of the meat and other animal products leaving the abattoir door and the value at which it came into the abattoir in the form of livestock. Value added is the revenue from sales less all costs not associated with labour and capital.

'like' establishments due to differences in the level of processing required to produce meat products to different levels of quality (Industry Commission, 1994).

Enterprise agreements in the meat processing industry

Despite the 1992 decision of the Full Bench of the AIRC to encourage devolvement of negotiation in the meat industry to the enterprise level, progress of such reforms has been slow (Industry Commission, 1994). The take-up of enterprise agreements has been slow in the meat processing industry compared to other industries. A recent BIE survey of Australian agri-food firms found that about 31 per cent of meat processing firms had a formal enterprise agreement compared to a survey average of nearly 34 per cent (BIE, 1996b). Moreover, given the complexity of meat industry awards and the fact that enterprise bargains are based on existing awards, the extent of the productivity gains achieved from enterprising bargaining in the industry is doubtful.

A recent study by the consultants Fellows Medlock for the DIR concluded that the major impediment to the growth of genuine enterprise bargaining in the meat processing industry is a general lack of understanding by all parties involved - employers, employees, unions - of the process and possible benefits of bargaining. They found that bargains struck to date in the industry tend to address broad cultural issues, whereas specific issues relating to award conditions and work practices have yet to be addressed through enterprise bargaining (Fellows Medlock & Associates, 1995).

Capacity utilisation

Based on data from an ABS survey⁶, the Industry Commission found that there was significant under utilised capacity in the meat processing industry in 1992-

⁶ Using data from a survey conducted by the ABS as part of its 1992-93 manufacturing census, the Industry Commission obtained data on a l abattoirs that were licensed by State meat authorities to slaughter animals for human consumption . The final database consisted of 101 establishments.

93. About half of the establishments in the sample reported operating between 240 and 275 days a year. For the remainder of the sample, the number of operating days varied between 45 and 240 days (Industry Commission, 1994).

Although operating hours may be affected by seasonal conditions, respondents to the survey commonly cited labour arrangements in the industry, in particular the tally system, as a reason why shifts were shorter than desirable. About half of all abattoirs operated between 7.5 and 8 hours on both cattle and small stock chains, and the other half had operating hours ranging from 2 to 7.5 hours. The survey found only two abattoirs operating for up to 10 hours, and only three that operated a second shift.

Industrial disputes

Industrial disputation has been an ongoing problem for the meat processing industry. The industry is characterised by high levels of industrial unrest. In 1991, the number of days lost due to industrial action was 1535 per thousand employees in the meat products industry. This compares with 265 days per thousand employees in all manufacturing, mining and transport industries (Industry Commission, 1994). Table 3.1 shows that the number of working days lost through industrial disputes in the meat processing industry has consistently been higher than for other industries throughout the last decade.

Table 3.1 Working days lost per 1000 employees, 1982 - 1991

	All industries	Meat products (including smallgoods and poultry)
1982	392	3137
1983	249	894
1984	248	3075
1985	228	2286
1986	242	1545
1987	223	738
1988	269	757
1989	190	2498
1990	217	1110
1991	265	1535

Source: Industry Commission (1994, Volume II, p. 19)

Industrial action can have both direct and indirect effects on the productivity of firms. A firm will have a lower average level of productivity over a period of time if working days are lost due to strike action. Other effects of strike action include the impact on both downstream and upstream customers of the firm. A firm with a high level of industrial action may be a less reliable supplier to wholesale or retail purchasers downstream. Depending on the extent of competition in these sectors and hence, the extent to which costs are passed on to final consumers, this lack of reliability may be reflected in a risk premium in the purchase price. Similarly, suppliers of livestock to abattoirs may be adversely affected by industrial action in the meat processing industry if they are unable to sell stock to abattoirs. The extent to which this occurs will depend on the ability to sell livestock to alternative abattoirs.

Another possible negative impact of strike activity is the potential for relations between employers and employees to deteriorate as a result of industrial action, reinforcing an adversarial approach considered to be incompatible with modern, enterprise-based workplace relations systems (discussed in section 3.3). The

more protracted and acrimonious are strikes, the greater the potential for a negative impact on the long term employer/employee relationship.

Skills levels

Given that the meat products industry is relatively labour intensive, the level of skills of the workforce is a potentially important factor influencing the productivity of labour in the industry. It is therefore of some concern that workers in the industry typically have a relatively low level of skills. This is particularly so as improving the skills and training of the workforce is fundamental to improving the overall performance of the industry by increasing the value added component of production. Technological changes in the production process and the move towards quality assurance systems in production make the transition to a more skilled workforce even more imperative. Improved worker skills and motivation are a necessary prerequisite for the introduction of effective industry-based quality assurance programs (DITAC, 1989).

In terms of expenditure on training and staff development, the meat products industry lags behind manufacturing as a whole and also behind the food, beverage and tobacco industry. Total training expenditure in the meat products industry in 1990 was equivalent to 1 per cent of gross wages and salaries. In food, beverage and tobacco and total manufacturing, training expenditure was 1.3 and 2.1 per cent respectively. The expenditure per employee on training was \$57 in meat products, \$89 in food, beverage and tobacco and \$149 in total manufacturing. Moreover, compared to total manufacturing, the level of formal educational attainment in the meat products industry is low. In 1993, 63 per cent of meat products workers had not finished secondary school compared with 37 per cent for the total manufacturing sector (Industry Commission, 1994).

This evidence of a relatively low level of skills among workers in the industry may be attributable to a number of factors. Traditionally, training in the meat

processing industry has occurred on the job'. Another explanation is that the high rates of labour turnover in the industry⁷ and the seniority system of promotion in operation in the industry (discussed below) which creates disincentives for skills acquisition. In addition, the uncertainty of throughput in the industry due to the seasonal nature of production and the consequently high proportion of casual workers may have contributed to this low incentive to acquire skills.

Occupational health and safety

In the area of occupational health and safety, the meat processing industry again does not compare favourably with other industries. Relative to other industries, the meat processing industry has a high level of industrial accidents and, in consequence, high workers' compensation insurance premiums. In 1989-90, workers' compensation insurance costs represented 4 per cent of total labour costs for abattoirs. The comparable figure for all industries was 2.2 per cent (Industry Commission, 1994).

A study by the Meat Research Corporation (1992) estimated the overall cost of injuries to the meat industry under workers' compensation schemes to be \$300 million per annum. This cost includes both the direct cost to the compensation fund and employers, and the indirect costs associated with injuries (such as machine down-time and retraining).

Awards applying to the meat processing industry

A large number of awards, both federal and state, apply to employees in the meat processing industry. There are 49 federal and 39 state awards affecting the industry that are registered with federal and state industrial relations commissions. There are also a number of site-specific registered and

⁷Labour turnover rates in the industry of 55 per cent per annum were estimated by a Meat and Allied Trades Federation of Australia (MATFA) study (1990).

unregistered agreements, other than the registered awards, that apply. Despite this multiplicity of awards, the Federal Meat Industry Award (FMIA) is the predominant industry award. It has general application in all states except Tasmania and Western Australia, and parts of New South Wales (Industry Commission, 1994). The parties to awards are typically employer associations and trade unions.

Award conditions generally include pay rates and conditions relating to shift work, penalty payments and leave. In terms of pay rates, a seniority system is a feature of meat industry awards. This seniority system is applicable to employment, promotion and redundancy. Piece-rate incentive schemes, known as 'tallies', are the typical form of pay rates in the industry, although different forms of the tally apply in different industry awards. The tally system is discussed further below.

Many of the existing award conditions reflect seasonality and labour intensiveness in the production process. Although some of these provisions have been modified over time as a result of technological changes which alter the production process, it is the view of some industry participants that award provisions remain overly prescriptive and inflexible, making them an impediment to improving industry efficiency (Industry Commission, 1994). However, in contrast to this view, the Australian Meat Industry Employee's Union (AMIEU) believe that many features of the award system have been developed to facilitate flexibility in processing plants (Industry Commission, 1994).

A number of specific concerns about the award system were raised in the Industry Commission inquiry into the meat industry. Of particular concern is the multiplicity, complexity and rigidity of awards, the seniority system, the tally system of payment, daily hire and the penalties associated with shift work. Also, despite the multiplicity of awards there are a number of basic award features

that apply universally across all awards. These universal basic features cover matters such as incentive payment systems and terms of employment. As these common features of meat industry awards do not reflect individual firm circumstances, they may have the effect of reducing innovation and flexibility, thereby reducing the productivity of abattoirs.

Meat industry awards contain fairly prescriptive task definition and complex payment systems. For example, the FMLA specified 49 different 'tasks' for cattle slaughter, with each task assigned a level of productivity (expressed in terms of labour units per 100 head). This approach gives very little recognition to the different technologies used, and the different productivity of each worker. Task definition in awards tends to focus on carcase throughput. This may create disincentives for the development of value adding activities and for the development of co-products as rewards are on the basis of carcase throughput alone, rather than total value of abattoir output (Industry Commission, 1994).

One criticism of the complexity and multiplicity of awards is that the system has resulted in instability and 'leapfrogging' as awards change and wages rise. The differences in pay rates for the same work and in the classification of tasks between different awards applying to the industry are examples of the complexity of the system. This complexity and instability has been recognised as major sources of industrial dispute in the industry (DIR, 1990).

Aspects of meat industry awards, including penalty rates for shift work, and short operating hours are of major concern to processors because they contribute to low capacity utilisation as they create a disincentive to spread fixed costs (Industry Commission, 1994). Cost savings associated with increasing the number of hours worked are discussed in section 3.5.

In 1991 a Full Bench of the AIRC conducted an inquiry into the meat industry (the Harrison inquiry), handing down its decision in 1992. It concluded that

industry awards were generally not appropriate for the industry. The AIRC recommended changes to the meat industry award system and the devolvement of negotiation to the enterprise level. The decision also recommended the establishment of an industry-wide council to facilitate change and to consider, in addition to changes to awards, other related issues such as occupational health and safety and training (AIRC, 1992). Despite this decision, there has not been significant progress in implementing the recommendations.

Progress in implementing change has been slow for a number of reasons. In particular, there are costs associated with changing existing employment arrangements for both employers and employees. Poor workplace culture in the industry has also been identified as a factor inhibiting the development of a constructive enterprise bargaining framework. Elements of existing workplace arrangements are also an impediment to change. For example, the seniority system (discussed below), and the commitments that employers have to employees under this system, may tend to lock enterprises in to existing arrangements. Other factors, such as job insecurity and the possibility that some changes may result in the closure of some regional abattoirs, may also tend to restrain change in labour market arrangements. These factors have all contributed to impeding the development of enterprise negotiations that are fundamental to achieving greater labour productivity in the meat processing industry (Industry Commission, 1994).

The tally system

The tally system, a piece-work incentive payment system, historically became the prevalent payment system in the industry at a time when a slaughterer was responsible for processing whole carcasses. The tally represented the number processed in a day by a worker. With the introduction of chain slaughtering, specific processing tasks were allocated to individual workers, and the tally was adjusted to reflect this change. Throughout the 1960s, tallies based on chain slaughtering systems were included in Federal awards.

Under the current FMIA, a unit tally exists which sets out specified tasks in the slaughtering process. Each task is weighted according to a specified 'units of labour per 100 head'. The *minimum tally* is determined by a formula which incorporates the sum of these components and the number of workers. For throughput beyond the minimum tally a per head premium is payable up to the *maximum tally*. Beyond the maximum tally, an additional premium is payable. The workforce has to agree to work beyond the maximum tally.

In summary, under the FMIA the pay of a meatworker is made up of:

- a guaranteed minimum daily payment, based on the minimum tally. This is determined under the award and is based on a set number of animals;
- bonus payments for each animal processed above the minimum tally. There is a pay premium of 25 per cent for each animal processed beyond the minimum tally, up to a maximum tally;
- additional payment for each animal processed beyond the maximum tally. This premium is 37.5 per cent higher than the per unit payment implicit in the minimum (Industry Commission, 1994).

Further penalty payments may be associated with a tally if additional shifts are worked. Under the FMIA, an afternoon shift has a 15 per cent penalty and a night shift attracts either a 25 or 30 per cent penalty.

The tally system can have a distorting effect on throughput and productivity, as well as creating a barrier to change. As awards specify tally levels as a function of the number of team members, with an assigned level of labour productivity, a change in the number of employees requires a renegotiation of tally labour rates. This may have the effect of limiting a firm's ability to restructure and reorganise its production. Tallies are negotiable, however, these changes tend to be problematical and frequently result in industrial conflict (DIR, 1990).

The fact that the tally applies similarly across firms in the industry may also have the effect of inhibiting competition among processors. The lack of flexibility in the way firms can organise their resources discussed above may reduce innovation and competition in the industry to the extent that processors face similar cost structures (Industry Commission, 1994).

As payment is based on throughput, there is also a disincentive to remove poor quality animals where this would decrease the overall quantity of output and to maximise the value of abattoir output (including co-products). As animals are weighted according to size under the FMIA, there is also a disincentive to process small animals or animals with weights above the threshold (Industry Commission, 1994).

A number of recent studies cite evidence of relatively low levels of productivity in the meat processing industry. AACM (1992) concludes that Australian livestock producers are the world's most productive whereas Australian abattoirs are almost half as efficient as Australia's major competitors. The National Farmers Federation (NFF) identify the rate of output per unit of wage, rather than wages per se, as a problem. This is because, although industry tribunals set wages in almost all industries, for the meat industry they fix wage rates to productivity in such a way that all productivity gains are captured by wage earners. This is the direct result of the tally system in which any productivity improvement that would, for example, double the throughput of an abattoir would almost double the average cost per unit of output. If doubling output halves fixed costs, and livestock prices remain unchanged, the tally system ensures that the extra unit of output is almost twice the cost of the first unit of output. Consequently, meat processors whose employees are covered by the Federal Meat Award (and all other meat awards with a similar tally system) are faced with increasing marginal costs. The NFF attribute the low capacity utilisation rates in the industry and low labour productivity to the tally system (AIRC, 1995).

Industry awards, and in particular the tally system, were also identified by AACM as the primary target of reform if substantial productivity increases are to be achieved in the meat industry in Australia. The specific constraints to productivity improvement they identify include:

- over-emphasis on the tally system which tends to limit productivity gains;
- over-regulation of the industry through complex and frequently out-of-date industrial awards;
- the unit cost of labour in the red meat industry is high compared to competing industries;
- the introduction of new technology is inhibited by the delay and uncertainty associated with having to subsequently negotiate award changes to achieve higher productivity (frequently involving disputes);
- low quality of technical and managerial staff in the industry due to lack of competitive atmosphere and industrial awards that have stifled innovative management;
- inflexibilities in industrial awards has meant that economies of scale are not achieved through greater mechanisation, with the result that the industry has not rationalised ownership, size and location of plants to the extent desirable; and
- low and volatile financial margins due to the low productivity and inflexibility of awards (AACM, 1992).

The potential scope for productivity gains from enterprise agreements, and the benefits expected to flow from those gains, is illustrated by the enterprise agreement recently reached between Australian Meat Holdings (AMH) in Rockhampton and its employees.⁸ The Rockhampton agreement resulted in

⁸ The AIRC subsequently rejected the agreement on the grounds that there was inadequate consultation with the workforce in the company's Rockhampton works.

productivity gains of up to 40 per cent in the boning and packing room, thereby reducing costs to AMH by about 10 per cent and raising returns to employees by 10 to 14 per cent (Australian Financial Review (1996). A study by the Centre for International Economics (CIE) found that AMH-style awards which introduced flexible hours and which ended the tally system would increase beef production by 52 000 tonnes a year and increase exports by 47 000 tonnes a year. Gross domestic product would rise by \$1.7 million a year (CIE, 1995). These figures highlight the potential gains to the industry from more flexible work arrangements, and in particular, from the removal of the tally system.

In summary, the operation of the tally system is becoming increasingly less appropriate as the industry moves away from seasonal production. It tends to limit flexibility within the industry and the scope for innovation and competition. The tally also creates a number of distortions that may tend to limit productivity improvements in the industry, such as distorting incentives for higher quality of output and decisions about the types of animals processed. Moreover, if the benefits of productivity improvements are mostly absorbed by labour, there is a disincentive to investment and technological improvement in the meat processing industry as a whole (Industry Commission, 1994).

Seniority

Seniority systems are another feature of meat processing industry awards. Seniority systems in employment, promotion and redundancy in the meat industry emerged as a result of the historically seasonal nature of production to compensate employees for the associated uncertainty of employment.

Given that seniority is the primary consideration when it comes to employment issues such as promotion and redundancy, skills and ability may become 'under rewarded' under this system. The effect of this may be to create disincentives for further training and skills acquisition, with consequent detrimental effects on productivity. The lack of incentives to develop skills and career paths is an

impediment to moving towards the more modern and productive 'lean production system' (LPS) of industrial relations discussed in section 3.3.

The original justification for the seniority system is eroding as production in the industry becomes less seasonal. Increasingly, stock are being transported between states for finishing and slaughtering and feedlot capacity is growing. These factors all contribute to more stable supply of cattle to regional abattoirs.

Daily hire

The incentive payment system for paying employees (the tally) applies only to skilled slaughtermen. Other tasks are performed by 'follow-on' labourers who are paid on a daily-rate basis. Daily hire employment contrasts with employment on the basis of weekly or permanent hire. Daily hire was initially used in the meat processing industry as a way of providing a more flexible supply of labour in an industry characterised by irregular and seasonal production.

Daily hire attracts a 10 per cent loading under the FMIA that is incorporated into ordinary rates of pay for daily employees. The Industry Commission (1994) concluded that this approach was costly in terms of creating employment insecurity for workers and in its effects on organisational commitment and on incentives for training and skill development.

After its review of the meat processing industry, the AIRC concluded that moves to weekly or permanent hire should be encouraged in the industry, as it is likely to improve job satisfaction and security for workers as well as reduce the need for regular retraining of new workers. However, the AIRC acknowledged that permanent or weekly employment in some regions may not be possible due to seasonal and climatic factors (AIRC, 1992).

In each of the features of the MPS identified by Matthews (discussed in section 3.3) it is possible to recognise very similar elements of the Australian meat

processing industry. The many awards that cover the industry contain numerous job classifications. The tally system is a piece-rate incentive scheme geared to providing individual incentives. The poor record of the industry in terms of industrial disputes provides another example of how the meat processing industry conforms to the MPS-style of industrial relations outlined by Mathews. He concludes that this style is not efficient in the context of changing production systems, as its rigidity, standardisation and worker exclusion from production decision-making is an impediment to more efficient performance.

The IC cites evidence of change in some parts of the meat processing industry. For instance, some establishments have enterprise agreements in place that incorporate changed working arrangements and cooperative approaches to issues such as the introduction of new technology. In Victoria, over one-third of employees in the industry have their employment conditions registered through certified agreements (Industry Commission, 1994). More flexible work arrangements and a more skilled workforce is likely to achieve increased competitiveness, which can be expected to result in benefits to both employers, employees, livestock producers and consumers.

3.5 Estimates of productivity improvements from labour market reforms

Industry Commission case studies

As part of its inquiry into the meat processing industry, the IC conducted a case study analysis to provide estimates of potential cost savings to Australian abattoirs. The IC benchmarked two Australian abattoirs against similar abattoirs in New Zealand to obtain estimates of the scope for productivity improvement and cost reductions. The IC's analysis focuses on the cost differences which arise from differences in labour productivity and differences in award conditions. It should be noted that this study relates to the particular

abattoirs that were case studies and does not provide an indication of average cost reductions available to all Australian abattoirs. By simulating 'best practice' labour productivity and negotiated work conditions, the study found that there is scope in Australian abattoirs for significant labour saving on the slaughter chains and follow-on tasks, in addition to scope for improved productivity of meat inspectors.

Method

The Australian abattoirs examined in this study are a sheep chain of a large multi-species abattoir and a large specialist beef abattoir. The discussion here focuses on the results for the specialist beef abattoir only. The IC obtained data on the operations of similar New Zealand abattoirs to establish benchmarks using data obtained from a consultant in New Zealand.⁹ Detailed cost models for a specialist beef abattoir were developed based on thirty-eight slaughter tasks identified. The slaughter tasks are broken down into the component tasks defined under the tally system and other labouring tasks essential to the operations. Using this model, the costs of slaughtering and chilling livestock at each abattoir are simulated.

Inputs identified for each of these tasks in the model include capital (equipment, buildings and land), labour, energy, water, repairs and maintenance, stores, packaging, inspection, levies and other costs. These costs are broken down into variable and fixed. Total costs of operating each abattoir are estimated by summing the fixed and variable costs of each identified task.

The labour input costs are estimated on the basis of using the FMIA.¹⁰ Table 3.2 shows the direct costs associated with slaughtering cattle estimated by the IC.

⁹ The IC engaged New Zealand consultants ProAnd to obtain data.

¹⁰ Assuming one live animal is equivalent to one unit for payment purposes. In practice, under the award labour costs vary depending on the weight of the livestock being processed. This means that the wages implied by the model may be lower than in reality.

The model shows that meat processing is fairly labour intensive, with labour costs accounting for up to 58 per cent of direct slaughter and chilling costs.

Table 3.2 Direct cost of slaughtering and chilling cattle^a
(Index: total cost equals 1.00)

Labour ^b	0.58
Capital and buildings ^b	0.11
Slaughter services ^c	0.00
Inspection ^d	0.09
Energy and water	0.08
Other	0.14
Total	1.00

Source: Industry Commission (1994), p. 174

a: All costs directly attributable to slaughtering and chilling. This excludes overheads and other costs that relate to other parts of the business. b: Excludes labour and capital costs involved in slaughter services, inspection or the provision of energy and water. c: Slaughter services are expenses that are not applicable to any one chain in a multi-species abattoir but are directly attributable to slaughter and chilling costs. d: Includes levies

The efficiency improvements simulated using this model arise from increased capacity utilisation and improved productivity.

Capacity utilisation

The IC modelled an increase in capacity utilisation of approximately 50 per cent. This represents an expansion in the daily work hours from 6.5 to 10 hours (at present, abattoirs operating at maximum tally operate for 6.5 hours a day, five days a week). The increased shift length was initially modelled by the IC with penalty rates paid for the additional hours worked. However, the IC acknowledged that this situation is unlikely to occur as it would be too costly and that it is probable that work conditions would be renegotiated for a standard ten hour day, and possibly a shorter working week for each employee. Consequently, the IC also simulated a 10 hour shift with average hourly wages kept constant at the same rate as the 6.5 hour working day. Another assumption made is that

there is sufficient slack capacity to allow for higher throughput, without additional investment having to be made.

Productivity

The IC also modelled the impact of increased productivity of labour. This increase is derived from reducing the number of slaughterers to be more consistent with the productive capability of the abattoir (rather than those determined under the tally system) and reducing the follow-on labour to be more in line with practices in New Zealand. Rationalisation of the number of meat inspectors is another source of productivity improvement modelled.

Under the industry award, the labour required for each individual task on the slaughter chain is specified. Moreover, rules on combining tasks mean that the final amount of labour required is more than the sum of labour requirement for each individual task. Consequently, a greater amount of labour is used in Australian abattoirs than is necessary. In terms of the productivity of meat inspectors, the IC study found that inspectors in New Zealand plants were more productive because they undertake other company tasks in addition to their inspection tasks.¹¹ A comparison of labour productivity for the two Australian abattoirs and the New Zealand abattoir is given in Table 3.3.

¹¹ In assessing savings from this source, the consultant (ProAnd) maintained the criteria of good quality and hygienic export standard carcass production.

Table 3.3 Labour input characteristics of comparison partners

	<i>Australia</i>		<i>New Zealand</i>
	<i>Existing</i>	<i>Best-practice</i>	
Carcases per hour (head)	82	82	91
Average length of shift (hours)	6.6	6.6	10
Employees	79	72	79
Carcases/person/hour	1.04	1.14	1.15

Source: Industry Commission (1994, Volume II p. 176)

Results

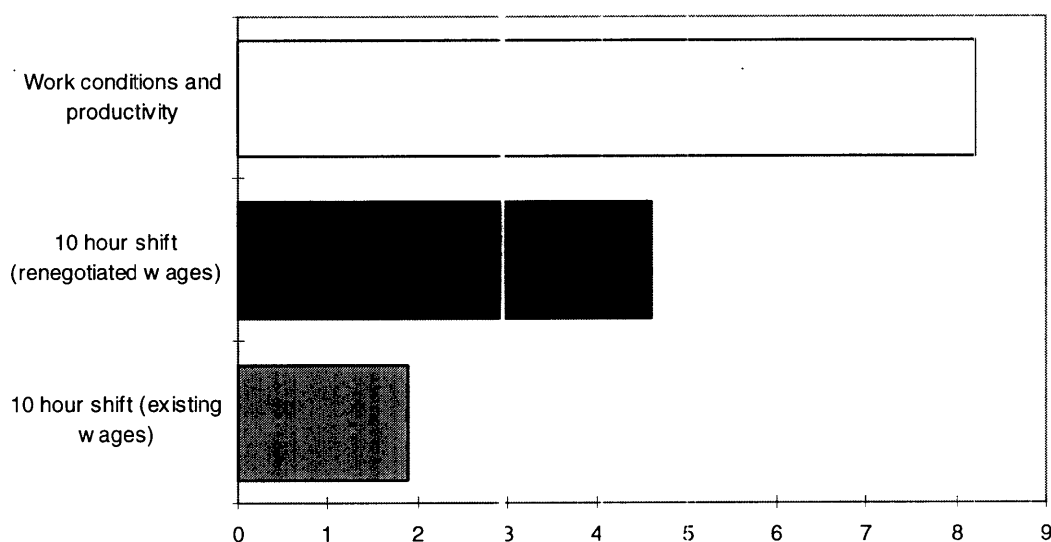
Based on the characteristics of a specialist beef abattoir identified in Table 3.3, the potential cost savings to be achieved by Australian abattoirs by introducing best practice labour productivity and negotiating work conditions were calculated. These cost savings are derived from spreading costs over a higher level of throughput, reducing the overall employment level on the slaughter floor and reducing premiums on 'overs'.¹² The IC estimates that an Australian abattoir which increases the length of its first shift to ten hours with existing wage conditions rather than operating two shifts can reduce costs by 1.9 per cent. An abattoir that moves from a two shift operation to one 10 hour shift with a shorter working week and renegotiation of wages to replace premiums on shifts and 'overs' with a constant wage was estimated to have a total cost saving of almost 4.6 per cent. If this saving is combined with a move to 'best practice' labour productivity, cost savings for abattoirs increases to 8.2 per cent. Figure 3.1 illustrates these cost savings.

The IC's analysis shows the extent to which improved labour productivity and negotiated work conditions can benefit the industry by reducing costs. The

¹² The ability of abattoirs to realise these savings depends on being able to increase throughput. This will depend on the seasonal availability of livestock and would necessitate rationalisation within the industry.

ability to negotiate work conditions and improve labour productivity by adopting 'best practice' manning levels is estimated to result in a cost saving to abattoirs of 8.2 per cent. The IC estimate this productivity improvement to be equivalent to \$83 million in the beef industry. Negotiated work conditions contribute the most to achieving this overall cost saving.

Figure 3.1 Cost savings for an abattoir resulting from negotiated work conditions and the adoption of best practice labour productivity (per cent of direct slaughter costs)



Source: Industry Commission (1994, Volume II, p. 179)

Booz-Allen & Hamilton international comparison study

A study by Booz-Allen and Hamilton in 1993 on behalf of the Meat Research Corporation (MRC) made international comparisons of the meat processing industry. Booz-Allen & Hamilton made cost comparisons between Australian best-in-class processors and those in the US, Ireland, Argentina and New Zealand. The study, including data from ten abattoirs, found scope for

improvement in the Australian meat processing industry as processing costs were significantly higher in Australia compared to the US. However, Australian processors remain competitive due to their access to cheaper livestock.

Method

Booz Allen & Hamilton selected a set of Australian and international “best-in-class”¹³ meat processing facilities and compared their respective costs. The selection of participating facilities was based on a consultation process involving meat processing companies, industry experts and consultants specialised in this industry, checked against publicly available data. Data on costs from the selected facilities were gathered and ‘cleaned’, enabling comparisons to be made.

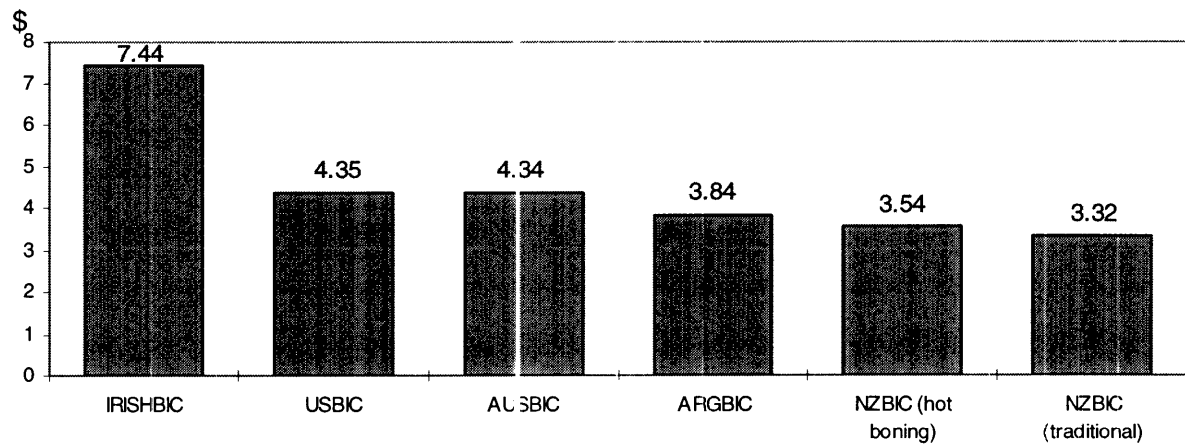
There are certain limitations to this approach which mean that conclusions need to be drawn carefully. There are difficulties associated with selection of “best-in-class” facilities. Cost comparisons between firms in different countries are complicated by the differences in location, product/market mix, government policies, resource availability and opportunity cost of resources (Industry Commission, 1994). Moreover, international comparisons are exchange rate-sensitive. Despite these limitations, the results of the study provide some indication of the relative processing costs between countries.

Results

The study found that the Australian best-in-class abattoir was not the highest cost producer overall. However, it did have the highest processing costs. Figure 3.2 shows the respective total delivered cost/unit, and Figure 3.3 shows the respective processing costs per unit.

¹³ “Best-in-class” firms are those that adopt best practice, within a set of similar competing firms (Industry Commission, 1994).

Figure 3.2 Total delivered cost/unit (A\$/kg FW)

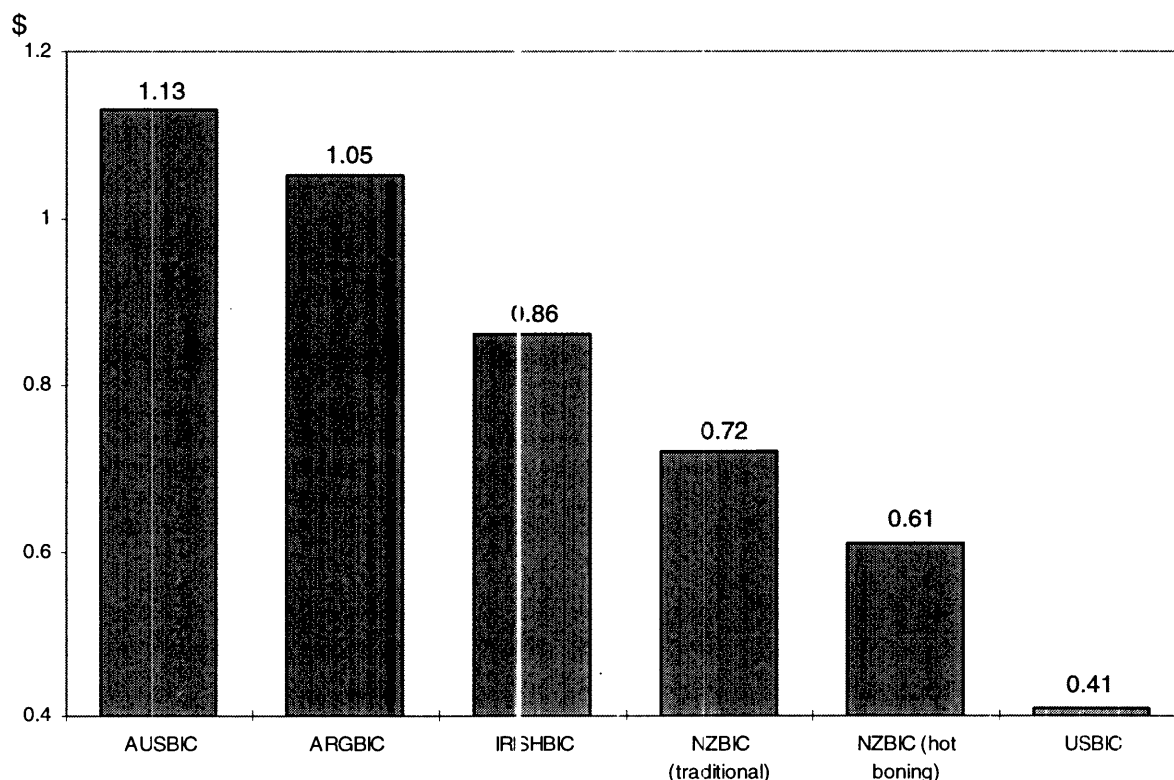


Source: Booz-Allen & Hamilton (1993, p. IV-14)

BIC = best-in-class

FW = finished weight. This includes all chilled or frozen muscle meat cuts, manufacturing and ground beef, trimmings and fat that can be sold as meat (boxed), not by-products. It excludes traditional by-products (eg. hides, offals, tallow, meals etc)

Figure 3.3 Processing costs/unit (A\$/kg FW)



Source: Booz-Allen & Hamilton (1993, p. IV-14)

BIC = best-in-class

Figure 3.3 highlights the cost disadvantage faced by the Australian abattoir in terms of processing costs. The study found that labour costs in the Australian abattoir represent the single largest area of cost disadvantage against the best-in-class facilities in the comparator countries.¹⁴ The labour cost per unit of the Australian abattoir is 47.1 Ac/kg FW. The US best-in-class abattoir had the lowest unit cost for labour at 16.5 Ac/kg FW. The best-in-class New Zealand (hot boning) abattoir had the next lowest unit labour cost of 19.5 Ac/kg FW. The New Zealand (traditional) abattoir had a unit labour cost of 26.4 Ac/kg FW.

¹⁴ Other factors affecting the cost gap include packaging costs, service input costs, overhead and depreciation costs.

The main factors contributing to the differences in labour costs between the comparator countries are summarised in Table 3.4. It shows that differences in labour productivity are the most significant single factor contributing to this difference in labour costs between Australia and the US and New Zealand abattoirs.

Table 3.4 Total labour cost difference with Australia (Ac/kg FW)

Factor	USBIC	ARGBIC	IRISH BIC	NZBIC (TRADITIONAL)	NZBIC (HOT BONING)
Animal size	5.9	(0.4)	6.6	2.0	(4.6)
Yield differences	3.7	2.8	2.8	0	1.7
By-product labour	0	1.0	2.0	0	2.0
Wage rates	0	41.0	(5.6)	(2.7)	(4.6)
Benefits (on-costs)	0.2	(11.0)	6.6	3.1	3.7
Labour productivity	13.5	(13.8)	(6.0)	11.1	22.4
Other factors*	7.3	1.4	6.5	7.2	7.0
<i>Total differences</i>	<i>30.6</i>	<i>21.0</i>	<i>12.9</i>	<i>20.7</i>	<i>27.6</i>
<i>vs AUSBIC</i>					

Source: Booz-Allen & Hamilton (1993, p. IV-27)

* Includes management, product mix, other unexplained factors

Work practices, along with technology and the mix of animals processed and products produced, appeared to be the major factors contributing to labour productivity differences. In terms of work practices, the tally payment system in Australia was estimated to be of high importance in explaining the gap. This is because it effectively places a ceiling on productivity improvement and inhibits the adoption of continuous improvement principles in the production process. Greater automation in the US best-in-class abattoir was also estimated to be of importance in explaining the labour productivity gap between Australia and the US. Multi-tasking is another factor that appears to be important in explaining

the labour productivity gap. The New Zealand hot boning facility has broad multi-tasking and has a slaughter labour productivity that approaches that of the US.

In summary, if the Australian best-in-class abattoir were to close the cost gap in terms of labour costs with the US, labour costs¹⁵ would be reduced by 13.7 Ac/kg FW, which equates to a reduction of 12.1 per cent in non-livestock processing costs. If it were to achieve labour cost levels of the New Zealand (traditional) abattoir, labour costs in the Australian abattoir would be reduced by 11.5 c/kg FW, which is equivalent to a 10.2 per cent reduction in non-livestock processing costs. If labour costs declined to be in line with the New Zealand (hot boning) abattoir, labour costs would be reduced by 23.5 Ac/kg FW, which is equivalent to a 20.8 per cent reduction in non-livestock processing costs.

Centre for International Economics study

The Centre for International Economics (CIE) recently undertook a study that analyses the effects of changes to work practices proposed by Australian Meat Holdings (AMH) in Queensland to be implemented as part of negotiated enterprise agreements (CIE, 1995). The aim of these changes is to reform the existing arrangements that are in place under the Meat Industry Award tally system.

New work arrangements proposed by AMH involve changing work arrangements from one six hour shift, five days a week to two ten hour shifts, six days a week. These changes are estimated to increase capacity utilisation of plant by four times.

Labour costs per tonne (carcase weight basis) under the tally system was \$279 per tonne for 1995. It is estimated that under the enterprise agreements

¹⁵ Includes by-product labour, wage rates, benefits (on-costs) and labour productivity.

covering its Queensland plants, labour costs will fall to \$226 per tonne, representing a decrease in unit labour costs of 19 per cent. This is estimated to translate to a decrease in unit costs in total of 4 per cent.

Method

The CIE utilised the global meat industry (GMI) model they developed for the Meat Research Corporation and the ORANI model to obtain estimates of the impact of the changes at AMH. The GMI model divides the global meat industry into 30 regions and countries and provides annual projections of production, consumption, prices, exports and imports for each type of meat. ORANI is a multisectoral model of the Australian economy which captures the interrelationships between different industries. It provides estimates of the economy-wide effects of policy or other changes.

The impact of the estimated productivity gains are assessed under two scenarios. The first is that the labour reforms are confined to AMH plants in Queensland. This involves weighting the 4 per cent cost reduction by AMH's share in Australian production.¹⁶ The second is that labour reforms are adopted industry-wide as best practice.

Results

The GMI results indicate a total payoff to the industry from the AMH reforms of \$62 million in gross value of beef production between 1995 and 2005 under the first scenario, and increasing to \$404 million under the second industry-wide scenario. Under the first scenario where reforms are confined to AMH only, the total Australian production of beef in 1996 would be 8 kt higher and Australian exports of beef in 1996 would be 8 kt higher. Under the second scenario, beef production would be 52 kt greater and exports would be 47 kt greater in 1996.

¹⁶ AMH accounts for 15 per cent of the Australian cattle kill and processes approximately 20 per cent of all meat exported (CIE, 1995).

Using ORANI to simulate the impact of the proposed changes on the economy, under the first AMH-only scenario, the improvement in the international competitiveness of meat processing results in an increase in processed meat exports of about 0.4 per cent. The demand for livestock by the processing sector grows and consequently, farm cattle production is estimated to expand by 0.14 per cent and the farm price of cattle by 0.5 per cent. As expected, the gains are considerably higher if the AMH reforms are adopted as best practice throughout the Australian industry, with an increase in processed meat exports of 2.73 per cent, a growth in farm cattle production of 0.93 per cent and an increase in farm cattle price of 3.2 per cent.

In summary, the first hypothesis of this dissertation is that there is scope for labour market reform in the meat processing industry to achieve improvements in labour productivity and therefore reduce production costs. The evidence from the literature reviewed in this chapter indicates that this hypothesis is true. The IC found that reforms improving labour productivity and the ability to negotiate work conditions would result in processing cost savings to abattoirs of 8.2 per cent. Booz-Allen and Hamilton found potential processing cost savings of 12.1 per cent, 10.2 per cent and 20.8 per cent from achieving labour cost levels equivalent to best practice in the US, New Zealand (traditional technology) and New Zealand (hot boning) respectively. CIE found that certain workplace reforms could decrease unit labour costs by 19 per cent and total unit costs by 4 per cent. These studies indicate that there is scope for labour market reforms in the meat processing industry that will reduce production costs.

3.6 Summary

This chapter gives an overview of the recent history of industrial relations in Australia and in particular, the progress towards a more decentralised system. The expected benefits of such a system is assessed by drawing on the literature in this area. Within the broad context of the industrial relations system in

Australia as a whole, the particular labour market issues relevant to the meat processing industry are examined. Issues such as complexity and multiplicity of industry awards, the tally system and the level of industrial disputation are identified as significant concerns for the industry in terms of its ability to increase efficiency and remain competitive. The benefits expected to flow from a more flexible approach to industrial relations, characterised by greater reliance on enterprise bargaining, are canvassed. Finally, some of the more recent studies done that assess the potential for cost savings in the industry are reviewed. From this review, a number of estimates of potential cost savings from labour market reforms are obtained.

However, these estimates do not provide the information necessary to examine the second hypothesis of this dissertation which states that industry participants, including livestock producers and beef consumers, will benefit from reform. The results from these studies are generally too aggregated to provide this information. In addition, they emphasise the benefits to the meat processing industry, when economic theory (discussed in the next chapter) suggests that consumers will also benefit from reform. The studies also do not provide estimates of the benefits of reform in terms of changes in producer and consumer surplus, which are the measure traditionally used by economists to assess welfare changes. Therefore, these estimates are used as input into the EDM, which gives results that enable the second hypothesis to be examined.