

Chapter 4 Employment

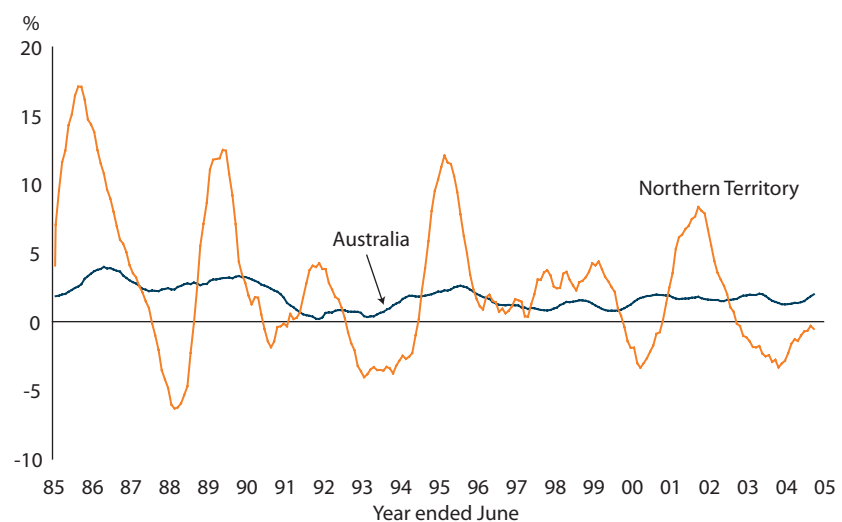
Key Points

- The Territory workforce of around 100 000 people is typically young, mobile and transient, and includes about 8000 Indigenous participants in the Community Development Employment Projects (CDEP) program. In addition, there are more than 5500 defence force personnel resident in the Territory that are not included in workforce estimates in the ABS labour force statistics.
- The Territory's labour force relies on large interstate migration flows to overcome skills shortages to meet the short to medium term employment demands of major infrastructure projects.
- For a variety of reasons Northern Territory labour force data are characterised by month to month, and year to year volatility (see Chart 4.1). As such, analysis and interpretation of available data can be difficult.
- Despite stronger activity in key employment industries, based on ABS data, employment is estimated to decline by 1.3 per cent in 2004-05.
- Employment is forecast to increase by 2 per cent in 2005-06. Major projects such as the Alcan G3 alumina plant expansion at Gove and the Trans-Territory Pipeline, the Darwin City Waterfront Redevelopment project and solid residential construction activity will be contributors to growth.
- Stronger prospects for the tourism sector and the cyclical upswing in the economy will support jobs growth. An anticipated shortage of locally based skills is likely to constrain ABS-reported employment growth, with increased fly-in fly-out employment on major projects.

Labour is a major input in the production of goods and services. As such, the demand for labour is linked to the demand for goods and services, the cost of labour relative to capital and the amount of output per unit of labour (that is, productivity). Employment growth tends to follow output growth.

Demographic composition, transience and small resident population can make the collection and interpretation of labour force statistics problematic in the Northern Territory. As Chart 4.1 illustrates, there is a high degree of volatility in official employment statistics for the Northern Territory as reported by the Australian Bureau of Statistics (ABS). While it appears that the degree of volatility is decreasing over time, it remains significant. Although all jurisdictions face some level of volatility, it is higher for small populations, with the Northern Territory experiencing the highest degree of volatility.

Chart 4.1: Labour Force Growth (moving annual average, annual percentage change)



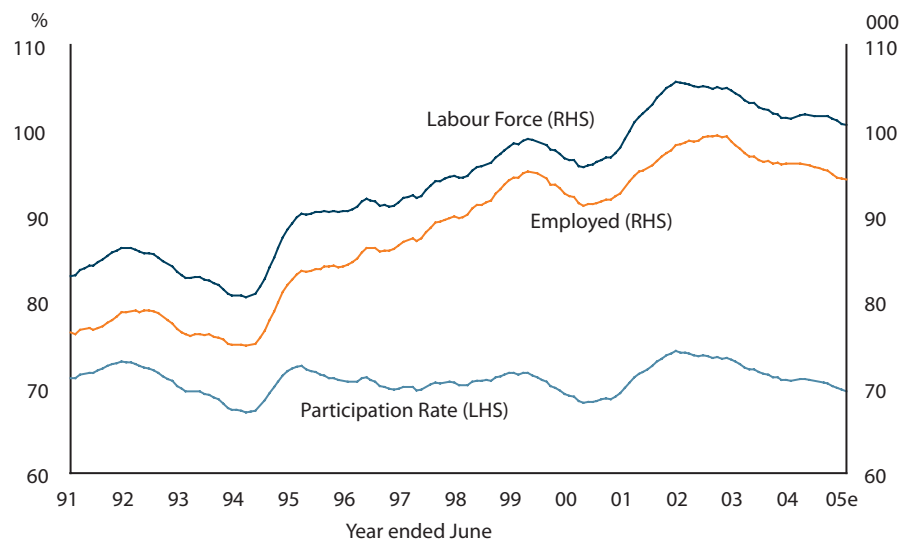
Source: ABS Cat. No. 6202.0

Definitions

- Labour Force** The labour force is defined as ‘persons employed and those looking for employment’. As such, the number of people actively seeking employment (which can vary significantly due to the encouraged / discouraged worker effect) influences the size of the labour force. Generally, the number of people seeking employment is pro-cyclical, increasing during periods of stronger economic growth as the chance of finding work increases and vice versa.
- Employment** In reporting employment, the ABS defines a person as employed if they are 15 years and over and worked for one hour or more during the reference period of the survey. A variety of persons are excluded from the scope of the survey, including self-employed persons (including subcontractors), full time defence personnel and overseas visitors.
- Unemployment Rate** The unemployment rate is the proportion of people seeking employment expressed as a percentage of the labour force. The relationship between the unemployment rate and economic and employment growth is not constant, with changes in participation and productivity acting to influence the unemployment rate. For instance, during the early stages of an economic upturn, increasing productivity can act to constrain employment growth, as previously under-utilised labour is used more intensively.
- Participation Rates** Participation rates express the labour force as a percentage of the civilian population aged 15 years and over and is therefore influenced by the demographic structure of the population. Labour force participation is typically higher in the Territory than elsewhere in Australia, reflecting the larger proportion of the Territory population in the working age groups. Nonetheless, at the Territory and national levels, socio-economic changes over the past 30 years have resulted in falling male and increasing female participation rates. This is associated with the general shift toward jobs growth in the services sector and part-time jobs, that coincided with higher female involvement in the labour force.

In the Territory, the female participation rate increased from about 55 per cent in June 1980 to 67 per cent in June 2004, while the male participation rate declined from 84 per cent to 74.7 per cent over the same period.

Chart 4.2: Territory Labour Market (moving annual average)



Source: NT Treasury, ABS Cat. No. 6202.0

Data Quality and Comparability

Data Volatility	Many factors can affect the relative accuracy of labour force data, and in smaller jurisdictions such as the Territory labour force survey results are volatile and contain large standard errors. Thus the data, at any particular point in time, can contain confusing signals. Highlighting this, the ABS recently released an article focusing on the extreme variability of Northern Territory labour force figures.
Labour Force Survey	Aggregate employment and unemployment data are derived by the ABS from the monthly Labour Force Survey (LFS) of households. The LFS is a sample survey and does not directly measure the whole population. Consistent with the method used for other jurisdictions, the ABS expands the survey results to conform to population distribution benchmarks generated from the Census. Despite best practices used for all jurisdictions, Territory labour force data are, in a relative sense, volatile and often subject to large revisions. This volatility is the consequence of several factors including the small sample size, the highly heterogeneous nature of the population which can influence the survey via the sample rotation process, remoteness and the transient and mobile nature of the Territory's population.
Standard Errors	The small sample size means the monthly estimates have a relatively broad range of statistically possible outcomes (described technically as relatively large standard errors). For example, in March 2005 the ABS reported Territory employment at 92 700, but with a 95 per cent confidence level that the number of employed people was between 89 900 and 95 500, which is quite a broad range.
Employment Versus Jobs	<p>Further, when interpreting employment it is important to understand the source and the scope of the data. The LFS survey reports on certain parts of the resident population defined as being part of the labour force, and does not report on the number of jobs in the economy (as is sometimes presumed). For example, a person holding two part-time jobs would only be recorded as one employed person in the LFS. Other series, such as ANZ job advertisements, are based on print and electronic advertisements, while the ABS job vacancies series is based on information sourced from businesses regarding employment intentions. As for all data for the Territory, data quality deteriorates rapidly as data sets are disaggregated.</p> <p>This is a further reason why the LFS may not accurately reflect prevailing labour market conditions, and caution needs to be used in interpreting the data. Various sources of data are used throughout this chapter to provide as comprehensive as possible analysis on Territory employment. Nonetheless, forecasting in this chapter is based on LFS data and the reader should be aware of volatility and accuracy issues.</p>
Narrow Definition of Employment	Another issue that affects reported data is the definition of employment used in the LFS, which excludes defence personnel, fly-in fly-out workers and workers who have been resident in Australia for less than one year. These types of workers can comprise a large percentage of total employment in the Territory. Fly-in fly-out workers can account for 50 per cent or more of workers on major construction sites such as the liquefied natural gas (LNG) plant at Wickham Point in Darwin and the Alcan G3 expansion at Gove. The requirement that workers be resident for more than one year to be included in the scope of the LFS excludes backpackers and other extended stay visitors to the Territory. These types of workers tend to be a significant source of labour during peak tourist season.
Leads to Underestimation	What this narrow definition of employment means in practical terms is that the official employment numbers released by the ABS, based on the LFS, do not correspond to the actual number of jobs in the Territory economy at any point in time, and are biased towards under-estimating true employment levels. This bias is consistent across all jurisdictions, but is likely to have a greater effect in the Territory given its relatively small population and skills base and its industry structure.

Data Aggregation and Disaggregation

Data aggregation is used to reduce the impact of data volatility and to aid interpretation and analysis. Volatility can be accentuated as the level of data disaggregation increases, such as when employment data are broken down by industry. Employment by industry, as reported quarterly by the LFS, is extremely volatile. For this reason, employment by industry data discussed in this chapter are taken from the Census of Population and Housing, which does not contain the same level of inaccuracies given that it includes all people resident on Census night.

Table 4.1: Territory Labour Force and Employment (annual average)

Year Average	Civilians 15 and Over		Labour Force		Participation Rate	Employed Persons		Unemployment Rate
Year ended June	'000	% Ch	'000	% Ch	%	'000	% Ch	%
1985	99.6	6.5	65.7	4.3	65.9	61.1	5.2	7.0
1986	105.4	5.8	75.1	14.4	71.2	69.6	14.0	7.3
1987	109.2	3.6	78.2	4.1	71.6	73.3	5.3	6.2
1988	110.1	0.9	74.4	-4.8	67.6	67.2	-8.4	9.8
1989	111.9	1.6	80.9	8.7	72.2	75.6	12.5	6.5
1990	114.7	2.5	83.2	2.8	72.5	77.7	2.8	6.5
1991	116.8	1.9	83.0	-0.1	71.1	76.4	-1.7	8.0
1992	118.2	1.1	86.2	3.8	73.0	78.8	3.1	8.6
1993	119.0	0.7	83.1	-3.6	69.9	76.4	-3.0	8.1
1994	119.9	0.8	80.8	-2.8	67.4	75.0	-1.8	7.1
1995	123.5	2.9	89.1	10.4	72.2	82.6	10.1	7.3
1996	128.3	3.9	90.6	1.7	70.6	84.3	2.1	7.0
1997	131.4	2.5	92.1	1.6	70.1	87.0	3.2	5.6
1998	134.4	2.2	94.5	2.6	70.3	89.8	3.3	4.9
1999	137.3	2.2	98.5	4.3	71.7	94.5	5.3	4.0
2000	139.9	1.9	96.6	-1.9	69.0	92.3	-2.3	4.4
2001	141.5	1.1	99.0	2.5	69.9	93.4	1.1	5.6
2002	142.5	0.7	105.6	6.7	74.1	98.4	5.4	6.8
2003	143.0	0.3	104.4	-1.2	73.0	98.3	-0.1	5.8
2004	143.3	0.2	101.4	-2.8	70.8	96.1	-2.2	5.2
2005e	144.9	1.1	101.3	-0.1	70.1	94.9	-1.3	6.6
Compound Annual Growth %								
1984-85 to 2004-05e		1.9	2.2			2.2		
1984-85 to 1989-90		2.9	4.8			4.9		
1989-90 to 1994-95		1.5	1.4			1.2		
1994-95 to 1999-00		2.5	1.6			2.3		
1999-00 to 2004-05e		0.7	1.0			0.5		

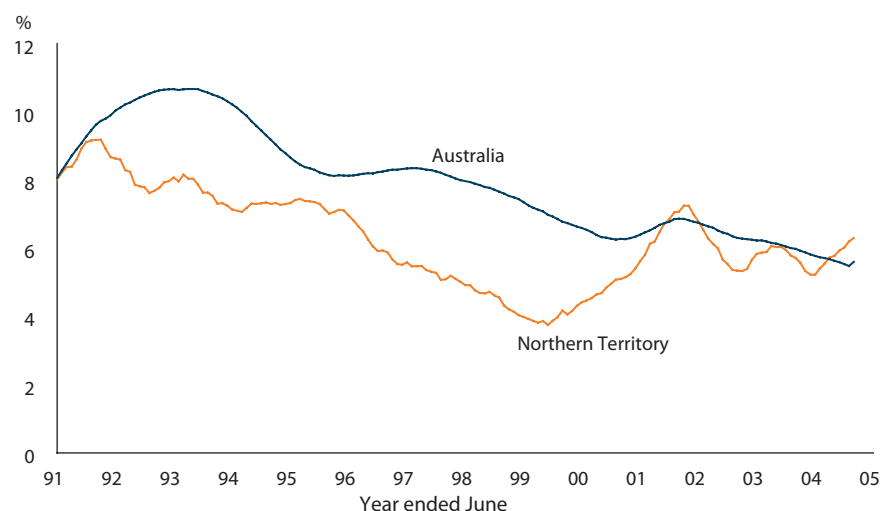
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Source: NT Treasury, ABS Cat. No. 6202.0

Territory Labour Market

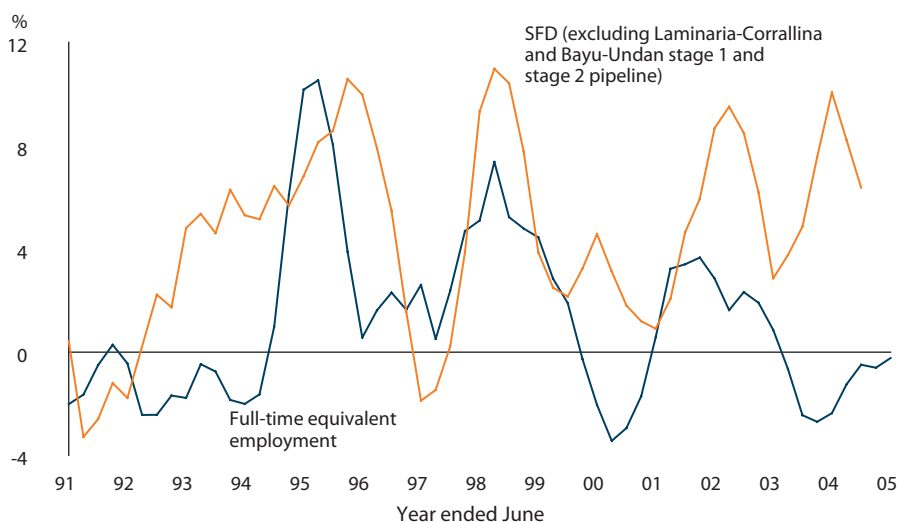
- 1985 to 1995** Table 4.1 sets out key labour market statistics for the Territory over the past 20 years. A feature of the Table 4.1 and Chart 4.1 is that, though improving over time, there is considerable volatility in labour market statistics in the Territory. For example, the data report that employment increased by a phenomenal 14 per cent in 1986 and declined by 8.4 per cent in 1988. The data report that employment increased at an average annual rate of 3.1 per cent in the 10 years to 1995, though with extreme annual movements.
- 1995 to 1999** Coinciding with a strong phase of economic growth, in the five years to June 1999 Territory employment as measured by the LFS experienced remarkably strong growth. Employment growth was consistently strong over the period, averaging 4.7 per cent per annum, and the unemployment rate fell from 7.1 per cent to 4 per cent (see Chart 4.3). Strong economic and population growth in this period was largely attributable to the defence relocation program and associated investment and employment across many industry sectors, notably the services sector.
- 1999 to 2001** The Territory labour market weakened between 1999 and 2001, experiencing a decline in employment. As expected, when the boost associated with defence-related construction ended, employment growth fell from what had been unsustainable longer term growth rates. Nonetheless, the ABS reports that the civilian population continued to grow at a modest rate over this period and despite weaker participation, the unemployment rate increased. The downturn in onshore business investment in the Territory in this period contributed to the weaker demand for labour.
- 2001 to 2002** Territory employment was reported to have strengthened markedly over the period 2001-02, largely attributable to the increase in business investment for the Adelaide to Darwin railway. Strong growth reported in this period was also influenced by the extent of the reported decline in 2001, as growth was measured from a relatively low base.
- 2002 to 2003** Following strong reported growth in the previous year, employment decreased marginally in 2002-03. Following the initial and significant boost from the railway, employment growth slowed as jobs related to the construction phase of the railway continued to fall back in line with railway construction coming to an end. Tourism-related employment was weak in this period, reflecting geopolitical conditions and international health and safety concerns.

Chart 4.3: Unemployment Rate (moving annual average)



Source: ABS Cat. No. 6202.0

Chart 4.4: State Final Demand and Full-time Equivalent Employment Growth (moving annual total, annual percentage change)



Source: NT Treasury, ABS Cat. Nos. 5206.0, 6202.0

2003 to 2004 Reported employment decreased by 2.2 per cent in 2003-04. The Territory labour force is estimated to have declined by 2.8 per cent in 2003-04 influenced by weak population growth of 0.7 per cent (in the financial year) and a fall in the participation rate, which decreased by 2.2 percentage points. This followed a decline in both the labour force and participation rates in 2002-03.

2004 to 2005 Strengthening population growth in 2004-05 was associated with better net interstate migration outcomes. This was reflected in estimated growth of 1.1 per cent in the civilian population aged 15 years and over. Nonetheless, the reported participation rate and labour force declined. Based on available LFS data, year average employment in 2004-05 is estimated to decrease by 1.3 per cent to 94 900 and the number of people seeking work is estimated to increase by 1300 to 6600.

Employment Demand Strengthening and Labour Shortages Emerging

Over largely the same period, job advertisements reported by the ANZ suggest that the Territory jobs market was improving. The ANZ reports advertisements increased by 26 per cent through the year to March 2005, compared to 5 per cent growth nationally. In addition the Department of Employment and Workplace Relations reported an increase in the number of Territory vacancies, with the Skilled Vacancies Index estimated to have increased by 61.4 per cent in 2004-05. While there is a significant structural component to the level of skilled vacancies in the Territory, the recent increase in advertisements and the Index is likely to reflect the impact of major projects such as the construction of the LNG plant at Wickham Point and the general improvement in onshore economic conditions.

State Final Demand Historically, there has been broad concordance between growth in Territory State Final Demand (SFD) and employment. However, as Chart 4.4 shows, these series diverged considerably over 2003-04 and 2004-05, as weaker reported employment growth was associated with strengthening consumption and investment.

Employment by Industry

Public Sector Employment

The Territory's major employment-providing industries are government administration, retail trade, health and community services, property and business services, education, construction, accommodation, cafes and restaurants, and transport and storage. Public sector employment is significant in the Territory. This is due to the comparatively smaller private sector presence associated with the developing status of the economy, limited economies of scale associated with serving a small and dispersed population, and a large defence presence.

Table 4.2: Territory Employment by Industry

Industry	Employment Level(a) (000)				Compound Annual Growth Rates				Percentage of Total	
	1986	1991	1996	2001	1986 to 1991	1991 to 1996	1996 to 2001	1986 to 2001	1986	2001
Agriculture, forestry and fishing	2.6	3.1	2.7	3.0	3.6	-2.9	2.6	1.1	3.8	3.2
Mining	3.1	3.0	3.2	2.4	-0.6	1.3	-5.3	-1.6	4.5	2.5
Manufacturing	2.9	3.8	4.0	4.4	5.8	0.9	2.2	3.0	4.2	4.6
Services (excluding defence)	57.5	64.7	74.3	80.9	2.4	2.8	1.7	2.3	84.5	84.1
Electricity, gas and water	0.7	0.8	0.6	0.9	4.6	-6.9	7.7	1.6	1.0	0.9
Construction	6.8	5.0	6.7	6.1	-6.0	6.2	-1.9	-0.7	10.0	6.3
Wholesale trade	2.7	3.1	3.4	3.6	3.2	1.5	1.1	1.9	3.9	3.7
Retail trade	7.8	9.5	10.0	11.7	3.8	1.2	3.2	2.7	11.5	12.2
Accommodation, cafes and restaurants	3.3	5.0	5.6	5.9	8.6	2.2	1.3	4.0	4.9	6.2
Transport and storage	3.5	4.2	4.4	5.2	3.6	1.0	3.2	2.6	5.2	5.4
Communication services	1.6	1.2	1.4	1.1	-6.4	3.9	-4.5	-2.4	2.4	1.2
Finance and insurance	2.0	2.1	1.8	1.7	1.0	-2.8	-1.2	-1.0	2.9	1.7
Property and business services	4.4	5.3	6.9	8.4	3.7	5.6	3.8	4.4	6.5	8.7
Government administration	7.7	8.1	10.4	12.2	1.0	5.2	3.2	3.1	8.4	12.7
Education	5.7	6.0	6.8	7.8	1.0	2.3	3.0	2.1	8.4	8.1
Health and community services	5.2	6.6	10.0	8.7	5.0	8.5	-2.7	3.5	7.7	9.1
Cultural and recreational services	2.1	2.1	2.7	2.9	-0.2	5.4	1.3	2.1	3.1	3.0
Personal and other services	3.9	5.7	3.6	4.7	8.0	-9.0	5.6	1.3	5.7	4.9
Total (excluding Defence)	66.0	74.6	84.1	90.7	2.5	2.4	1.5	2.1	97.1	94.4
Defence	2.0	2.1	3.3	5.4	0.8	9.8	10.0	6.8	2.9	5.6
Total (including Defence)	68.0	76.7	87.5	96.1	2.4	2.7	1.9	2.3	100.0	100.0

Source: NT Treasury, ABS data

(a) Census data

Note: 1996 and 2001 Census employment by industry data includes two irregular items. First is the category 'not stated' whereby the respondent has answered as being employed but has not identified the industry in which they work. Second, is the category 'not applicable' whereby the respondent has answered as being in the labour force but has not identified whether they are employed or unemployed. For 1991 and 1986 'not stated' data is available, however 'not applicable' has been estimated using the proportion of identified employment by industry in the 1996 Census and 2001 Census. As an estimate of employment, 50 per cent of the 'not applicable' category is assumed to be employed. Therefore employment not allocated to an industry was 6280 in 1986, 9062 in 1991, 7446 in 1996 and 7980 in 2001. This employment was weighted through the industry sectors for each Census year. Defence employment has been estimated at 2000 for 1986.

Census Data Based on Census information, these eight industries accounted for around 70 per cent of Territory employment in 2000-01. This accords generally with employment data for 2004, with the three largest employment-providing industries remaining the same, and 'accommodation and cafes' being replaced in the top eight by 'personal and other services'. The top eight industries account for 79 per cent of total employment in 2004. Defence is estimated to have comprised almost 6.0 per cent of total Territory employment in 2001, following compound annual growth of 6.8 per cent over the 15 years to 2001.

Construction Recent employment growth by industry has been mixed. For example, the construction sector has been through a major cycle in the past 10 years and has recovered strongly in the past two years as residential construction has picked up and major engineering and building projects have proceeded. In the medium term construction will be heavily influenced by employment for major projects, while population growth will be a key driver in the demand for residential construction activity. The expectation for 2005-06 is that skill shortages in the construction sector will continue as strong labour demand exceeds the available supply. There is a prospect that this will be reflected in either stronger employment and population growth being reported, or alternatively, increased fly-in fly-out employment.

Service Industries As shown in Table 4.2, over the 15 years to 2001 Territory employment (excluding defence) increased at an average annual rate of 2.1 per cent per annum, around 0.2 of a percentage point higher than nationally. As in the rest of Australia, the services sector has driven job creation in the Territory, reflecting strong demand and the labour-intensive nature of services industries. The falling proportion of employment in the traditional 'production' sectors is consistent with a maturing and diversifying economy. Approximately 95 per cent of employment growth was in the services sectors in the 15 years to 2001, and services currently account for around 92 per cent of total Territory ABS LFS reported employment.

Administration Strong growth in health and community services employment (3.5 per cent average annual growth over the 15 years to 2001 compared to around 3.0 per cent nationally) partly reflects the increased provision of social services in remote communities and the increasing sophistication of available services. For example, as the population of the Territory has grown there has been an increased capacity to support specialist medical activities, leading to expanded services.

Tourism Other service industries that exhibited strong growth in the 15 years to 2001 include tourism-related services such as accommodation, cafes and restaurants (4.0 per cent per annum), and retail trade (2.7 per cent per annum). While the tourism sector and associated employment have declined in the Territory since 2001, it is starting to show signs of recovering. Despite the setbacks following 2001, tourism continues to be an important component of Territory employment.

Manufacturing Manufacturing, with average growth of 3.0 per cent per annum, is the only non-service industry in the Territory to experience growth greater than total employment growth over the 15 years. Further solid employment growth is likely as the industry expands in coming years, with liquefied natural gas (LNG) production to commence in 2006 and alumina production scheduled to almost double in 2007. Typically, manufacturing accounts for around 5.0 per cent of Territory employment, compared to around 12.0 per cent nationally. The Northern Territory Government released its manufacturing strategy, *Making It In the Territory*, in 2004. The Strategy aims to increase the value of manufacturing output and employment by 40 and 25 per cent respectively by 2009.

Contracting Industries Some industries in the Territory have recorded negative average annual employment growth rates over the 15 years to 2001. These include mining (-1.6 per cent), communication services (-2.4 per cent) and finance and insurance (-1.0 per cent). These declines reflect the impact of technology-related productivity gains and the trend towards centralisation.

The Territory Workforce

The Territory's labour market profile differs significantly from that of the rest of Australia, largely as a result of remoteness, transience and seasonality of demand. Compared to the rest of Australia, the Territory attracts a disproportionately large number of young, mobile workers, who often view their stay as short to medium term.

Young, Mobile Workforce Large interstate migration flows mean that some 8 to 10 per cent of the Territory's population relocates interstate each year, around four times the level of any other jurisdiction (apart from the Australian Capital Territory). The transience of the Territory's youthful workforce and the Territory's remoteness impose significant recruitment and training costs on employers. High turnover also results in a loss of expertise, often leading to skill shortages, which can be accentuated by large specialised projects as is currently the case.

Skill Shortages Transience is reflected in high turnover rates and high job vacancy rates for both skilled and unskilled positions, which are often higher in the Territory than nationally. It is anticipated that major projects currently under way will continue to exacerbate skill shortages in some industries in the medium term. The Territory Government's policy *Jobs Plan – Building the Northern Territory Workforce* aims to reduce the shortage of skilled tradespeople by expanding pre-vocational training for apprentices, providing financial incentives for employers to take on apprentices and increasing the number and range of school-based apprenticeships.

Community Development Employment Projects A significant proportion of Aboriginal and Torres Strait Islanders in the Territory are employed under the Community Development Employment Projects (CDEP) program, which until September 2004 was administered by the Aboriginal and Torres Strait Islander Commission. It is now coordinated by the Department of Employment and Workplace Relations. CDEP began as a 'work for the dole' community development scheme.

Recent Changes to CDEP Under International Labour Organisation definitions, CDEP participants are reported as employed in the labour force survey. Participants in the CDEP program work in community development initiatives in return for a wage at least equivalent to the unemployment benefit. The vast majority of employment among Aboriginal and Torres Strait Islanders living in remote communities is connected to CDEP. In the past eight years, CDEP participant numbers have increased from around 6000 to the current level of 8000. The Australian Government is currently reviewing the CDEP program with the stated aim of reforming it to improve outcomes for Indigenous Australians.

Outlook

Solid Growth Outlook Independent employment market analysts suggest a strong upswing in labour demand associated with economic growth and major projects. Treasury forecasts employment growth of 2.0 per cent in 2005-06 as local employment at the Alcan G3 expansion at Gove and the Trans-Territory Pipeline more than compensate for the loss of jobs as construction work for the LNG plant winds down. Employment will also be boosted by defence infrastructure development and the construction for the Darwin City Waterfront Redevelopment project. This project will include a convention centre, residential apartments, hotel, retail centre and infrastructure to be developed over 10 years. The first phase of the project is estimated to create up to 1000 jobs and is scheduled for completion in the first half of 2007.

Solid residential construction activity will support employment growth in coming years, while there will be about 135 jobs directly associated with the operation of the LNG plant. More broadly, the upswing in the onshore economy will continue through 2006 as the labour intensive tourism sector benefits from a solid rebound in visitor numbers, notably for international visitors.

