



An Australian Government Initiative

Submission: "Transitioning Regional Economies"

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1 Introduction

After six years of exceptional growth from 2008 to 2013, due to the construction phase of the resources boom, the economy of the Pilbara and its population have been severely impacted by the downturn that started to materialise in 2012, with an accelerating negative impact to the end of 2016 and early 2017.

Various initiatives have been taken by regional authorities and the State government to provide support by continuously improving services, living conditions and infrastructure throughout the Pilbara region.

These initiatives have benefits that will last over the longer term, however, significant socio-economic progress continues to rely mainly on private enterprise investment, maintenance, production and employment, over time, in the resources sector. The economy is not diversified and is particularly prone to the impact of downturns in extractive industries, primarily iron ore and liquefied natural gas (LNG).

2 Relevant Economic Development Studies in the Pilbara

RDA Pilbara is involved in a range of economic development and social activities that includes the preparation of development plans and studies. These have been used in the preparation of this submission.

RDA Pilbara¹ commissioned the 2012 the Pilbara Plan Report, which included an analysis of the economy of the Pilbara and suggested steps to be taken in the future. In 2015 further analysis of the economy was undertaken in the preparation of an Investment Prospectus commissioned by RDA Pilbara for the Pilbara, the Kimberley and the Mid-West-Gascoyne regions. Three studies on the Cost of Doing Business were undertaken in 2013, 2014, and 2015², with full analysis of the cost structure of the Pilbara in relation first to the resources sector investment boom and then the impact of the downturn. A Study on Banking and Insurance in the Pilbara for RDA Pilbara was prepared in 2015.

Other Agencies and organisations have undertaken many other studies on the economy of the Pilbara, such as a study on future retail and commercial space needs for the then Shire of Roebourne³. In 2014 additional analysis was carried out as part of a study on the revitalisation of the three older suburbs in Karratha⁴, and studies on the development options for some of the smaller towns, such as Onslow and Roebourne. The Western Australia Chamber of Minerals and Energy has prepared various studies related to economic development, including for example, work carried out on the cost structure of the Pilbara and employment. The Department of Regional Development has prepared numerous studies on aspects of the economy related to land availability and use. The Pilbara Development Commission has prepared an Investment Blueprint for the region, which covers the period to 2050.

¹ *Pilbara Report 2012 – Exploring Opportunities in the Nations Powerhouse – Regional Development Australia*

² *The Cost of Doing Business in the Pilbara. Imani Development for RDA PILBARA: 2012, 2013 and 2015*

³ *Commercial and Retail Property Demand Analysis and Strategy – Shire of Roebourne – Imani Development Austral – January 2013*

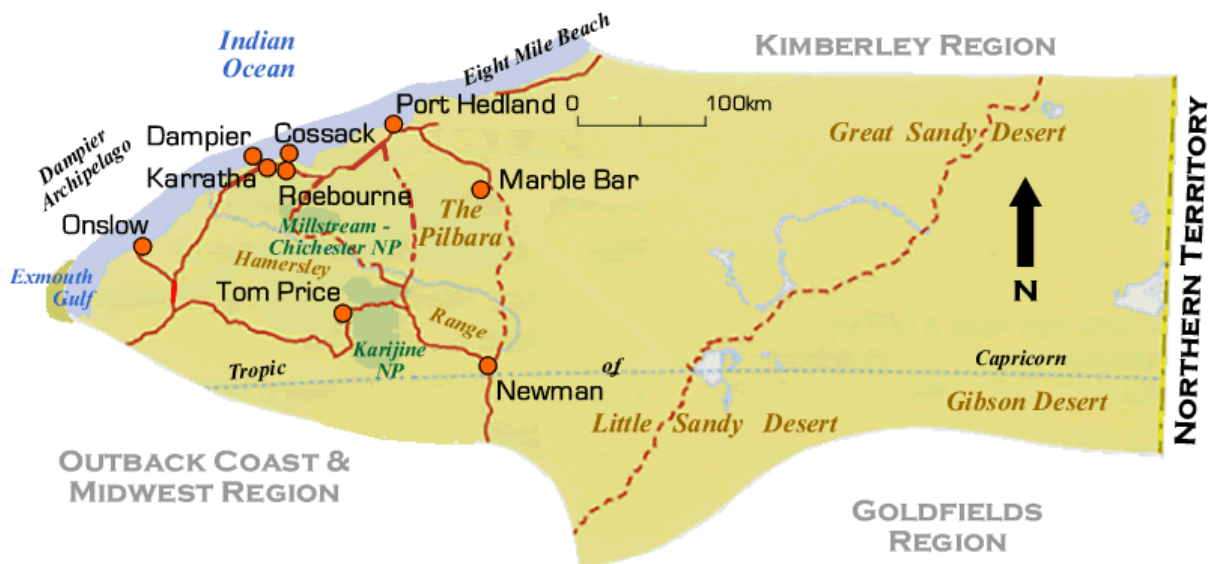
⁴ *Karratha Revitalisation Plan - Shire of Roebourne - May 2014 –Essential Environment and Imani Development Austral*

3 Land Mass and Location

The Pilbara region, located in northern Western Australia, accounts for 20% of the state's total land mass. Its area of 502,000km² equates to two thirds of the area of New South Wales, twice the size of Victoria, and more than five times bigger than Tasmania. The Pilbara is remote and distances between the main centres of Karratha, Port Hedland, Newman Tom Price and Onslow are large.

The region is bordered by the Indian Ocean to the west⁵ and extends across the Great Sandy Desert to the Northern Territory border in the east. It comprises four local government areas: the City of Karratha, the Shires of Ashburton and East Pilbara, and the Town of Port Hedland.

Key tourist attractions within the region include Karijini National Park, Karlamilyi National Park, Murujuga National Park and Millstream Chichester National Park, which offer visitors the chance to explore rugged gorges, secluded waterfalls and isolated rivers and billabongs. These parks are also rich in Aboriginal culture and heritage. Coastal attractions in the region include the Dampier Archipelago and the Montebello and Mackerel islands, which offer visitors world-class boating, fishing, diving and snorkelling opportunities.



The Pilbara consists of three distinct geographic areas. The western third is the Roebourne coastal sandplain, which supports most of the region's population in towns and much of its industry and commerce. The eastern third is almost entirely desert, and is sparsely populated by a small number of aboriginal peoples. These are separated by the inland uplands of the Pilbara Craton, including the predominant Hamersley Range, which has a considerable number of mining towns, the Chichester Range and others. These uplands have a number of gorges and other natural attractions.

4 Climate and Soils

The climate of the Pilbara is arid and tropical. The region experiences high temperatures and low irregular rainfall that follows the summer cyclones. The average annual rainfall in the region is between 200 and 350 millimetres (7.9 and 13.8in). Almost all of the Pilbara's rainfall occurs between December and May, usually with occasional heavy downpours including tropical cyclones. There are large areas of land with large areas of semi-fertile or fertile soils, which are suitable for irrigation.

⁵ Pilbara: A Region in Profile 2014. Government of Western Australia: Department of Regional Development

5 Governance

The local government areas of the Pilbara are Karratha, Ashburton, East Pilbara and Port Hedland. Most of the population lives in the main towns of Port Hedland, Karratha, Roebourne, Wickham, Point Samson and Onslow along the western coast; and in Tom Price in the south west and Newman in the east.

6 Main Town Centres

The main town centres are fully serviced with high quality and varying accommodation, secure and clean water supplies, and adequate waste water infrastructure. There is adequate power from the national grid and increasingly locally sourced energy supplies are in place or planned. There are also several well serviced sub regional centres and smaller settlements. There are approximately 10 major/medium population centres and more than 25 smaller ones. A substantial number of people have worked in the region on a fly-in-fly-out basis in the past. Although numbers have declined they still make up an important segment of the working population.

7 The Economy; Strengths

The Pilbara has been the main region in the world for the rapid expansion of investment, construction and operations in iron ore and natural gas ever to take place, with many major iron ore and gas projects completed since 2008. In combination with resources, the increase in growth of other sectors of the economy associated with these projects, has led to a very large increase in the importance of the Pilbara to both the Western Australian and Australian economies. Its proximity to Asia and extensive reserves of resources have resulted in the Pilbara being recognised as a region of global significance⁶:

Investment in the Pilbara⁷ has been directed towards building world class infrastructure to assist in extracting and exporting natural resources. This included investment in numerous investments in iron ore mines amounting to many billions of dollars, the \$52 billion Gorgon Liquefied Natural Gas (LNG) project on Barrow Island and the \$29 billion Wheatstone LNG project at Onslow. The ports of Dampier, Ashburton, Port Hedland and Cape Lambert support the industry. Substantial investment in the resources sector continues to underpin economic activity and the prospect of strong export growth in the future.

Key economic facts are:

- The Pilbara's share of Australia's Gross Domestic Product (GDP) has risen from 2% in the late 1990's and early 2000's, to 6.2% in 2014.
- The size of the Pilbara's economy is approximately 55% of New Zealand's GDP and greater than the individual GDP of 127 of the world's 189 nation states.
- The Pilbara produces 95% (\$62 billion) of the value Western Australia's iron ore production (2015).
- The region also services the north-west shelf oil and gas fields, which produce approximately two thirds of Australia's oil and gas, worth \$27 billion (2015).

⁶ Source: *Pilbara Regional Development Blueprint; Pilbara Development Commission - 2016*

⁷ *Pilbara: A Region in Profile 2014. Government of Western Australia: Department of Regional Development*

- The Pilbara will remain a significant contributor to state and national economies. In March 2015, Western Australia had an estimated \$179 billion worth of resource projects under construction or in the committed stage of development. A further \$118 billion has been identified as being allocated to, planned, or possible projects in coming years.

It should also be noted that whilst resource sector investment and construction have declined the export value of commodities will probably continue to increase from 2017 onwards as investments in iron ore and LNG production substantially increase export volumes, despite price declines. From a policy perspective, economic development in the Pilbara remains critical to the fortunes of the nation.

8 The Downturn: Degree of Economic Dislocation/Engagement, Transitional Friction and Local Economic Sustainability

The downturn, first started to manifest itself in 2012, has exposed the economy of the Pilbara to a high degree of economic dislocation in a region that has significant challenges regarding socio-economic sustainability. Challenges include heavy reliance on resources; small populations that limit the size of the region's internal market, a remote location with long distances between main centres, a very hot and arid climate, and a high cost structure.

9 Socio-Economic Impact of the Downturn

9.1 Gross Regional Product (GRP)

The rate of growth of the GRP of the Pilbara has slowed as a result of the downturn in the resources sector, although price decreases for commodities have been mitigated by vastly increased levels of outputs since 2012 in both iron ore and LNG.

9.2 Population

After extremely rapid population increases during the boom period at over 3.0% per annum, the population of the Pilbara has declined recently. The graphs below show a decline in the total population in 2016, which is the first for many years, for the Pilbara as a whole and the Estimated Residential Population (ERP) of Karratha, which clearly illustrates the first fall in the resident population. The economic impact of population declines on some sectors of the economy is negative, for example the retail trade and property.

Figure 1: Overall Population in the Pilbara: Trend⁸

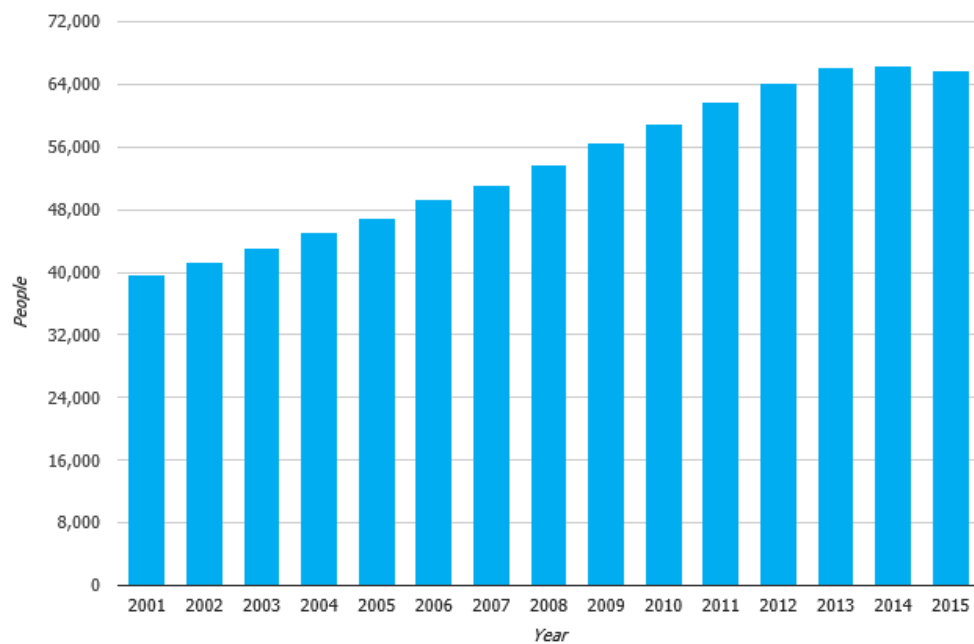
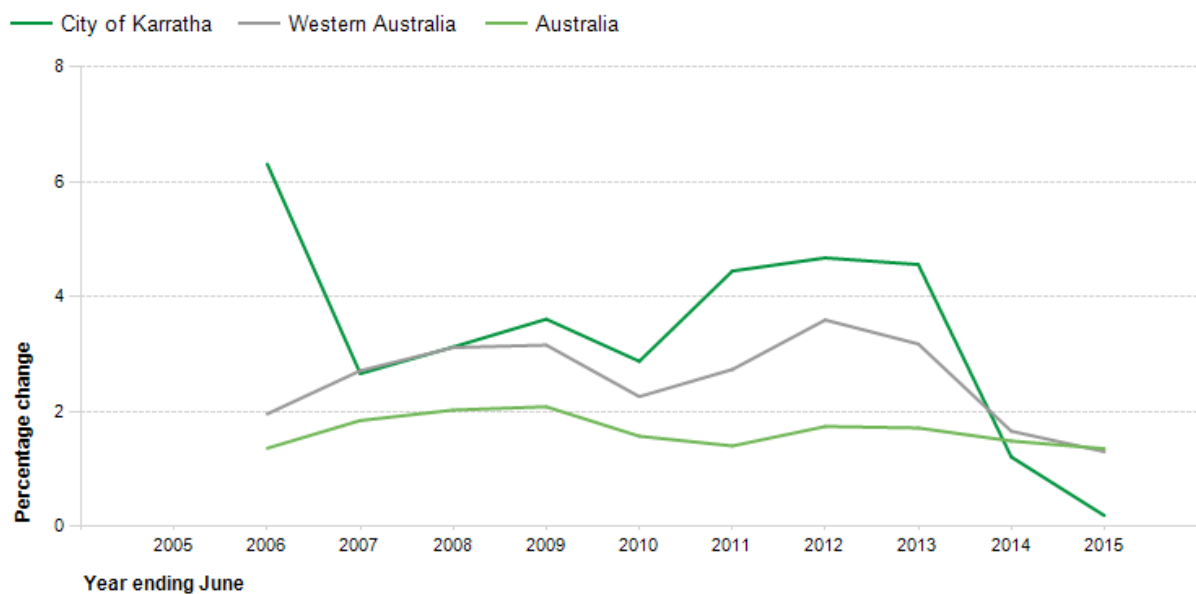


Figure 2: ERP City of Karratha⁹

Estimated Resident Population (ERP)



Source: Australian Bureau of Statistics, Regional Population Growth, Australia (3218.0). Compiled and presented in economy.id by .id, the population experts

.id the population experts

⁸ Pilbara Development Commission

⁹ Pilbara Development Commission

9.3 Employment (including Fly-in-Fly out workers) and Incomes

The main driver of household income is the state of the resources sector labour market in the Pilbara. Factors such as distance and isolation are also important. The ABS 2011 census Place of Work data reported nearly 45,000 jobs in the Pilbara¹⁰ with the mining and construction workforces representing 35.3% and 16.4% respectively. During the boom years residential workforces moved from other local industries to capitalise on the higher wages offered by the construction and mining industries. Labour market conditions started to moderate in 2012-13 as major resource projects transitioned from construction to production. This less labour-intensive phase resulted in a softening of employment growth and an upward trend in regional and state unemployment rates.

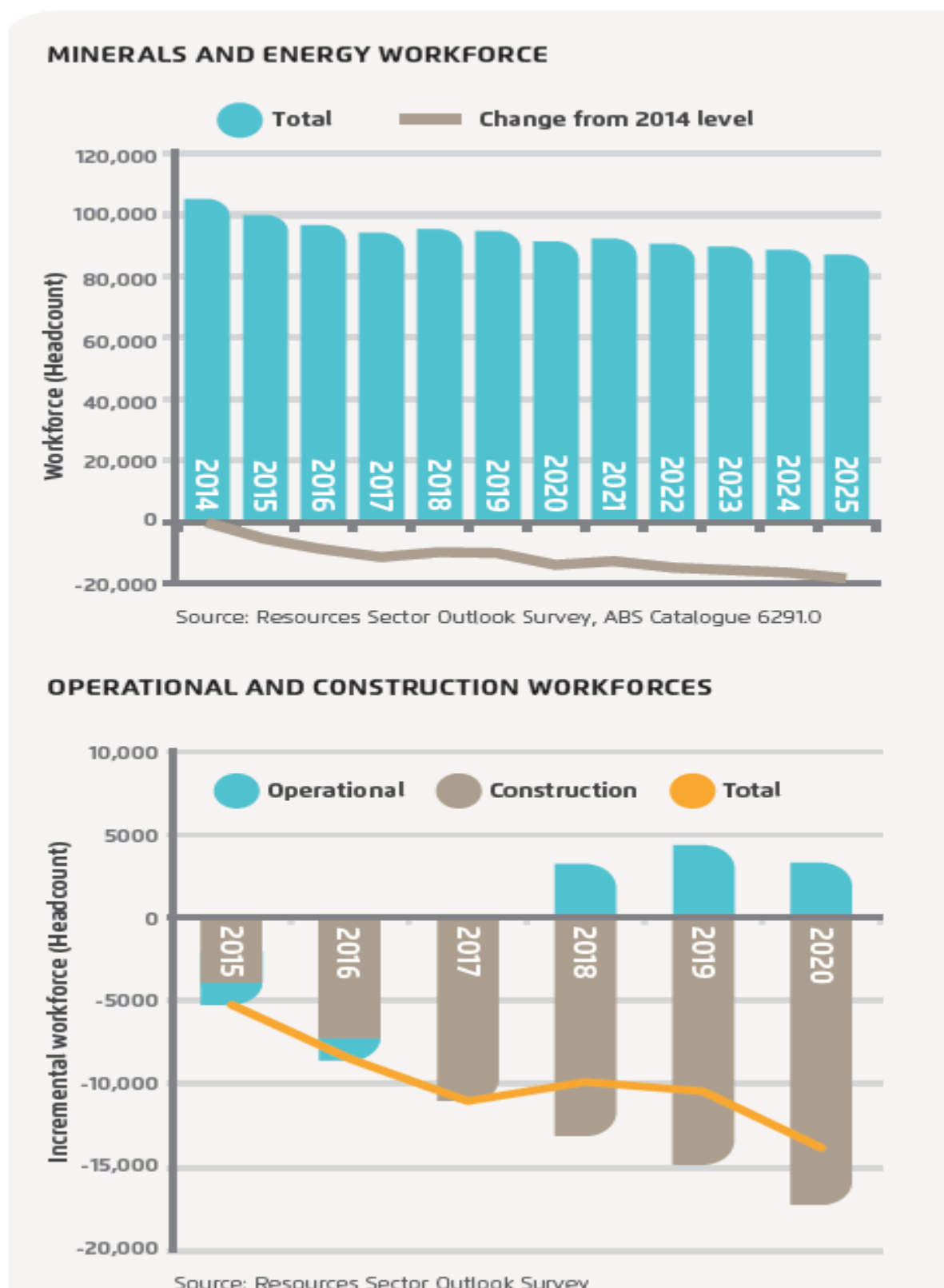
This change in the employment trend has had a negative effect on employment and household expenditure in the Pilbara. Difficult employment conditions and decreased economic opportunity have led to lower levels of income, and hence expenditure, and increased community and family friction and other social issues.

According to a report prepared by the Chamber of Minerals and Energy, in WA¹¹ as a whole the resources sector workforce was expected to decline from 105,200 in 2014 to 87,000 by 2025, although, while lower than current numbers, the resources sector workforce will still be approximately double that of pre-expansion levels in 2004. Labour productivity in the production phase is expected to increase by 40% to 2017 and then plateau to 2025. In 2014, the proportion of residential workers in WA in the construction phase was 13% of the workforce. This is expected to increase to 25% of the overall workforce in 2020. The proportion of residential workers in the operational phase is expected to decrease to 37% in 2020, from 40% in 2014. The proportion of Fly-in-Fly-out (FIFO) workers in the operational phase is expected to increase to 63% in 2020 from 60% in 2014. The Perth and Peel regions contributed 70% of the FIFO workforce in 2014. A further 3% of the FIFO workforce is expected to come from this region in 2020.

¹⁰ *Pilbara: A Region in Profile 2014. Government of Western Australia: Department of Regional Development*

¹¹ *2015 to 2025 Resources Sector Outlook – CME – Deloitte Access Economics*

Figure 3: Changes to Labour Force Number to 2025: Chamber of Minerals and Energy Forecasts



In the Pilbara the workforce was expected to decrease by 14,300 workers by 2020, comprising a reduction of 17,900 construction workers and increase of 3,600 operational workers. The transition from the construction to the operational phase will decrease the construction -based workforce. In line with these development unemployment in the Pilbara rose from a very low base to a high of 4.1% in March 2014 and has fluctuated in a higher range from then onwards.

The 2015 RDA Pilbara Study on the Cost of Doing Business in the Pilbara indicated that due to the downturn in investment and construction since 2012 to 2016 employee remuneration has decreased significantly in the range of 20 % to 40 % and in some professions even more. There have been reductions in benefits such as housing subsidies and allowances. Although persons working in higher paid professions can potentially cope with the high costs of living, for persons in lower paid categories such as clerical and administration the high cost structure in the Pilbara is problematic.

9.4 Property values

The **exceptional decrease** in the value of property in the Pilbara over the last few years illustrates just how difficult the economic environment has become. Declines in property values result in decreased levels of confidence of populations, pressurise the financial sector and leads to business issues regarding access to finance. Decreases in values lead to personal financial difficulties with severe social dislocation. Exacerbating the dire state of the residential property market, is the sharp decline in rental income to property owners, although there is a benefit to those persons renting.

Figure 4: Rental Values 2012 to 3rd Quarter 2016

ADVERTISED RESIDENTIAL PROPERTIES FOR RENT

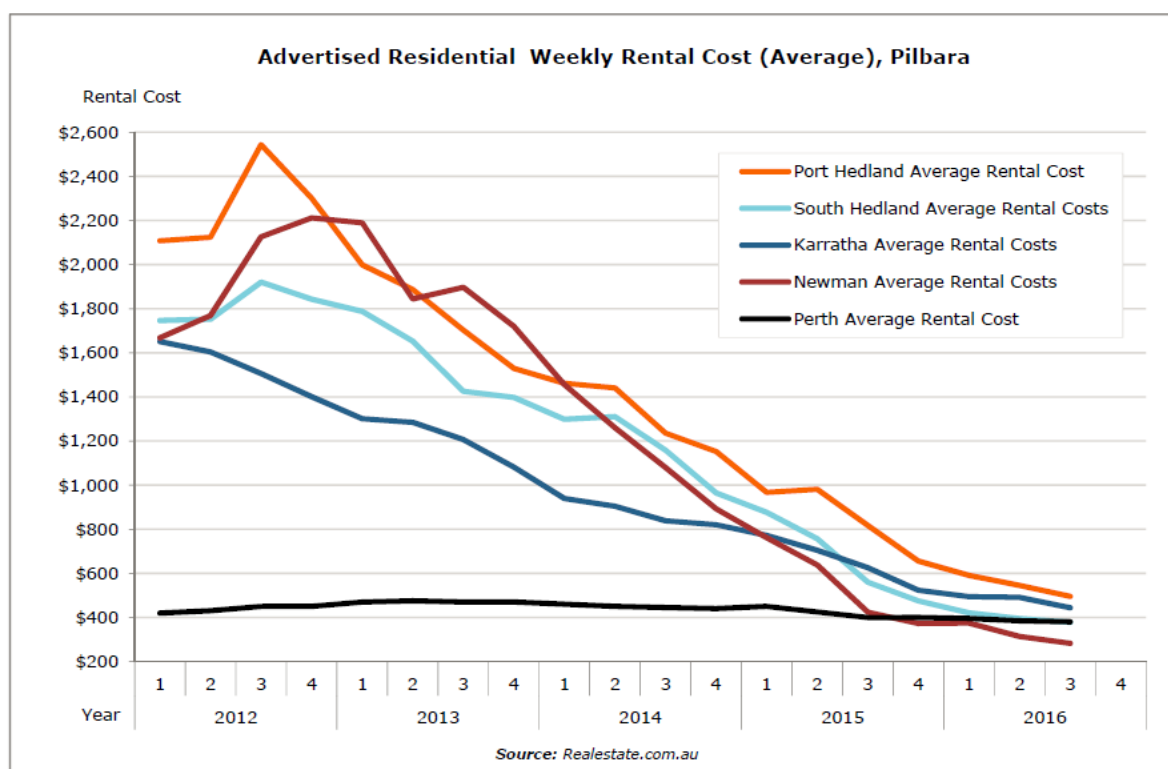
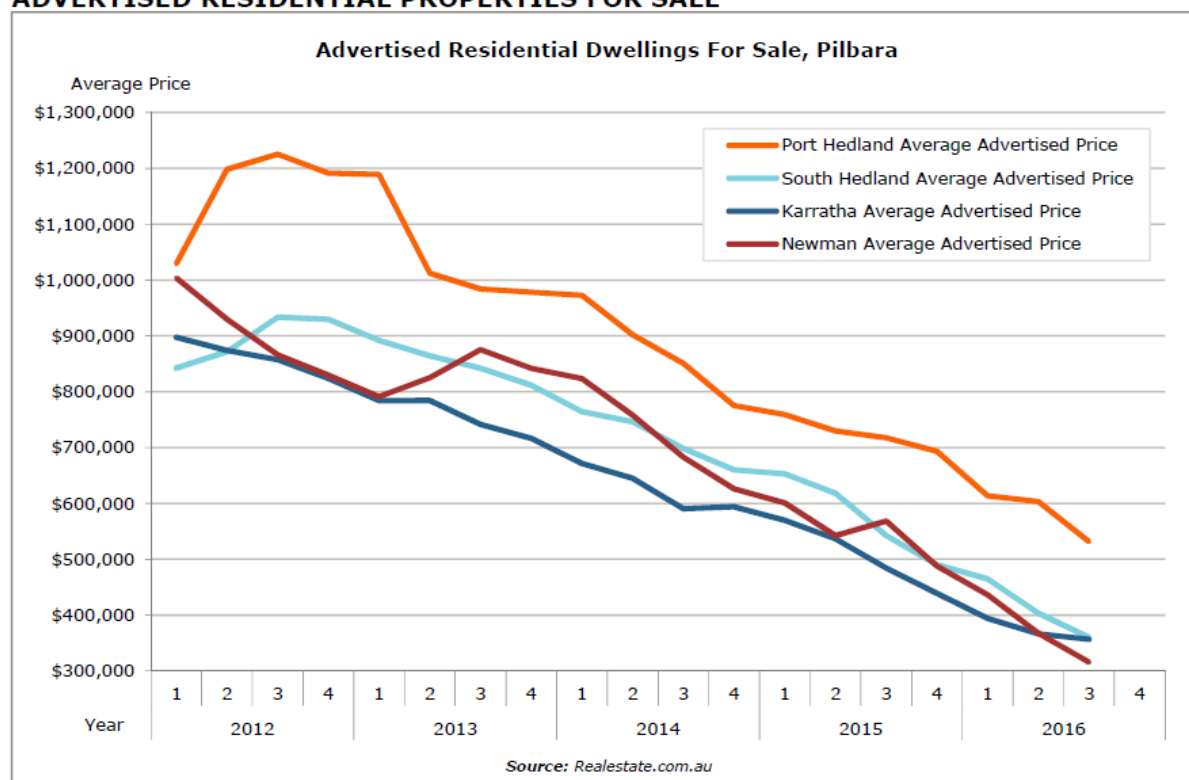


Figure 5: Residential Values 2012 to 3rd Quarter 2016

ADVERTISED RESIDENTIAL PROPERTIES FOR SALE



9.5 Business Environment

The economic environment for Small and Medium Enterprises (SMEs), since 2013, has been particularly difficult as a result of the downturn in capital investments and the demand for goods and services of the resources sector, leading to a reduction in employment, and expenditure, the value of the internal market, and depressed trading conditions. Over the period 2012 - 2014 there has been a reported fall in the number of small businesses (turnover of less than \$200k per year) in the Pilbara.

10 Prospects for Transition from the Resources Boom

In the case of the Pilbara, **diversification of the economy** is the primary requirement for a successful transition. Since the Pilbara is resource sector dependent, a transition is challenging as negative influences on the prospects for a successful transition from the resources boom outweigh positives. This is clear from the impact of the downturn that has taken place since 2012 at an accelerating rate. The prospects for change are related to the structure of the region's economy and there are several other factors that inhibit a "transition" and prevent a broad sharing of opportunity, consistent with the national growth outlook.

10.1 Positive Factors Influencing the Prospects for a Transition

There are currently some opportunities for economic development and “transitioning” in the Pilbara, through diversification, although the scale of diversification in terms of value is nowhere near the value of the resources sector. Nonetheless, additional diversification needs to be looked at as a necessity from a policy and investment point of view, given the susceptibility of the economy to fluctuations in the strength of the resources sector.

10.1.1 *Economic Viability of the Resources Sector*

Over the last few months there has been a change in the demand and supply balances of both iron ore and LNG. Price rises have occurred, particularly for iron ore with prices fluctuating in a range around US 80 per metric tonne (62% fines), which translates to a price of about AU\$ 100 per tonne. At this price level most companies are able to generate positive cash flow, to reduce debts and even to consider further investments. Whether or not these prices hold remains to be seen and doubts have been expressed regarding their durability.

There are several large scale investments that were mothballed during the slump, including the development of Anketell port, which may be given the green light if current prices hold, or even increase, and the Browse LNG development. Further, it is possible that the proposed 25-million-tonne-a-year Pilbara Iron Ore Project in Western Australia, which has been given the official stamp of approval by the WA Department of the Environment Minister will go ahead. The project involves the building of a new trans-shipping operation at Balla Balla Harbour – between Port Hedland and Cape Lambert on WA’s north-west coast; as well as the construction of a 160km railway line and a 40km conveyor system, which will connect to the Pilbara Iron Ore Project (PIOP).

Should the resources industry stabilise and expand in the future (there are doubts about this) there will be a major impact on the economy of the Pilbara in all respects and all sectors. In turn this may change the “mind set” of the non mining sector and a more “risk on” attitude may gain some traction, leading to investments and expansion in non-mining areas. Certainly resource sector suppliers and service providers both in terms of construction, accommodation and services will benefit.

10.1.2 *Marine Resources and Pilbara Land Mass: opportunities*

The sheer dimensions of the marine and land mass presents a unique investment opportunity. The Pilbara area has a land area of 502,000km². There are major environmental advantages in the landmass, including active and successful environmental and ecological preservation and very clean water and air. There is an abundance of well-conserved land for development.

The North-West Marine Region of the Pilbara comprises part of the coast line stretching from Kalbarri in the Mid-West to the north of the Kimberley region covering a vast area of some 1.07 million km². The regions have extraordinary coastlines with a total length of over 6,000km, thousands of islands, numerous world-class beaches, magnificent scenery, crystal clear water, coral reefs and substantial petroleum resources.

10.1.3 *Infrastructure and Services: Opportunities*

The Pilbara has world class infrastructure to extract natural resources including integrated networks of iron ore mines, extensive rail systems and the Pilbara’s main ports of Dampier and Port Hedland. There are two liquefied natural gas plants, the North West Shelf Venture’s Karratha gas plant and Woodside’s Pluto gas hub, with two more plants currently under construction / recently completed by Chevron Australia, the Gorgon project on Barrow Island and the Wheatstone project at Onslow. There are also three domestic market gas plants and a liquid ammonia plant. This private sector

infrastructure is complemented through a public investment program to facilitate increases to the populations of Port Hedland and Karratha until 2035. Government investment has prioritised extending capacity in water, power, waste and residential land. All towns have a high level of service provision, although internet connectivity and data transmission speeds require improvements.

Strategic Industrial Areas (SIAs), which are developed to accommodate resource and export-oriented industries, including those industries that form part of the supply chain for major resource products, have been established within the Pilbara including Boodarie, Maitland, Burrup, Ashburton North and Anketell. The Maitland and Boodarie Estates, together with the Explosives Reserve Port Hedland, are three of the limited number of sites in Australia zoned to accommodate heavy industry unsuited to more populated areas.

Ports in the Pilbara are among the highest tonnage bulk export ports in the world and have potential for intermodal transport functions, with Port Hedland already having, and Karratha building, an international airport that can accommodate freight movement. The region is also home to major ground transport routes commonly used for some of the largest freight movements in Australia, including from Perth.

Over time, population and business expansion will lead to increased service needs of all types, including port capacity, expansion and improvement of airports and additional and upgraded road links in all the regions. In time there will be further exploitation of the vast reserves of minerals and petroleum. Several offshore LNG projects are in the design stage or are awaiting investment decisions. Although these are now some way off they may eventually materialise. Onshore deposits of natural gas in the Canning Basin are amongst the largest in the world. Tourism, aquaculture and agriculture are all set for some expansion.

The development of ports, air links and roads in the regions ties in with the State Government plan for improving inter-regional transport links. Private investors can take advantage of support from recent Federal Government initiatives. The government has committed nearly \$5 billion in transport infrastructure in the Northern Australia Infrastructure Fund (NAIF). It is designed to offer long term concessional loans to investors in infrastructure on favourable terms, including favourable interest rates and long term loans. The NAIF facility will catalyse further private investment in Northern Australia, either as standalone investments or in partnership with government agencies. The NAIF financing component for proposed projects will be for amounts of \$50 million or more and a project can include multiple pieces of infrastructure that are aggregated into a single project.

Private sector investment opportunities in the entire range of infrastructure services are growing. Some main ports are already operated and maintained by the resources sector; and others are planned or under construction. The port of Dampier is currently operated under licence by a private sector organisation. The Town of Port Hedland has recently sold a 50 year lease on the town's international airport to AMP Capital and Infrastructure Capital Group for \$205 million with an upfront payment of \$165 million and will invest another \$40 million to redevelop the airport during the next five years.

Traditionally all main roads have been funded and operated by government agencies. In WA policy changes are going through the process of amending legislation to allow the use of toll roads to generate revenue. Tolls will not be permissible on existing roads; however legislation has been introduced to Parliament that includes the power to impose tolls for heavy vehicles on prescribed roads. Which roads would be prescribed shall be determined by regulations, and easily changed at a departmental level. Under the new powers, the Main Roads Commissioner would make a recommendation to the Minister after consulting with local government. The government is planning to levy a toll on its Perth Freight Link project, and wants the flexibility to do the same on other new roads. The funding of the Perth Freight Link is contingent upon a State Government contribution of \$650 million, of which \$374.5 million will be recovered through a private sector contribution by way of a heavy vehicle charge.

10.1.4 Renewable Energy Opportunities

The Pilbara has very substantial renewable energy potential, primarily in solar and wind energy. Solar power potential is based on the high number of sunlight hours in the region, which are amongst the highest in the world. Renewable energy utilisation will probably be focused on larger systems with the potential for substantial increases in renewable energy deployment. The focus is on off-grid technologies that can support the larger industry and community energy loads. A range of projects have already been implemented or are under development such as:

- In 2011, Horizon Power completed construction on two power stations in the inland Pilbara towns of Marble Bar and Nullagine which combine solar technology with back up diesel generation. The technology being applied provides the highest solar penetration possible, with 65% of the day time load to be met from solar energy.
- Horizon Power will buy 110 megawatts (MW) of electricity from the new Pilbara power station being built, owned and operated by Canadian energy company TransAlta Energy (Australia) Pty Ltd. The station will provide electricity to Horizon Power and the major resource company Fortescue Metals Group (FMG). An additional 110 MW of power is required by Horizon Power to meet growing energy demand due to growth in the Pilbara. Power is expected to be exported from the station in late 2016 with full commissioning in 2017.

10.1.5 Agriculture and Aquaculture Opportunities

There are some limited opportunities for increased agricultural production in the Pilbara, with several State Government projects providing support to the sector. These include:

- **Irrigated agriculture:** Irrigated agriculture has the potential to expand the economic base of the Pilbara and attract major capital investment. Department of Agriculture and Food Western Australia (DAFWA) is planning for the future of irrigated agriculture development in the Pilbara through the \$12.5 million Pilbara Hinterland Agricultural Development Initiative (PHADI) funded by Royalties for Regions over four years. The extent of this expansion is limited to a currently estimated 20,000 hectares.
- **Intensive, high value Agriculture:** Conceptually intensive, high value agricultural production is a possibility using the natural assets of the Pilbara, including desalinated water and high levels of sunshine providing long lasting solutions to water shortages and green energy . An operation in Victoria owned by Sundrop Farms uses desalinated water to produce high value tomato crops in a controlled greenhouse with solar power to supply energy needs and is a good example of innovative thinking for in terms of using resources in areas that lack opportunities in agriculture due to water shortages.

- **Pastoral Industry:** In the Pilbara agriculture production in the region is valued at \$70 million consisting mainly of livestock production and exports (cattle and calves). The Rangelands (or pastoral) Industry is growing in the Pilbara with strong participation of Aboriginal people who either have a family history of employment on cattle stations or own and live on pastoral leases. Global demand for beef will continue to increase.
- The Livestock industry is supported by the State Government Northern Beef Futures project, which is a four year \$15 million project funded by the State Government's Royalties for Regions program to transform Western Australia's northern beef industry through improving markets, businesses and productivity. The project will support the beef industry to capture new market opportunities, particularly in Asia, and secure sustainable growth by working with industry to help transform more than 110 pastoral beef businesses in the Kimberley and Pilbara into a resilient, prosperous industry that creates increasing benefits for the regions.
- **Aquaculture:** An aquaculture Development Zone is under creation, which will create large scale opportunities for existing and future aquaculture operations through a streamlined assessment and regulation process and increased licence volume driving investment in aquaculture and downstream industries such as transport, logistics, ice works and technical operations.

10.1.6 Tourism Opportunities

The region has a thriving, well serviced and diversified tourism industry with regional linkages that take advantage of the vast natural assets of the sea and the land with breathtaking scenery and abundant sunshine. The assets and attractions of the regions are world class and supporting infrastructure including adequate power and water is available.

There are hundreds of kilometres of scenic coast line with some of the world's best beaches, dramatic coastal scenery, and many islands set in crystal clear and beautiful blue waters. There are numerous global scale ports and a wide range of activities at dozens of sites, each with a unique character, including swimming, boating, fishing, diving and snorkelling.

The region has a rich aboriginal culture and history going back many thousands of years. This history is found nowhere else on earth. Numerous artistic sites abound. The region offers most of the key criteria that are used by tourists globally in selecting their holiday destinations:

- A safe and secure destination;
- Good food, local cuisine and produce;
- Interesting attractions to visit;
- Rich history and heritage;
- Friendly and open citizens, local hospitality;
- World class beauty and natural environments; and
- Spectacular coastal scenery.

A particular niche market opportunity exists in luxury tourism, which is the leading growth sector in tourism. Luxury travel is booming. High-price trips are the strongest-growing market segment worldwide, according to ITB Berlin and IPK International. With a 48% increase in the last five years, luxury travel has grown twice as fast as all other types of foreign trips, which grew by 24%¹². In 2014, the world population undertook 46 million international luxury trips. A total of 172 billion Euros was

¹² Special evaluation of the World Travel Monitor, which is conducted by IPK International and commissioned by ITB Berlin. Luxury trips defined for this analysis as all short trips with spending of more than 750 Euros per night and all long trips costing more than 500 Euros per night.

spent on international luxury travel in 2014. The Pilbara has several sites that could be considered for luxury tourism development, including the Dampier peninsula.

10.1.7 Other Government Initiatives

Local governments, the State government departments such as Agriculture and Food (DAFWA) and those dealing with water, commerce, lands, planning, state development, main roads, port authorities, transport, education and health have a major role to play in all aspects of development planning and implementation. The Department of Regional Development is a key agency that manages the planning and implementation of the Royalties for Regions Program involving over \$1 billion of investments over the last few years in the regions. Landcorp has a key role in land use planning, development and investment. The Aboriginal Corporations are becoming increasingly important as investment players.

The Government of Western Australia recognises¹³ the importance of a prosperous and secure future for the Pilbara, a region that has contributed more than \$5 billion to state royalties. It's landmark \$1.7 billion Royalties for Regions Pilbara Cities initiative has contributed significantly to addressing these challenges, with Pilbara townships receiving considerable public and private sector investment in amenity and liveability enhancements over the past five years.

The Australian Government Department of Industry, Innovation and Science has provided a \$297.7 million Building Better Regions Fund (BBRE) that has opened (January 2017). It has two funding streams, one is a Community Investment Stream and the other is an Infrastructure Investment Stream.

The Community Investment Fund will see regional communities partner with governments and stakeholders to take full advantage of a range of economic and regional development opportunities to help build those strong, sustainable communities. Importantly, the funding will be directed only to projects outside of major capital cities. The new Community Investments Stream will invest in projects outside of traditional infrastructure – events and initiatives which aim to build regional communities in other ways. These projects might, for example, attract locals and tourists to events, build leadership capacity or undertake strategic planning so communities can pursue new opportunities. Eligible entities must be a legal entity, have an Australian Business Number (ABN) and be a Local governing body as defined by the Local Government (Financial Assistance) Act 1995 or a not for profit organisation. The Infrastructure Projects Stream of the Fund will be open to investment-ready projects that will create jobs, drive economic growth and build regional communities for the long term.

10.2 Negative Factors Influencing the Prospects for a Transition

There are a number of factors that negatively influence the prospects for a transition from the resources boom, including distributional impacts. These outweigh the positive factors and as a result the Pilbara has made a “less successful transition from the resources boom than other parts of the country at a time when our economy is reconciling the impacts of globalization, technological and environmental change¹⁴”.

¹³ Source: *Pilbara Regional Development Blueprint; Pilbara Development Commission - 2016*

¹⁴ *Productivity Commission Terms of Reference*

10.2.1 Geography and the Environment

The location of the Pilbara is advantageous from the point of view of exports to Asia. However, its remoteness from the perspective of high transport costs internally, within the region, within WA and within Australia, and the fact that much of the population lives in remote areas, is a distinctly negative factor for economic diversification and settlement.

The region is susceptible to climate change¹⁵. The extremes of the Pilbara's heat are likely to intensify and the region's coastline is one of the most cyclone-prone regions of Australia. Not only are cyclones more frequent there than anywhere else in Australia, they are also more severe, with some storms capable of winds over 170km/h. Looking back over the historical records, the CSIRO has indicated that Bureau of Meteorology data has shown that from 1960-2010 maximum temperatures in the Pilbara had risen between 0.05 to 0.15°C per decade. Over the same period rainfall has increased in the north and central areas, but decreased in the south-western region.

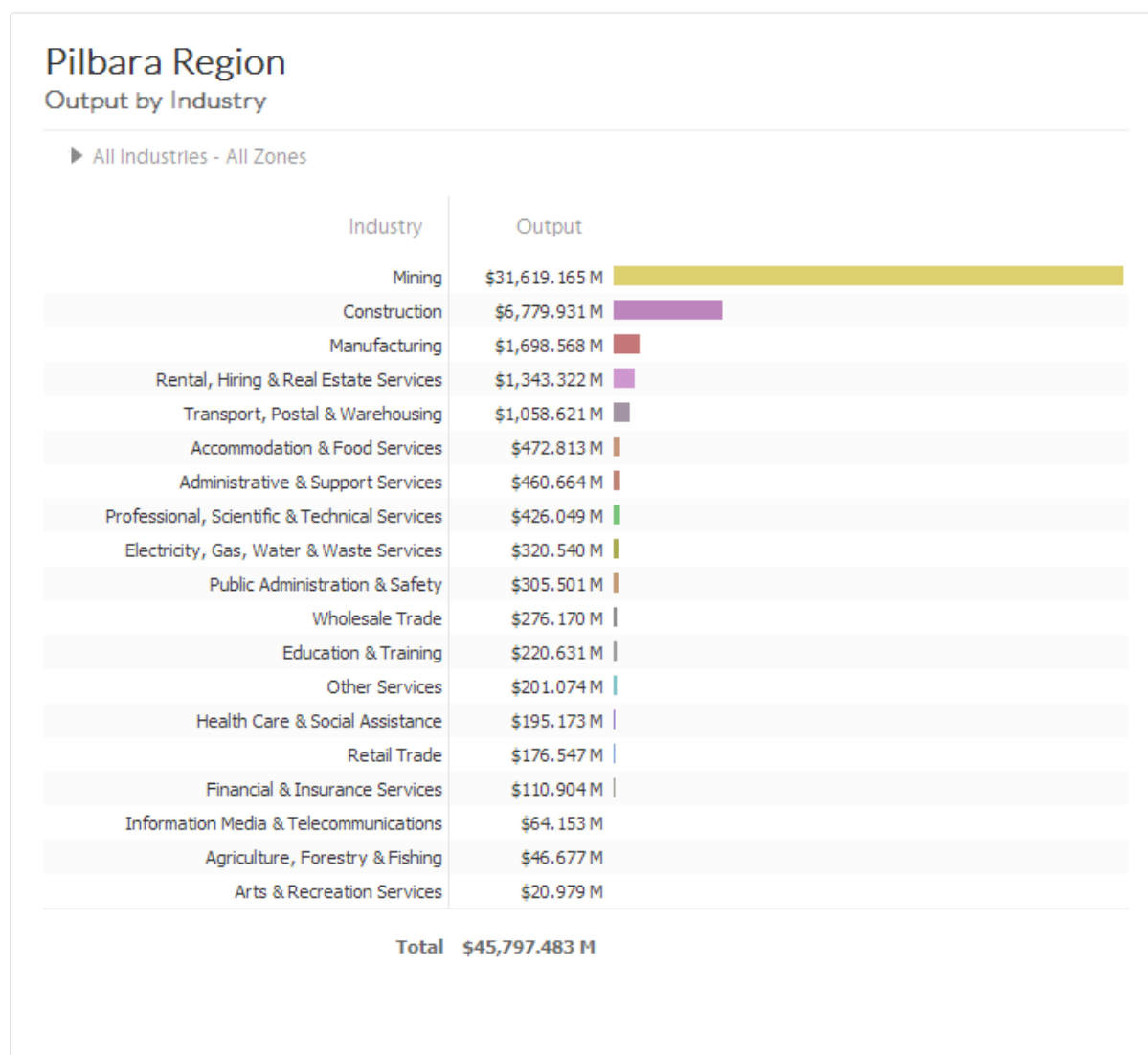
Based on the data at hand, climate scientists have projected 2070 temperatures in the region to be around 3°C higher than 1990 levels. And while one projection shows a substantial increase in summer rainfall, the majority of scenarios show a decrease in rain over the winter period.

10.2.2 Structure of the Economy

Despite ups and downs the resources sector will continue to heavily influence all other sectors of the economy in the future. Whilst the extractive industries have supported economic development in the Pilbara for decades, with a major boost from 2008 to 2013, this dominance means that most sectors of the economy are subject to changing fortunes that parallel changes in investment, construction and operational activities of the resources sector. The structure of the economy is heavily skewed towards mining and construction, which together make up some 84% of gross output.

¹⁵ CSIRO 2012

Figure 6: Output by Industry



Source: Pilbara Development Commission: Latest [REMPLAN](#) data incorporating Australian Bureau of Statistics' (ABS) June 2016 Gross State Product, 2013 / 2014 National Input Output Tables and 2011 Census Place of Work Employment Data.

10.2.3 Small Regional Market

The local market is comprised of only 67,000 consumers in a vast area with marked differences in the size of main centres and income levels of different segments of the work force. Moreover, anecdotal evidence suggest that on-line shopping is competing heavily with traditional purchasing methods. The market for goods and services in some sectors has declined markedly post the boom period, further adding to the difficulties for businesses in the region. The downturn in business conditions is illustrated by falls in turnover in small businesses in Newman, Port Hedland and Karratha, where stakeholders report decreases of up to 30% to 40% in 2016, compared to 2013/14 in some sectors.

10.2.4 High Cost Structure of the Pilbara¹⁶

The cost of doing business in the Pilbara for SMEs and NGOs has fallen post the boom period, partly as a result of a reduction in the demand for labour, accommodation and other services.

Nonetheless, in the Pilbara costs of doing business remain higher than the rest of WA and most of Australia. This has an impact on the sustainability of business viability. The high cost structure remains a constraint to starting new businesses, operating successfully as an existing enterprise, and discourages diversification. Clearly it is in the best interests of all businesses, small or large that costs are brought down further.

The major cost drivers in the Pilbara are the costs of capital and operational costs of the resource sector. If resource sector costs are high, costs in other sectors follow as there is inter-sector competition for labour and supplies. Costs in the future will be dictated by the future direction of the resources sector as increases or decreases in the level of investment and production and the resultant demand for services has the largest impact on the economic growth of the region and the regional inflation trend.

In the resource sector one of the main considerations remains the competitiveness of Australia and the Pilbara in particular. In this regard the picture is more positive. As a result of substantial decreases in the level of investment and construction and cost cutting measures taken by the organisations operating in the sector, operating costs have fallen and competitiveness has improved substantially. However, the impact of a high cost structure in the Pilbara remains evident. As a result, in the LNG sector, the alternative processing option of offshore platforms is increasingly likely to become the norm.

The cost structure of the Pilbara has been analysed by the three RDA Pilbara commissioned Cost of Doing Business studies in 2013, 2014 and 2015. The summary provided in the 2015 report (and updated analysis) makes the following points:

Regional Price Indicators (RPI)

Based on the 2013 Regional Price report produced by the Department of Regional Development the following points show the level of prices in the Pilbara, compared to Perth and other regions. The major cost driver in the Pilbara remains the resource sector. High costs are a constraint to economic diversification and infrastructure provision.

- Over the two years from 2011 to 2013 the gap between the Consumer Regional Price Index for the region and Perth has fallen from 137 to 118¹⁷.
- The rate of inflation in the Pilbara has been negative or more or less flat in 2013, 2014 and 2015. This trend is likely to have continued in 2016.
- Nonetheless the Consumer Price Index for the Pilbara is likely to remain the highest of any region in WA and high employment costs continue to have a negative impact on businesses and NGOs in some sectors.
- The cost of utilities (water and electricity) to both households and businesses is anticipated to continue to rise in the Pilbara.
- The median cost of buying a house in the Pilbara has fallen significantly, which points towards a depressed property sector, which is beyond residential “market normalisation”.

¹⁶ *The Cost of Doing Business in the Pilbara 2015 Update: Regional Development Australia (Pilbara): Prepared by Imani Development Austral. July 2015*

¹⁷ *Based on RDL CPI reports for 2011 and 2013*

Business Cost Multipliers

- Multipliers show the comparative cost for similar products and services in the main centres compared to Perth.
- These show comparisons for a range of major cost items comparing the main towns in the Pilbara with Perth and indicate high price differences across some major items with wages and accommodation still dominating the differentials even though these have come down considerably.
- The multipliers demonstrate the continued high cost structure faced by businesses operating in the Pilbara.

Table 1: Business Cost Multipliers (First Quarter 2015): Pilbara Towns compared to Perth

Cost Item	Karratha	Port Hedland	Newman	Onslow
Median Individual Weekly Income (2015)	1.5	1.4	1.5	1.7
Median Family Weekly Income (2015)	1.1	1.1	1.1	1.0
House Prices (2015)	1.09	1.4	1.1	1.4
Rent - Accommodation (2015)	1.6	1.9	1.6	3.4
Rent - Commercial (2015)	0.9	1.1	0.8	1.0
Rent - Retail (2015)	0.9	1.2	0.9	0.9
Rent - Industrial (2015)	0.5	0.4	0.5	0.5
Construction (2015)	1.5	1.5	1.6	1.7
Water (2015)	1.7	1.4	1.1	3.3
Electricity SMEs (2014/15)	2.4	2.4	2.4	2.4
Electricity Large Businesses (2014/15)	2.4	2.4	2.4	2.4
Insurance Home and Contents (2015)	6.7	14.6	4.8	6.5
Insurance SME Light Industrial (2015)	2.5	3.8	1.6	2.5
Insurance SME Services (2015)	2.9	2.9	1.1	3.1
Petrol (2015)	1.1	1.1	1.1	1.1
Diesel (2015)	1.0	1.0	1.1	1.0
Car Hire (2015)	3.3	3.8	2.3	3.0

The comparative cost of operating a business in the main Pilbara centres in comparison to Perth is shown below for 2014 and 2015.

Table 2: Comparison of Percentage Costs of Operating a Business in 2014 and 2015 Pilbara Towns with Perth

Town	Percentage above Perth 2014	Percentage above Perth 2015
Karratha	88	61
Port Hedland	71	51
Newman	85	55
Onslow	105	81

- Faced with substantial costs above those in Perth and with a small market size, there is considerable pressure on businesses to survive, and NGOs also face problems.
- Businesses and NGOs face relatively high costs for several important cost items, such as staff training, staff recruitment and turnover, travel, professional services and consumables, although some of these cost pressures have abated - to an extent.
- Businesses sometimes have to purchase or rent accommodation for staff, adding a significant cost for business start-ups in particular; although, as with other cost factors, this aspect has become less prevalent.
- Although construction costs have fallen, the costs of construction can be as much as 1.5 to 1.6 times the Perth norm for a similar building.

Future Costs 2017 to 2020

Predicting future costs is difficult. There are a large number of variables involved and developments in commodity markets and investment intentions are constantly changing. Global energy markets are changing exceptionally quickly with major new sources of supply emerging for natural gas and oil, whilst on the other hand there is the potential for a significant increases in demand of LNG. The dependency on China as the major iron ore market still has an “all our eggs in one basket” risk and recent developments in iron ore pricing with very significant reductions are well known, as are the consequences to the region, to WA and to Australia.

Price increases in the Pilbara will likely continue to moderate or stabilise over the next few years. Investment has slowed down and very limited commitments regarding large scale new infrastructure or major additions to production capacity have been made in the medium term. However, if decisions are made to proceed with the new Port Anketell and other investments then costs may come under a limited amount of pressure in Karratha. In addition, discoveries of additional commercially exploitable LNG reserves in the oceans adjacent to the City of Karratha and Shire of Ashburton will also lead to price pressures in Karratha and Onslow, in a limited way, if decisions are made to increase capacity at some stage in the future.

There are both downside and upside risks to the resource industry investment picture. The main downside risks include failure of economic policy in the USA, Europe, China and Japan to further address debt problems. Deflation is also a threat in Europe. Lower global economic growth rates will occur with reduced demand for commodities under a low growth scenario.

Of particular importance to the Pilbara is the performance of the United States and Chinese economies. The economy of China has slowed down markedly and there are signs that this slowdown will continue, without further stimulus measures. This weights the risks of our forecasts to the downside. The upside risk is that the signs of global economic recovery accelerate and commodity demand and prices increase as a result, particularly as a result of a strengthening economy in the United States and possible expenditure of US \$ 300 billion or more on infrastructure, which may stimulate demand, and eventually lead to another round of resource industry investment.

Increased competition from LNG suppliers such as Russia, Canada, and the USA has gained further momentum. However, the market situation is fluid and diversified. Although Japan and South Korea remain as the main LNG markets, other markets are opening up such as China, other countries in Asia and potentially in Europe. On balance though, LNG prices are likely to remain subdued in the medium term with rising prices only after 2020.

For the Pilbara as a whole the rate of inflation should continue to moderate in the medium term (2017 to 2020), because of the reduction in mining investment relieving pressure on housing and employment costs and other services. Nonetheless, it is anticipated that the overall cost structure will remain high compared to Perth.

10.2.5 The High Costs of Insurance and Banking

The high costs of two of the major cost constraints in the Pilbara are of particular significance in assessing barriers to economic 'transitioning', which are insurance and banking.

Insurance costs for home owners and businesses were analysed in an RDA Pilbara Study carried out in 2015 for towns and cities in WA (and one city on the east coast of Australia), in comparison to the Pilbara. The very high comparative costs for Pilbara towns are summarised below, showing that insurance costs north of the 26th Parallel are far higher than those south of the 26th Parallel. Also shown is the rapid rate of price increases for strata title properties in Port Hedland, which is symptomatic of price increase in the Pilbara as a whole.

Table 3: Comparison of Indicative Residential Insurance Costs Pilbara Towns to Perth for a Standard 4 Bedroom House

Town	Cost \$	% difference to Perth
South of 26th Parallel		
Perth	650	0
Albany	420	-54
Kalgoorlie	500	-30
North of 26th Parallel		
Port Hedland	11,700	1,800
Mackay (QLSD)	6,730	1,035
Karratha	5,390	829
Onslow	5,232	804
Tom Price	3,895	599
Newman	3,800	900

Note: For purposes of comparison a standard 4 bedroom 1 story residence was selected with good security and constructed in 2012 near town centres.

Table 4: Port Hedland Sample Insurance Costs for Strata Title residences 2009/10 to 2014/14 (6 complexes with 79 Units)

Year	Cost (\$)	% Increase Over Previous Year	Cumulative % Increase Over Base Year
2010/11	155,100	100	100
2011/12	404,200	261	261
2012/13	517,500	128	335
2013/14	550,200	106	356
2014/15	523,000	95	338

The total premium paid in Port Hedland for the insurance cost of the six strata titles rose from \$154,600 in 2009/10 to \$ 523,000 in 2014/15, which is an increase of 338% over a five year period. This is excessive. The increase in insurance costs varied between the six strata titles for which data was available and was up to 1,900% over five years for one of the strata titles.

The same study analysed high banking costs. Key findings were:

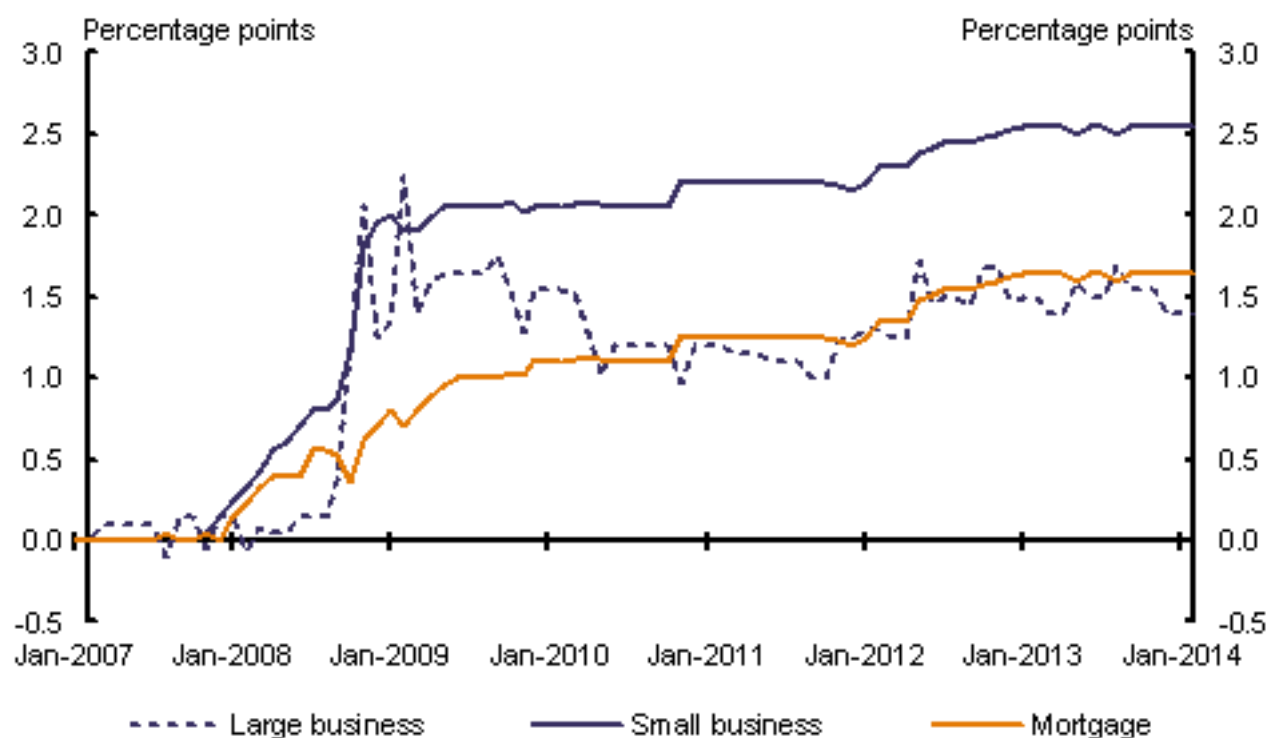
- Bank loans are not priced by location, but rather priced on specific characteristics of persons and businesses taking out loans.
- There are insurance and affordability issues in the Pilbara, because of the high cost of insuring assets that can be used as collateral for loans and the higher cost of lending rates for SMEs – this was confirmed in the SME survey carried out as part of the Study.
- Lending rates are higher for small businesses, and combined with other barriers to finance such as compliance costs. These are barriers to accessing finance that the government has been trying to address¹⁸.
- According to a recent financial systems inquiry initiated by the Federal government¹⁹ interest rate spreads have increased for small businesses increasing their cost for debt financing.
- Other issues with gaining access to loans include assessment of risk by lenders in a weakening economy in the Pilbara and the quality of management. With start-ups with no history of operation loans are more difficult to secure.
- The quality of the security being offered to support the loan is also important. In the Pilbara both in the towns and the country home values have been falling rapidly since 2012²⁰. The impact of falling house price values on business lending is that there is less collateral against which to borrow.

¹⁸ (<http://www.treasury.gov.au/Policy-Topics/Economy/G20/~media/Treasury/Policy%20Topics/Economy/G20/Downloads/PDF/G20-SME-Conference.ashx>).

¹⁹ <http://fsi.gov.au/publications/interim-report/03-funding/small-med-enterprises/>

²⁰ http://www.pdc.wa.gov.au/files/7014/1828/1146/2014Q3_Housing_and_Land_Snapshot.pdf

Figure 10: Interest Rate Spreads for SMEs



10.2.6 Approvals, Permits, Licences and Environmental Costs²¹

Developers and other businesses incur high environmental costs. These costs apply to all businesses in the Pilbara where environmental impact is a factor. The Pilbara is home to a fragile ecosystem that also contains rare flora and fauna that requires detailed EIA assessments before any major project development. There are also the costs associated with operating in a harsh climatic environment that includes extreme heat, cyclones and floods. For example in 2014 rehabilitation costs remained high at over \$50,000 per hectare for large scale miners and construction companies.

The high cost of approvals, permits and licences for development in the mining sector continues to impose a constraint to development. Recently, the proprietors of the Roy Hill iron ore development in the West Pilbara stated that thousands of approvals, permits and licences were required to develop the mine.

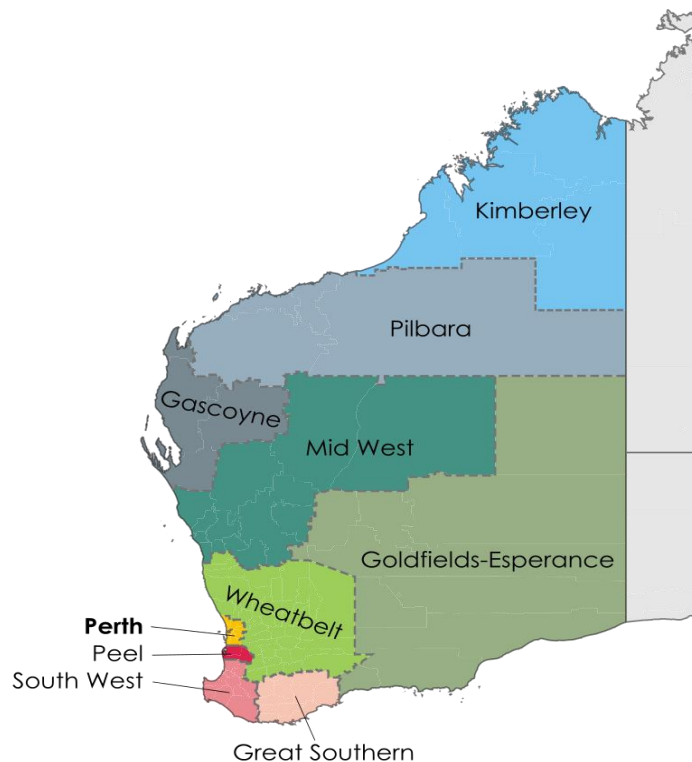
11 Scope for Economic and Social Development in Neighbouring Regions

There is scope for economic and social developments with neighbouring regions. RDA Pilbara commissioned the preparation of an Investment Profile for four regions in the North and Mid- West of WA in 2015/16²². These regions comprised the Pilbara, the Kimberley, the Gascoyne and the Mid- West and indicated areas for integrated development and regional linkages.

²¹ CME Report December 2012 on the Cost of Doing Business in WA

²² North West Investment Profile: Regional Development Profiles: Imani Development: 2016

The regions are adjacent to each other with the Kimberley the most northerly region, the Pilbara to the immediate south, followed by the Gascoyne and the Mid-West also to the south of the Pilbara. They are linked from a Federal and WA State government development perspective, by geography, a continuous and resource rich coast line from north to south of over 6,000km, transport links, water sources that sometimes cross boundaries, regional tourism opportunities and the utilisation of vast agricultural, mining and petroleum resources on a truly immense scale.



Australia's north is unique²³ in the developed world. It sits at the intersection of the two great regions of global economic and population growth — Asia and the Tropics:

- The booming economies of South East Asia and southern China are within three to five hours flying time from Darwin.
- The Tropics account for 40% of the world's population today, rising to 50% by 2050.
- By 2030 Asia will represent approximately two thirds of the global middle class population and of middle class consumption.
- The north operates in similar time zones to the most dynamic economies in Asia — a particular advantage for service industries.
- The region is integrating fast — Australia has concluded Free Trade Agreements (FTA) in Asia with Japan, South Korea and China, and is in ongoing negotiations with India and Indonesia and India and multi-country initiatives such as the Trans-Pacific Partnership (TPP), the Regional Comprehensive Economic Partnership (RCEP) and the Pacific Agreement for Closer Economic Relations (PACER).

²³ Australian Government – our North, our Future, White Paper on Developing Northern Australia - 2015

Even though only over one million people live in the north, including all of the Northern Territory, and those parts of Western Australia and Queensland above the Tropic of Capricorn, it accounts for over half of the sea exports of Australia. Thriving and diverse exports in minerals, energy, agriculture and tourism underpin national income. The Federal Government will make significant investments in the north worth over \$ 1.5 billion to assist in realising the vision of the region, which will be of major benefit to the four regions in the profile. These include infrastructure, water, land and business trade and investment with a total value of \$ 1.14 billion. In addition improvements in the workforce and governance to support further investment in the north will be undertaken.

Australian trade policy is very favourable for the four regions. Australia has signed ten FTAs that are of prime importance to the four regions. Seven of these are with major trading partners in Asia, including for example China and ASEAN. Other signed agreements are with the USA, New Zealand and Chile. In addition, there are six FTAs and partnership agreements under negotiation including the Trans Pacific Partnership Agreement, the Gulf Cooperation Council, India and Indonesia. One of the benefits includes reductions of tariffs to zero percent for most of the commodities produced for export in the four regions (or reductions to very low tariff levels). Investment protocols have become very much more favourable offering increased incentives for both inward bound investments into the four regions and outward bound investment flows.

The trade value and benefits of the agreements to WA and the regions is significant. For example the ASEAN-Australia-New Zealand Free Trade Agreement has a trade value of over \$ 7.2 billion to WA. Under this FTA binding zero (0%) or very low (5%) export tariffs apply on a wide range of commodities produced in the regions, including agriculture (crops and livestock) minerals, and petroleum products. The FTA with South Korea is based on elimination of tariffs on 99.8% of Australia's exports (by value). Australia is one of 11 countries, to agree on the Trans-Pacific Partnership agreement, which will cover 40% of the global economy and eliminate about 98% of tariffs on Australian agricultural exports.

The four Regions have prepared Regional Investment Blueprints covering the period up to 2050. These are comprehensive documents designed to guide and shape the transformation of the regions well into the future. They recognise the diversity and significant resources of the regions and create platforms for development options that can be both assessed and monitored. They also create a platform for leaders to engage constructively across all levels of government, community and industry and set measurable targets across the key sectors that will transform the regions in the future. The targets have purposefully been set at levels that create aspiration.

Further integrated development of transport links, irrigated agriculture, agricultural processing and tourism are likely to be the beneficiary sectors of development in the future. For example linkages between tourist destinations in the four regions to take advantage of different world class in-land and coastal experiences and offerings are an attractive proposition, which will be enhanced with additional product including the luxury tourism segment of the market.

12 Conclusions

- The economy of the Pilbara is very dependent on the resources industry, which has suffered a major downturn since 2012. The structure of the economy is unbalanced and because of the dominance of extractive industries it is extremely vulnerable to sharp falls in commodity prices.
- The downturn since 2012 has had a major impact on the economy, with a declining population, falling levels of employment and income, extreme falls in property prices and personal wealth; and very negative effects on the private sector, in particular small and medium size businesses.

- In turn this has led to severe social problems, including unemployment, personal finance issues and related stress factors.
- Diversification is the key to 'transitioning' the economy and improving the situation of much of the population.
- However, there are several major constraints to broadening the base of the economy. These include the small internal market, a high cost structure, an arid and hot climate, a lack of water supplies at a scale large enough to support large irrigated agriculture opportunities, susceptibility to climate change, and the remoteness of the Pilbara.
- Although there are opportunities for diversification, the scale of potential expansion in non-mining sectors is relatively small, apart from renewable energy and possibly aquaculture production.
- There are opportunities for inter-regional links between the Pilbara, the Kimberley, the Gascoyne and the Mid-West that have been recognised and which may lead to further integration of the regional economies and the development of opportunities in transport linkages and tourism for example
- The Federal and State governments need to provide further support to encourage investment in the Pilbara, such as reduced taxation levels for business and taking action on the high costs of insurance in the Pilbara.