BIS Shrapnel Forestry Group

Global marketing intelligence and forecasting

Case Studies of the Hardwood Outdoor and Natural Feature Grade Furniture Sectors Western Australia

prepared for

Australian Bureau of Agriculture and Resource Economics
and
Department of Primary Industries and Energy

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FOREWORD

This report is the product of a technical consultancy undertaken by the BIS SHRAPNEL FORESTRY GROUP to develop a detailed economic profile of two sectors of the hardwood-based manufacturing industry in Western Australia. The report forms a part of the economic assessment for the Western Australian RFA.

The principal consultant was Mr Bernard Neufeld of BIS Shrapnel. The consultancy was managed by The Australian Bureau of Agricultural and Resource Economics (Mr Peter Connell) and was facilitated by The WA Department of Conservation and Land Management (Mr Terry Jones and Dr Martin Rayner) and The WA Department of Resources Development (Mr Ross Guyton).

The Commonwealth and WA Governments wish to acknowledge the extensive cooperation and assistance provided by individuals and companies in the industry in contributing background information and data for this project.

Table of Contents

Page No:

BIS

List of Tables

Page No:

EXECUTIVE SUMMARY

The major finding of this report is that while the outdoor and natural feature furniture industries in Western Australia are not large, they have grown very rapidly over the past five years, there is considerable potential for further growth in both domestic and export markets, and they add significantly to the value of Western Australia's timber resource, while using very little timber. They are the type of industries that should be nurtured and fostered, with government support if necessary, if the objective is to maximise value adding to Western Australia's hardwood resource.

Industry size

Both industries are relatively small. The outdoor furniture industry has three major producers and approximately twenty smaller producers. The natural feature furniture industry has only six to eight small producers. The three major outdoor furniture manufacturers had a turnover of $25 million in 1998, and with the twenty smaller producers included, it is estimated that the turnover was $50 million. The natural feature furniture industry had a turnover of approximately $8 million in 1998. Total industry turnover was estimated to be $58 million in 1998.

Historical growth

Both industries have grown rapidly over the past five years. The outdoor furniture industry grew at an annual average rate of 18%, while the natural feature furniture industry grew at a rate of 17% per annum between 1993 and 1998.

Growth forecasts

Forecasts are for both industries to continue to grow rapidly. The outdoor furniture sector is expected to grow at a rate of 9% per annum, and the natural feature industry at a rate of 17% per annum over the five years to 2003. By 2003, the industry should have in annual turnover of over $70 million, according to current growth plans. If new players enter the industry, turnover could be even larger.

Exports

The outdoor furniture industry is export driven. Exports in 1998, at over $8 million, were 34% of turnover for the three major producers. This is expected to grow to $18 million, and 49% of turnover by 2003.

The natural feature furniture industry is driven mainly by the domestic market, where there is still considerable potential for market expansion. However, there is substantial opportunity for these companies to export, and exports will likely expand over the next five years. The main constraints appear to be a lack of skilled personnel to produce a high volume for export, a commitment to exporting, and packaging and distribution logistics. The industry will likely need considerable support from government in the initial stages of entering the export market. Key target markets for both sectors are North America and Europe.

Sales to eastern states and New Zealand

Both the outdoor furniture manufacturers and the natural feature furniture manufacturers are successfully marketing their product to the eastern states and New Zealand.

Excluding exports, 40% of the major outdoor producers sales went to New South Wales in 1998, 23% to Queensland and Victoria, and 21% to New Zealand. A further 8% was sold to South Australia, and 5% to Tasmania/Northern Territory, compared to 5% in Western Australia. Most of these sales were through Harvey Norman, Myer and David Jones.

The natural feature furniture industry is currently focussed on the domestic market. Most are interested in expanding sales to the eastern state's. Most sales to eastern states are via a network of furniture and "boutique" shops. There is considerable opportunity for sales of both marri and jarrah natural feature furniture in the eastern states, and the growth strategy for several existing producers is very much targeted to this market.

Direct and indirect employment

The outdoor furniture industry directly employs an estimated 440 people, the natural feature industry 95. Total direct employment is approximately 535.

The industry also appears to generate considerable indirect employment although this is difficult to measure. The Furniture Industry Association estimates that for every direct job, three indirect jobs are created, which would suggest indirect employment over 1,600 in addition to the 535 direct jobs in the industry. Total direct and indirect employment is estimated to be over 2,100. It is estimated that a further 400 people are employed directly and indirectly by the natural feature furniture industry.

Impact on the economy

The outdoor and natural feature furniture industries contribute positively to the economy in at least four ways:

- increased capital investment
- employment creation and income generation
- the balance of trade
- diversifying manufacturing to rural centres.

It is estimated that the two sectors of the industry had accumulated capital investments of over $25 million. Investment is expected to increase by over 60% over the next five years to over $40 million, according to current expansion plans.

The employment created by both sectors would have generated an estimated $70 million in income, over $20 million in direct income, and an estimated $50 million in indirect income, in 1998 on the assumption that three jobs are created indirectly for every direct job in the industry.

The industry is becoming increasingly export oriented, and in 1998 exported an estimated $8 million to $10 million in furniture, a direct contribution to Australia's balance of trade. Considerable furniture is also sent to the eastern states which creates a direct flow of income to the West Australian economy.

The industry is creating a manufacturing base in rural centres. Some of the outdoor and natural feature furniture manufacturers are located in rural centres, where they support increased capital investment, employment and manufacturing activity.

Utilisation of wood resource and value adding

Both sectors of the industry use very little wood compared to the value of the final product. Estimates are that the industry used only 16,000m^3 of timber in 1998, 15,000m^3 for outdoor furniture manufacturing and less than 1,000m^3 for natural feature furniture manufacturing. It is expected to be using 25,000m^3 to 30,000m^3 by 2003.

Both industries use predominantly jarrah. The outdoor furniture industry is totally dependent on jarrah, which commands a premium price and quality brand in the international market. The natural feature furniture industries has until recently used mainly jarrah, but marri has been increasingly used recently and karri has been tested. An estimated 75% of natural feature furniture in Western Australia is produced from jarrah, and this could decline to 60% by 2003, depending on the success that manufacturers have with marri and karri.

Both sectors of the industry use wood very efficiently. The outdoor furniture industry uses short lengths, which a few years ago were discarded. The natural feature industry uses timber that would have been discarded in the past, when only clear grade timber was used for the manufacture of furniture. The development of these two sectors over the past five years has in effect significantly increased the availability of hardwood suitable for furniture manufacturing.

Both sectors add significantly to the value of the timber resource. Outdoor furniture manufacturers sell the final product for three to four times the input cost. Natural feature furniture manufacturers sell the final product for six to eight times the input cost. It is estimated that the outdoor furniture manufacturing industry added over $16 million to the value of timber purchased for just $8 million in 1998. The natural feature furniture industry added over $5 million to the value of timber purchased for just $880,000 in 1998. Total value added for these two sectors is expected to rise to over $36 million in 2003, at a timber cost of just $14 million.

1. BACKGROUND AND TERMS OF REFERENCE

As part of the Regional Forest Agreement process (RFA), the Australian Bureau of Agriculture and Resource Economics (ABARE) and the Department of Primary Industries and Energy (DPIE) have commissioned BIS Shrapnel Forestry Group to undertake a case study of the hardwood outdoor and natural feature grade furniture manufacturing industries in Western Australia. The study has been managed by ABARE, funded by DPIE, and facilitated by the West Australian Department of Conservation and Land Management (CALM) and the Department of Resources Development (DRD), with the support of the Forest Industries Federation of Western Australia (FIFWA), and the Furnishing Industry Association of Australia WA Chapter (FIAA).

The purpose of the study is to investigate the structure of the industry, its potential for adding value to Western Australia's hardwood resource, and its potential for growth and contribution to the economy via capital investment, employment creation and domestic and international trade development.

The terms of reference for the consultancy are as follows:

The consultant will initially undertake two case studies of value adding industries in Western Australia. These industries are:

Hardwood outdoor furniture manufacture and

Short-run production of individual pieces manufactured using natural feature grade wood.

For each case study, the consultant will address the following issues:

1. The size of the industry in Western Australia.
2. How much of the industry's output is exported and how much is sold to local and eastern markets?
3. How reliant is the industry on WA hardwoods and why.
4. How many people does the industry employ.
5. What is the likely indirect employment factor to attribute to the industry.
6. What is the value of the industry to the Western Australian and Australian economies.
7. How much WA hardwood is used by the industry.
8. How much wood other than WA hardwood is used by the industry.
9. What growth has the industry experienced in the last five years.
10. What is the projected growth for the next five years.
11. What is the average buying price of WA hardwood per cubic metre of the industry and what is that wood worth per cubic metre in finished product average price.

The timing for the delivery of the case studies is Monday 6 July.

Upon completion and delivery of the case studies, the consultant will meet with the principal to discuss the need for further work on the outlook more generally for the timber value adding industries in Western Australia, drawing on the case studies, the earlier BIS Shrapnel report for ABARE on development opportunities for the WA timber industry and other work undertaken by BIS Shrapnel and others on the WA timber industry.

2. METHODOLOGY

Information for this study was obtained in a series of meetings with industry associations, furniture manufacturers and government departments. The meetings which were conducted individually over a period of one week, were frank and open-ended discussions about the nature, operational details and future intentions of furniture manufacturers in each sector. The manufacturers were very forthcoming with information, not only about their future intentions, but also about their financial details. They were by and large both enthusiastic and concerned about the future.

The interviews with the manufacturers were conducted by the consultant (Bernard Neufeld) and attended and facilitated largely by CALM (Terry Jones) and in one case also by DRD (Ross Guyton). The executives and owners of the organisations that were interviewed are listed below.

Industry Associations

Forest Industries Federation of Western Australia (Mr Trevor Richardson)
Furnishing Industry Association of Australia (W.A) (Mr Ian Hearne, President)

Outdoor Furniture Manufacturers

Inglewood Products Group (Mr David Gosatti)
Clarecraft Industries (Mr Bill Clare)
Jensen Jarrah (Mr Max Jensen)
L & B Timbers (Owner)
Stallwood Furniture (Owner)

Natural Feature Grade Furniture Manufacturers

Just Jarrah (Mr John Riggs)
BVR Brooker Van Rhym Furniture (Mr Les Brooker)
Jamel Furniture (Mr Mal Princiotto)
Stirling Furniture (Mr Frank Iopollo and Mr Vince Iopollo)
Jah-Roc Pty Ltd (Mr Gary Bennet)
Antry Pty Ltd (Mr Edmund Damouni)

Government

Department of Conservation and Land Management
(Mr Terry Jones, Mr Jon Murch)

Department of Resources Development
(Mr Ross Guyton)

3. HARDWOOD OUTDOOR FURNITURE MANUFACTURING

3.1 Size and structure of the outdoor furniture industry, Western Australia

The outdoor wooden furniture industry in Western Australia is dominated by three major producers: Inglewood Products, Jensen Jarrah and Clarecraft Industries. These three major producers between them had a turnover of approximately $25 million in 1998, and are at the cutting edge of the world outdoor timber furniture industry.

In addition, the FIAA estimates that there are approximately twenty smaller manufacturers that produce outdoor furniture components along with other products such as pallets. The turnover for these smaller operations is estimated to be between $6 million and $8 million in 1998. Several of the smaller producers are producing a range of high quality products and have plans for rapid expansion. They could within a few years begin to challenge the major producers for market share. At least two of the smaller operators had turnover of $1 million in 1998, with plans to achieve a turnover of $4 million to $6 million within five years.

The current industry structure has evolved over a short period of time, from the 1980s, and has been driven by individuals with an interest in developing the outdoor furniture industry, and with the support of the state government, which has a strategy to ensure that the maximum value added is achieved from the utilisation of its unique hardwood resource.

The three major producing companies have been developed by these individuals who are still in the businesses today, each with a unique blend of technical, design and entrepreneurial capability to drive the business forward particularly in the international market. In each case, the focus of expansion over the next five years, is the international market, with exports targeted mainly to Europe and the United States. They typically employ from 35 to 70 people per company.

The twenty smaller producers are developing along a similar path. While many of them produce outdoor furniture components for products such as barbecue trolleys, they also produce other products such as pallets. Typically, they are small single owner operations, with five to six employees. Some of them are larger, with up to 18 employees, and have a range of products including chairs, tables and components for barbecue trolleys.

The industry generally produces a range of products including chairs, tables and components for barbecue trolleys. The furniture is designed to use wood of small dimension, and of both clear and feature grade. It is therefore a very efficient utiliser of the Jarrah resource. It is 100% reliant on Jarrah.

3.2 Industry Growth

3.2.1 Historical

The growth and expansion of these three companies has been very rapid. The three companies have more than doubled in size (turnover) from $10.5 million in 1993 to $24.5 million in 1998. The average annual growth rate has ranged from 8.4% to 27.6% over the past five years. On average, the three majors grew at a rate of 18% per annum over the past five years.

3.2.2 Forecast

The industry is expecting turnover to increase to $37 million in the five years to 2003. This is a growth rate of approximately 9% per annum. Given historical growth rates, this is a very achievable target, and probably understated. The historical growth rates and forecasts are shown in Table 1.

Assuming that there are twenty additional small producers, their annual turnover would have been approximately $12 million in 1998. This would suggest that the value of the industry as a whole, measured in annual turnover, was approximately $50 million. If the smaller producers grow at approximately the same rate as the larger producers, by 2003, annual turnover for the industry as a whole would be approximately $55 million by 2003. This is probably a very conservative estimate.

Table 1: Annual Turnover of Major Outdoor Furniture Producers, Western Australia, 1993 to 1998

Year	*Turnover 1998 $million*	*Annual Growth Rate %*
Actual		
1993	10.5	-
1994	13.4	27.6
1995	16.7	21.6
1996	18.7	12.0
1997	22.6	20.6
1998	24.5	8.4
Forecasts		
1999	25.8	5.3
2000	28.0	8.5
2001	30.7	9.6
2002	32.9	7.2
2003	36.9	12.2

Source: Inglewood, Clarecraft, Jensen

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3.3 Export orientation

3.3.1 Actual (estimated) Exports

The three major producers exported an estimated $8.4 million of product in 1998. This is approximately 34% of total production. The smaller producers, with the exception of one or two producers are mainly oriented to the local market. Assuming that the twenty smaller producers had a turnover of $12 million in 1998, directed to the domestic market, total sales in Australia were approximately $28 million in 1998. This includes $12 million from the twenty small producers, and the $16 million not exported by the majors.

Table 2: Exports of Outdoor Furniture, By the Three Major Producers in Western Australia 1993-2003

Year	*Exports* 1998 $millions*	*Annual Growth %*	*Turnover** 1998 $millions*	*Exports/ Turnover Ratio*
Actual				
1993	1.57	-	10.50	15.0
1994	2.17	38	13.40	16.2
1994	2.93	35	16.73	17.5
1996	2.89	-1.4	18.74	15.4
1997	5.93	105	22.60	26.2
1998	8.36	41	24.50	34.1
Forecasts				
1999	10.85	30	25.80	42.1
2000	12.45	15	27.99	44.5
2001	14.90	20	30.70	48.5
2002	16.40	10	32.87	49.9
2003	17.70	8	35.85	49.4

Source: Inglewood, Jensen, Clarecraft

* Excludes sales to New Zealand
** Excludes turnover of 20 smaller producers

3.3.2 Domestic sales and sales to New Zealand

Domestic sales and sales to New Zealand for the major producers are distributed approximately as shown in Table 3.

Table 3: Distribution of New Zealand and Domestic Sales of Western Australian Outdoor Furniture, Major Producers 1998

State	*% Share of Sales*
Western Australia	5
New South Wales	40
Queensland/Victoria	23
South Australia	8
Tasmania/Northern Territory	3
New Zealand	21
Total	100

Source: Inglewood, Jensen, Clarecraft

Sales in the eastern states of Australia are directed mainly through the three major retail chains, Coles Myer, Harvey Norman and David Jones.

3.3.3 Export Forecasts

The industry is forecasting that exports by the three major companies will increase to almost $18 million by 2003. This will be approximately 36% of annual turnover. The export strategy is based on very good prospects for sales to the United States, Japan, the United Kingdom, the Middle East and other European countries such as Greece, Turkey, Sweden and Italy.

3.4 Employment

3.4.1 Direct

According to the Furnishing Industry Association of Western Australia, the West Australian furniture industry employs approximately 12,000 people of which approximately 8,000 are employed in the field of timber furniture. The association estimates that the outdoor furniture industry employs approximately 450 people, with expectations that employment will increase by 300 over the next three years.

According to the three major producers, they employed approximately 200 people in 1998, excluding management. This is double the number employed in 1993. Employment in the three major companies has grown at a rate of approximately 14% per annum over the five years to 1998. Assuming that twenty smaller producers employ on average, twelve people per producer, non-managerial employment would be approximately 240 for the twenty small producers. The industry in total would therefore employ approximately 440 non-managerial personnel.

The three major producers are forecasting non-managerial employment to reach 250 by 2003. This is an annual growth rate of less than 6%, and probably a very conservative estimate given their plans for expanding production and exports. Some of their future capacity expansion will be achieved through mechanisation.

The strongest growth rates in employment will likely occur in the non-majors, as several of them will expand their operations to a level approaching the current size of the three major producers. It is therefore reasonable to expect employment to reach a level of 700 by 2003, excluding managerial personnel.

Actual employment from 1993 to 1998 (non-managerial) and annual forecasts to 2003 for the three major producers are shown in Table 4.

Table 4: Employment (non-managerial), Three Major Producers of Outdoor Furniture, Western Australia, 1993-2003

Year	*Employment*	*Annual Growth*
Actual	*Number*	*%*
1993	100	-
1994	113	13.0
1995	125	10.6
1996	148	18.4
1997	167	12.8
1998	191	14.4
Forecasts		
1999	205	7.3
2000	216	5.4
2001	229	6.0
2002	239	4.4
2003	250	4.6

Source: Inglewood, Clarecraft, Jensen

3.4.2 Indirect Employment

The outdoor furniture industry is also a significant generator of indirect employment although this is very difficult to quantify. The Furniture Industry Association estimates that for every job directly related to the furniture industry, three indirect jobs are created.

This is a reasonable assumption, since there are many indirect suppliers to the outdoor furniture industry, including the following:

- Stainless steel fittings
- Plastic fittings
- Wheels
- Hardware components (nuts and bolts)
- Metal products such as axles for barbecues
- Outdoor furniture dealerships (over 35 dealerships in Australia for one major alone, each employing 2 to 6 people, and relying on one Western Australian producer for 25% of stock)
- Oils
- Packaging materials
- Sanding discs and finishing materials
- Warehousing
- Tooling
- Cutters
- Paints
- Transport

In addition, outdoor furniture manufacturers spend considerable money every year on marketing in Australia and internationally. In 1998 this was estimated to be over $1 million. They also contract work to upholsterors, woodturners, transport companies and blade sharpeners.

Further indirect employment is generated with the three key retailers in Australia: Myer, Harvey Norman and David Jones.

3.5 Impact of the outdoor wood furniture industry on the economy

The outdoor wood furniture industry in Western Australia contributes positively to the economy in at least four ways:

- Increased capital investment
- Employment creation and income generation
- The balance of trade via trade development
- Diversifying the manufacturing sector into rural centres.

3.5.1 Capital Investment

The value of capital investment for the three major manufacturers Inglewood, Clarecraft and Jensen has increased from approximately $4 million in 1993 to a current (1998) value of approximately $9 million. The total debt of these companies is approximately $3.6 million. The debt/equity ratio is approximately .40.

In 1998, these three companies were generating turnover of $25 million on a capital investment base of $9 million.

In addition the twenty smaller producers invest considerable amounts in capital equipment. An average capital investment of $600,000 per company would generate capital investment of approximately $12 million for twenty small companies.

The total industry therefore has invested approximately $20 million in capital, a considerable contribution to the productive capacity of manufacturing in Western Australia.

Assuming that the small producers have a debt equity ratio of .40, as do the larger producers, the total debt of the industry would exceed $8 million in 1998.

This debt and productive capacity would be at risk should the industry not have access to the Jarrah resource. Further, the major producers and several smaller producers have plans for additional expansion of investment over the next five years. The three majors have intentions to increase their capital investment from $9 million in 1998 to over $15 million in 2003. Some of these plans are contingent on the outcome of the RFA process.

3.5.2 Employment creation and income generation

The employment created by this industry generates considerable income, which is re-spent in other sectors of the economy.

On the assumption that the average worker earns $30,000 per annum, and that the industry employs 440 non-managerial workers, this would generate direct income of over $13 million per annum (1998).

In addition, assuming that managerial salaries are 6% of the $50 million in turnover generated by the industry, a further $3 million in income would have been created in 1998.

The total income generated directly by the industry in 1998 would be approximately $16 million. Indirect employment creation would add further to income generated in the economy, depending on the multiplier. A multiplier of 3, assuming an average wage of

$30,000, would generate a further $39 million in income for non-managerial personnel. Each of these manufacturers also contributes to the economy by paying government charges such as rates for power and water, land and property taxes and corporate taxes, and therefore generates indirect employment and income.

3.5.3 Trade development

This industry is increasingly becoming export oriented. The bulk of expansion over the next five years will be driven by increased exports on the part of the major producers.

In 1998, the three major producers exported over $8 million in products. This is expected to increase to almost $18 million by 2003, a direct contribution to Australia's balance of trade.

Substitution of outdoor furniture for imported furniture from other countries equally contributes positively to the balance of trade, as does the substitution of local species such as Jarrah in place of imported species.

The major producers have undertaken significant promotion activity to increase exports. The industry spends almost $1 million per year in promoting exports, with the assistance of Austrade. Wisely, at least two of the major producers also cross-sell in Europe and the United States. This is a positive step to selling Australian outdoor Jarrah furniture on an industry wide basis. An industry wide export promotion effort would permit some of the smaller producers to enter the export market.

3.5.4 Diversifying the manufacturing sector to rural centres

Much of the capital invested in this industry and the employment and income creation flows to regional centres. One of the major producers for example is located in a rural (non-Perth) location, and contributes significantly to the regional economy. Approximately one third of the direct benefits and indirect spinoffs outlined above flow to this regional economy. This industry is creating a manufacturing base in rural centres.

3.6 Utilisation of wood resource and value adding

3.6.1 Usage of Western Australian hardwood

The industry, excluding the twenty small producers used approximately 9,000m^3 of Jarrah in 1998. This is nearly double the amount used in 1993. Given the industries current expansion plans, the use of Jarrah is expected to almost double again to over 14,000m^3 by 2003. This is shown in Table 5. In addition, the twenty small producers, on the assumption that they each use 300m^3 per year, would use an additional 6,000m^3 of Jarrah. This would suggest that total hardwood usage for outdoor furniture production in 1998 was approximately 15,000m^3.

By 2003, total usage of Jarrah for the outdoor furniture industry is likely to be in the range of 25,000m^3 to 30,000m^3 per year, on the assumption that the three major producers will expand production capacity, and that the twenty smaller producers will also increase their production.

Table 5: Usage of Western Australian Hardwood, Major Outdoor Furniture Producers, 1993-2003

Year	*Timber Usage* m^3	*% Annual Growth Rate*
Actual		
1993	4,300	-
1994	5,300	23
1995	6,000	13
1996	6,700	12
1997	8,500	27
1998	8,800	4
Forecasts		
1999	10,300	17
2000	11,200	9
2001	12,300	10
2002	13,100	7
2003	14,300	9

Source: Inglewood, Clarecraft, Jensen

3.6.2 Dependence on Jarrah

The industry is highly reliant on Jarrah. Jarrah is a premium quality hardwood ideally suited to outdoor furniture production because of its durability, colour and strength. Jarrah is unique to Western Australia. Its current use for outdoor furniture has evolved from being used in the past for railway sleepers, as bridge dock piles and as paving blocks in the streets of London. It is highly resistant to rot, fire, termites, marine borers and most acids.

Because of these characteristics and its comparative scarcity world wide, it is a product that can command a premium in the international market place. Local producers have capitalised on these unique qualities and have established Jarrah outdoor furniture as a "high quality" product internationally, a product that is unique to Australia.

3.6.3 Competing species to Jarrah

The only timber that can compete with Jarrah at the high end of the market is teak, which is still considered to be the premium species for outdoor furniture. However, Jarrah is gaining market share, and with effective marketing techniques, it could eventually be recognised as "the" premium product, with its unique Australian character. Teak originates in Burma, Thailand and Vietnam and plantations are being established in a number of tropical countries including Papua New Guinea.

While outdoor furniture made from species such as Shorea have a larger share of the international market than teak and Jarrah, they are a cost-effective alternative, and not in the same quality range. Shorea species include Philippine mahogany, and balau from the Philippines, Malaysia and Indonesia. Other species such as iroka and bubinga, which are African hardwoods and kwila which originates in Papua New Guinea, Philippines, Solomon Islands, Fiji and North Queensland, are also quality hardwoods that could compete with Jarrah, but they are not as widely used or recognised internationally as is teak or Jarrah. They also do not have that unique "Australian" origin, which is so marketable in Europe and America.

In the domestic market, some outdoor furniture in New South Wales for example is made from treated pine but it is not in the same quality range as jarrah or teak, or other Australian hardwoods. Some sheoak is also used in Western Australia. This is a developing product for outdoor furniture but sheoak is more expensive and less readily available than jarrah.

Approximately $3,300m^3$ per annum of furniture grade jarrah is shipped annually to New Zealand and the other states. Of this, 17% is sent to South Australia, 37% to Victoria, 25% to New South Wales, 10% to Queensland and 10% to New Zealand. It is therefore also a popular species for manufacturers outside of Western Australia. In 1998, the furniture grade jarrah sent outside of Western Australia was approximately one third of the total timber used by the three major outdoor furniture manufacturers.

There has been some experimentation with the use of karri in Western Australia, but it is currently not widely used as it is more difficult to kiln dry and does not have the international appeal or awareness of jarrah.

3.6.4 Greater utilisation of timber by effective design

One of the great advantages of the outdoor furniture industry is that the designs facilitate the use of short lengths. Furniture can be designed so that almost any length of timber can be utilised. Further, second (non-clear) grade timber can be used, especially on downward facing surfaces of barbecue trolleys, tables and chairs. This allows for the utilisation of timber, which normally would have been discarded because of inappropriate length or appearance.

West Australian producers are developing a computer assisted design capability, which will not only significantly enhance their capacity to compete internationally in outdoor furniture sales, but will also utilise a premium but sustainable resource more efficiently.

3.6.5 Value added and timber pricing in outdoor furniture manufacturing

Furniture manufacturers in Western Australia buy jarrah for an average of $1,000 to $1,200 per cubic metre for furniture and for as low as $600 per cubic metre for timber suitable for barbecue trolleys (short lengths). The final product sells for three to four times the input price. There is therefore significant value added to timber, which would not otherwise be utilised for manufacturing high value products.

Table 6: Value Added by Major Furniture Manufacturers, Western Australia, 1998-2003

	Timber Cost*	*Value of Turnover 1998 $million*	*Value Added 1998 $millions*
1998	8.2	24.5	16.3
1999	8.6	25.8	17.2
2000	9.3	28.0	18.7
2001	10.2	30.7	20.5
2002	11.0	32.9	21.9
2003	12.3	36.9	24.6

* Assumes timber cost is one third value of output

In the five years to 1998, the cost of timber has been approximately one-third of the value of turnover. The three major producers in 1998 therefore added over $16 million to the value of timber purchased at a cost of just $8 million. The value added is expected to rise to over $25 million by 2003, based on current expansion plans, at a timber cost of just $12 million.

4. NATURAL FEATURE GRADE FURNITURE MANUFACTURING

4.1 Background to the natural feature grade furniture manufacturing industry, Western Australia

The natural feature grade (NFG) furniture industry in Western Australia is still very infant. The industry is a new phenomenon based on the use of natural feature grade timber which a few years ago was considered to be inadequate for the manufacture of furniture, and was basically waste.

Most Australian hardwoods are heavily "featured" with natural characteristics. There is currently a radical shift underway in which the consumers view these "character marks" in these native hardwoods, and this has major implications for the utilisation of hardwood for furniture production. Natural "decorations" such as fire streaks (kino vein) and wormholes are now considered by many consumers to be interesting features caused by natural past occurrences during the life of a tree. Examples of natural occurrences are fire, drought, flood and insect attack.

This change in consumer taste is due to factors such as the popularity of the "distressed" look, where furniture is made to look well worn, the use of recycled Australian hardwood beams from warehouses, and the naturalism trends associated with the 1990s. The acceptance of natural features is supported by environmental groups, and is consistent with trends to conservation and maximising the utilisation of timber resources.

This trend to utilising natural features in furniture is international in scope, and has been developing for some time in North America. It has yet to take hold significantly in some countries such as Japan, where clear grade is still preferred in furniture. The Victorian, Tasmanian and Western Australian branches of the FIAA have identified this look as uniquely Australian, and have been developing designs for international markets.

Furniture made from feature grade timber has won the award for excellence at the FIAA New Product Parade in 1995 and 1996, and has created significant interest and sales into a number of international markets, especially the United States.

A much larger volume of sawn wood is now effectively suitable for furniture manufacture, since only an estimated one fifth of Australia's sawn timber is "clear grade" in wide boards and long lengths.

State governments, forest industry associations and timber promotion councils in Australia have been collaborating to develop the market for natural feature hardwood together with the FIAA, the Australwood Export Network and an expanding network of furniture manufacturers and sawmillers. Funding assistance has been provided by State and Federal governments and the Forest and Wood Products Research and Development Corporation (FWPRDC). This funding has helped to generate a major impetus for the development of natural feature grade furniture markets in Australia and internationally by sawmillers and furniture manufacturers in Western Australia, Victoria and Tasmania.

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The cooperative effort between government and industry includes the following initiatives:

- raise awareness in Australia of the potential to use natural feature hardwood,
- identify manufacturers interested in developing products using natural feature hardwood
- define standards and specifications of natural feature hardwood, and improve the processing of natural feature by sawing, drying, sorting, machining, gluing, filling and finishing methods in concert with timber and furniture manufacturers
- provide technical and promotional support material and advice for manufacturers for domestic and overseas markets
- research key international markets
- research consumer attitudes to natural feature species, finishes and designs
- develop natural feature sales in overseas markets
- develop with the FIAA new Australian designs specifically for natural feature hardwood

Natural feature has become an accepted grade in Australia, especially in Victoria and Western Australia. The top selling bedroom suite in Australia is made from natural feature messmate from East Gippsland in Victoria.

The development of natural feature hardwood in Australia demonstrates that a timber, which was historically not suited for furniture, can ultimately be very successfully utilised at the upper end of the market given the right conditions and marketing and development strategies.

In Western Australia, the Department of Conservation and Land Management (CALM) is actively working with industry to encourage the use of jarrah, marri and karri for crafting into fine furniture, including natural feature furniture. With CALM's initiative, more than 50% of jarrah sawn timber is now suitable for furniture manufacture compared to only 10% before 1987. This has provided a solid basis for expanding the furniture industry in Western Australia, and has resulted in the emergence of at least six producers of natural feature furniture.

The Western Australian government is also supporting the "Wood and Paper Industry Strategy" of the Commonwealth Government. The strategy is intended to assist the wood furniture and paper industry to compete successfully in the international market place. The strategy is being supported administratively by the Western Australia Department of Resources Development and is intended to implement the 1992 National Forest Policy Statement, in conjunction with the Regional Forest Agreement and the Forest Industry Structural Adjustment Package.

These initiatives are likely to have a very positive influence on developing a new industry such as natural feature grade furniture.

4.2 Size and structure of the natural feature grade furniture industry in Western Australia

The natural feature grade furniture industry in Western Australia is a small but rapidly developing industry. There are currently only six to eight small producers with a combined annual turnover of between $6 million and $8 million per annum. The largest producer in 1998 is estimated to have a turnover of $2 million. The six producers which were interviewed have a combined turnover of $6.3 million, ranging from $800,000 to $2 million per producer.

Like the outdoor furniture industry the feature furniture industry has developed over the past five years, driven by individuals that have a technical background in the wood industry as craftsmen, as cabinet makers, as previous employees of other unsuccessful furniture companies, and in one case an internationally recognised master woodcarver and furniture maker. These individuals are driving the industry forward, and have the capacity to make it an internationally recognised industry.

One of the major constraints to the development of the industry appears to be the lack of sufficient numbers of such individuals, and apprentices who are able to produce enough natural feature furniture to satisfy an apparently insatiable domestic and international market.

Several of these individuals were satisfied with maintaining their existing market share and continuing to focus on the domestic market. Others were keen to drive the industry to unprecedented heights by expanding sales to eastern states and to the international market. Given sufficient individuals with a capacity to produce and to market, this industry has tremendous potential in Western Australia.

The major advantage is the uniqueness of the resource. While jarrah is the predominant species used to produce feature furniture, marri has been trialed successfully and there is some potential for using karri.

The six producers interviewed produce a wide range of products mainly in the upper end of the market. Products include tables, chairs, dressers, sideboards, dining suites, coffee tables and desks. Typically, they are small operations individually or family owned, with anywhere from four to twenty non-managerial employees per company.

4.3 Industry growth

4.3.1 Historical

The growth and expansion of the feature furniture industry has been quite rapid. The industry has more than doubled in size from turnover of $2.5 million in 1993 to $7.6 million in 1998. On average, the industry has grown at a rate of 17% per annum for the five years to 1998.

4.3.2 Forecast

The industry is expecting turnover to increase to over $16 million in the five years to 2003. This is a growth rate of approximately 17% per annum, about the same as the annual growth rate over the past five years. The historical growth rates and forecasts are shown in Table 7.

Table 7: Annual Turnover of Feature Grade Furniture Producers, Western Australia, 1993 to 1998

Year	*Turnover $million*	*Annual (%) Growth Rate*
Actual		
1993	3.5	-
1994	4.3	24
1995	5.6	31
1996	6.2	11
1997	6.7	8
1998	7.6	13
Forecasts		
1999	8.5	13
2000	10.0	17
2001	11.9	19
2002	14.3	20
2003	16.4	15

Source: Just Jarrah, BVR, JAHROC, Jamel, Stirling, Antry. Figures adjusted up by 20% to account for other producers not interviewed

4.4 Export orientation

The industry is currently mainly focussed on the domestic market and exports very little. In most cases, exports result from tourists entering retail outlets, and requesting an item. Some producers were not interested in expanding exports, perhaps because there is a sufficiently untapped domestic market, and perhaps because some of them were not capable of, or interested in delivering large volumes. Most were interested in expanding sales to the domestic market, especially the eastern states.

Some, however, were very interested in exporting, and were developing sophisticated hand crafted furniture that could be dismantled easily for export packaging.

The industry does not currently maintain adequate records to report on export volumes. However, the range of products produced, the sophistication and the quality of the products together with the uniqueness of jarrah and marri in particular suggest that there is a huge potential for exporting if the industry could be geared up to produce sufficient volume for the export market. This will require initial government support.

The Wood and Paper Industry Strategy mentioned earlier will be a very important support mechanism for encouraging the relatively small producers in this sector to market their product internationally. Equally important however, is the need for developing craftsmen, woodcarvers and furniture workers.

Apprentices are in short supply. Individuals with a combination of entrepreneurial talent and craftsmanship are a pre-requisite to ensuring that this industry can grow and succeed internationally.

4.4.1 Export and eastern states sales strategies

One of the manufacturers was basing its marketing strategy for the eastern states on developing a market network of shops to stock its natural feature grade marri furniture. At time of writing, three shops in New South Wales and two shops in Victoria were stocking and regularly selling the companies natural feature grade marri furniture. Plans were to expand this network to additional furniture retailers and "boutique" shops in Victoria and New South Wales. Approximately 8% of sales for this company were generated by the eastern states. Marri is similar in appearance to ash, oak and blackwood species.

The same company was planning to target the United States and the United Kingdom as export markets. An agent was to be appointed within the next six months to cover both countries.

Another company suggested that returns from exports were low compared to the domestic market, but was very successful selling to New Zealand. This company was targeting the United States, the United Kingdom and Asia. The company had sold some chairs to Japan and would make Japan an export target for selected products.

A fourth company suggested that there was significant scope for sales in Sydney and Melbourne. Plans were to open retail outlets in Perth, Sydney and Melbourne. The company was already selling significant volumes to Sydney and Melbourne. The company was planning to target Japan and the United States, but suggested that it was difficult to find people with adequate skills to make enough product for the export market. However, the company suggested that most of its products would sell very well in the United States, especially those that had an "Australian" image.

A fifth company was already exporting samples to the United States, and been establishing a market in Japan for three years, and was planning to open an agent office in New York. It was also developing an export strategy by jointly promoting Australian exports via a network of companies, including other furniture manufacturers and timber suppliers. The company was developing furniture that could be dismantled for export packaging. At time of writing this company had an order for one container of natural feature furniture from the United States.

The sixth company was producing product at the high end of the market and was basically targeting the domestic market. The company was successful in selling to all states, but had the perception that there were not enough skilled people to produce an adequate volume of furniture for the export market.

The company was very cautious about entering the export market, but had experience selling "up market" natural feature furniture to overseas visitors.

4.4.2 Export forecasts

Generally, this industry produces furniture which would likely be very appealing internationally. However, there are some major constraints arising from the relatively small size of operations, the fact that there is a constraint on skills, and the fact that both the product and the industry are relatively new. With government and industry wide networking support, however, there is a huge potential in the international market. The main constraints appear to be production capacity, a commitment to exporting, and packaging and distribution logistics.

4.5 Employment

4.5.1 Direct employment

According to the records of the six manufacturers interviewed, the industry directly employed approximately 74 non-managerial staff in 1998. Actual employment by the six producers was 62, but on the assumption that there are two to three additional small manufacturers, this has been upwardly adjusted by 20%. Employment has more than doubled since 1993, from 34 to 74, growing at an annual average rate of 17%. With the inclusion of managerial staff, total employment in the industry is likely between 95 and 100 people.

Based on the growth plans of existing producers, direct employment of non-managerial staff will increase to approximately 115 in the five years to 2003. This is an average annual growth rate of 9%.

It is possible of course that in the next five years new companies could be established to produce non-feature furniture. This would result in additional direct employment. It is also possible that exports will expand more rapidly than anticipated by the existing producers. If three additional producers were established, for example, with 10 employees each, this would bring employment of non-managerial staff to nearly 150. On the assumption that there are 4 managerial staff per company, and there are 12 companies in existence by 2003, employment would be approximately 200 by 2003.

Actual direct employment from 1993 to 1998 and forecasts to 2003, for the six companies interviewed, with a 20% upward adjustment for other companies not interviewed, are shown in Table 8.

Table 8: Direct Employment (non-managerial) Feature Grade Furniture Manufacturers, Western Australia, 1993-2003

Year	*Employment*	*Annual Growth (%)*
Actual		
1993	34	-
1994	42	24
1995	55	31
1996	65	18
1997	68	5
1998	74	9
Forecasts		
1999	83	12
2000	89	7
2001	96	8
2002	107	11
2003	115	7

Source: Just Jarrah, BVR, JAHROC, Jamel, Stirling, Antry. Figures adjusted up by 20% to account for other producers not interviewed

4.5.2 Indirect employment

The natural feature furniture industry generates considerable indirect employment, but as in the outdoor furniture industry this is difficult to quantify. It is not unreasonable to assume that for every job directly created by this industry, three indirect jobs are created. This is based on the fact that there are many suppliers to the industry, including the following:

- Paint
- Upholstery
- Hardware
- Glass
- Saw sharpening
- Abrasives
- Glues
- Machinery
- Contracts for wood turning
- Bevelling
- Transport
- Agents
- Designers
- Marketing and brochures.

A typical company would spend between $100,000 and $150,000 per year on indirect suppliers. This is equivalent to the wages of three to five employees in a furniture factory.

There are other businesses that are created as spinoffs from the feature furniture industry. Examples are retail and boutique outlets, which generate indirect employment. One manufacturer located in a tourist area had a restaurant and a retail outlet integrated with the furniture factory, and was using a warehouse to stage large functions. The restaurant catered to the functions and plans were underway to further integrate the factory with a brewery, and a facility for overnight accommodation. These associated businesses generate substantial additional employment, income and capital investment in Western Australia and particular regions of the Western Australian economy, as several of the furniture manufacturers are located in rural centres. This helps to establish a manufacturing base in rural centres.

4.6 Impact of natural feature furniture industry on the economy

In addition to contributing to the development of a manufacturing base in rural centres, the natural feature furniture industry in Western Australia has the potential to contribute positively to the economy in at least three ways:

- increased capital investment
- employment creation and income generation
- the balance of trade via trade development

4.6.1 Capital investment

The value of capital investment for the six companies interviewed was approximately $3.75 million in 1998. Plans are underway to expand capital investment to $6.65 million, almost double the current investment. Most of these companies are very conservative and are very reluctant to undertake debt. Most of these businesses expanded by reinvesting profits into the business rather than undertaking additional debt financing over the next five years. The debt/equity ratio in this industry is probably not more than .10.

4.6.2 Employment creation and income generation

The employment created directly and indirectly by this industry generates income, which is re-spent in other sectors of the economy.

On the assumption that the average worker earns $30,000 per annum, and that the industry employs 100 non-managerial workers, the industry in 1998 generated an estimated $3 million direct income in 1998.

In addition, assuming that managerial salaries are 15% of the $6.1 million annual turnover, a further $1 million in income would have been created in 1998.

The total income generated directly by the industry in 1998 would be approximately $4 million.

Indirect employment creation would add further to the income generated in the economy. Based on a multiplier of 3 and assuming an average wage of $30,000, the industry would generate a further $9 million in income for non-managerial personnel.

4.6.3 Trade development

Unfortunately the natural feature furniture industry is not yet sufficiently developed to be a major exporter. However, there are plans to target export markets, and one producer at time of writing had sold one container of furniture to the United States.

This industry can, with the support of government, become a major exporter, and can ultimately contribute significantly to Australia's balance of payments. Within five years the industry should be in a position to export at least 20% of its turnover. This would amount to approximately $2.8 million, based on current expansion plans.

Via its trade with other states, the industry also contributes to the Western Australian economy in terms of payroll taxes, rates, wages and incomes. All of the producers have targeted the eastern states for expansion, and it should be possible to export 30% of turnover to the eastern states by 2003. This would amount to a $4.1 million contribution to the West Australian economy. The $6.8 million in sales remaining would be absorbed by consumers in Western Australia, an increase of 8% over 1998.

4.7 Utilisation of wood resource and value adding

The natural feature furniture industry, like the outdoor furniture industry is a very efficient utiliser of hardwood and has one of the highest rates of value added of any segment of the forest industry.

Assistance to this industry is being supported by a research and development section in the Western Australian Department of Conservation and Land Management (CALM). CALM Timber Technology (CTT) which is based 160 kilometres south west of Perth is working with sawmillers and furniture manufacturers in the areas of sawing, drying, grading, processing and marketing.

The R & D program will also concentrate on the use of whole bole logs, which will ensure greater utilisation of the log, particularly in high value added manufacturing such as feature grade furniture.

4.7.1 Usage of Western Australian hardwood

It is estimated that the industry used only 980m^3 of timber in 1998, mainly Western Australian species, jarrah and marri. This is more than double the 385m^3 used in 1993, but a very small amount of timber, compared to timber availability for the manufacture of furniture.

Given the industries current expansion plans, the use of Western Australian hardwood is expected to double to almost 2,000m^3 by 2003. This is shown in Table 9.

Table 9: Usage of Western Australian Hardwood, Natural Feature Grade Furniture Manufacturers, Western Australia, 1993-2003

Year	*Timber Usage* m^3	*% Annual Growth Rate*
Actual		
1993	385	-
1994	440	14
1995	535	22
1996	620	16
1997	770	24
1998e	980	27
Forecasts		
1999	1,100	14
2000	1,280	15
2001	1,480	16
2002	1,720	16
2003	1,970	14

e: estimate

Source: Just Jarrah, BVR, Jahroc, Jamel, Stirling, Antry. Figures adjusted up by 20% to account for other producers not interviewed

4.7.2 Dependence on jarrah

The industry currently uses mainly jarrah in Western Australia, but several producers have successfully marketed marri natural feature furniture, especially in the eastern states. Marri has the advantage that it is similar in appearance to American oak, ash and blackwood and can therefore compete directly with feature furniture made from these species in eastern states and internationally.

Jarrah has its own unique and rich appearance ideally suited for the high end of the feature furniture market, and can be successfully marketed as "uniquely Australian" both internationally and domestically.

The industry has also been experimenting with the use of karri for feature grade furniture.

At the time of writing, approximately 75% of all feature furniture produced in Western Australia was jarrah. This product mix could decline to approximately 60% by 2003, depending on how successful manufacturers are in marketing karri and marri. It is likely that marri will be marketed very successfully, especially in eastern states and internationally, and it is possible that jarrah and marri could be used in equal proportion within five years. One of the manufacturers was using approximately 60% jarrah and 40% marri at the time of writing and was very optimistic about the prospects for marri.

One of the great advantages of feature furniture is that it utilises wood that would have been discarded just a few years ago when only clear grade timber was used for fine furniture manufacturing. It is also timber that is not used for structural purposes, and therefore it adds to the availability of the resource for manufacturing furniture.

4.7.3 Competing species to jarrah

There are many species that can be used in place of jarrah, marri and karri for the manufacture of natural feature furniture. As already discussed, there is a well developed natural feature furniture manufacturing sector in Victoria, where all of the hardwood species shown in Table 10 could be used for manufacturing natural feature furniture.

Table 10: Victoria Hardwood Species Available for Natural Feature Furniture Manufacture

Major Species		*Minor Species*		*?? Volume Species*		*Total Timber Available*
Species	*% of total*	*Species*	*% of total*	*Species*	*% of total*	
Ash	46	Mountain grey gum	2	Broad leaf peppermint	<1	
Messmate	22	Candlebark	2	Southern mahogany	<1	
Silvertop	12	Mannagum	2	Red stringy bark	<1	
Cut-tail	6	Narrow leaf peppermint	2	Mountain gum	<1	
		Yellow stringy bark	2	Red ironbark	<1	
		Red gum	1	Yellow gum	<1	
		Brown stringy bark	1	Grey box	<1	
		Bluegum	1	Blackwood	<1	
				Silver wattle	<1	
				Other	<1	
	86		13		1	100

Source: Gooding, Pepper, Timber availability for furniture production – an Australian perspective, Timber Promotion Council, Victoria

A wide range of hardwood species are also available in Queensland and New South Wales that are suitable for the production of natural feature furniture. These are shown in Tables 11 and 12.

Table 11: Crown Log Hardwood Production, Queensland

Species	*% of grown log volumes*
Spotted gum	47
Blackbutt	13
Ironbark	20
Bush box	3
Sydney blue gum/Rose gum	2
Forest red gum	5
White mahogany	4
Other mixed hardwoods	6
Total	100

Table 12: Hardwood Species, New South Wales, 1997

Species	*% of total 346,000m³*
Blackbutt	23
Spotted gum	14
Blue gum	6
New England blackbutt	5
Brush box	4
Messmate	4
River red gum	4
Tallowood	4
Silvertop stringy bark	4
Flooded gum	4
Ironbark	4
Brown barrel	2
Yellow stringy bark	3
Silvertop ash	3
White mahogany	3
Turpentine	3
Grey gum	3
White stringy bark	2
Manna gum	2
Diehard stringy bark	1
Alpine ash	<1
Monkey gum	<1
Peppermint	<1
Roundleaf gum	<1
Mountain gum	<1
Total	100

The main species available in Tasmania for natural feature furniture production is Tasmania oak, which includes messmate, alpine ash and mountain ash. Other lesser available species are Tasmanian myrtle and blackwood.

However, jarrah, marri and karri are unique to Western Australia, and they can be successfully marketed because of their unique Australian character. Marri can also be substituted for oak, ash and blackwood species in the eastern states. Jarrah is uniquely Western Australian, and is at the high end of the international market along with species such as teak, American oak, and European mahogany. Beach is a lower cost alternative species internationally.

4.7.4 Value added and timber pricing in natural feature furniture manufacturing

Natural feature furniture manufacturers buy hardwood (mainly jarrah) for an average price of approximately $1,000 to $1,300 per cubic metre for natural feature jarrah and obtain a final price of up to $8,000 per cubic metre for the final product. An average for the final price is approximately $7,000 per cubic metre, reflecting a very high value added. The industry is now adding significant value to timber, which a few years ago was not suitable in the market place for furniture manufacture.

In the five years to 1998, the cost of timber has been approximately 14% of the value of turnover. Assuming that this continues to be the case, the industry added over $5 million to the value of timber in 1998 on a base price for timber of only $880,000. The value added is expected to rise to over $11 million by 2003, at a timber cost of just under $2 million.

This is a significant contribution to value added given the low volume of timber used.

Table 13: Value Added by Natural Feature Furniture Manufacturers, Western Australia, 1998-2003

	Timber cost 1998 $million*	*Value of turnover 1998 $millions*	*Value added 1998 $millions*
1998	0.88	6.31	5.43
1999	1.00	7.14	6.14
2000	1.16	8.26	7.10
2001	1.38	9.88	8.50
2002	1.66	11.86	10.20
2003	1.92	13.70	11.78

Assumes timber cost is 14% of the value of turnover