



## **POPULATION AND LABOUR MOVEMENTS IN RURAL AUSTRALIA**

**Anne M. Garnett**

School of Economics, Murdoch University, WA 6150, Australia.

**Philip E.T. Lewis**

Centre for Labour Market Research, Murdoch University, WA 6150, Australia.

**ABSTRACT** Rural Australia comprises 37 per cent of Australia's population, and 35.5 per cent of the total workforce. Given this significance, rural population and labour markets, should be the focus of much research and analysis particularly for government policy relating to the provision of physical and social infrastructure. Yet, generally, rural labour markets have not received the attention that other labour markets in Australia have. This paper analyses the characteristics and trends in Australia's rural labour markets to identify areas of change or stability over time.

### **1. INTRODUCTION**

Although a large proportion of Australia's population lives outside the major urban conurbations there remains relatively little research on rural population and labour markets. However, the perceived decline in economic and social well-being of many rural communities in recent years has put rural Australia firmly on the political agenda and created a new impetus for research in this area (see Productivity Commission 1999). A thorough analysis of rural population and labour markets is beyond the scope of this paper. However, this paper attempts to analyse the major characteristics and trends in rural labour markets in order to provide a basis for further research.

The next section provides a snapshot of the distribution of population based on the 1996 census data. The third section highlights the major changes in population and workforce over time. The fourth section examines rural employment with a particular emphasis on agriculture. The next two sections examine the provision of services and education, identified as major factors contributing to the welfare of rural communities. The concluding section includes a discussion of policy issues relating to rural Australia.

### **2. RURAL POPULATION AND LABOUR MARKET**

The 1996 population census highlights the main areas of difference between the rural and metropolitan populations and labour markets. This paper uses the Australian Bureau of Statistics (ABS) classification of rural communities, as below:

- major urban – all cities and towns of 100 000 or more persons
- other urban – towns and cities from 1000 to less than 100 000 persons
- rural locality – centres from 200 – 999 persons

- rural balance – all other areas, but not including “migratory population”.

Table 1 shows the distribution of the population and the labour force of Australia by community classification for 1996. The migratory category has been omitted, noting that this category comprises only 0.06 per cent of the total population and 0.09 per cent of the labour force. It is hoped that a future paper will refine these classifications, in an attempt to reveal migration effects within the ABS classifications. Of most concern is the ‘other urban’ classification, as this includes relatively small rural towns, larger rural centres and regional cities. Reducing the range of this category should prove useful when analysing trends and changes.

The census data show that the Australian population is heavily concentrated, almost 63 per cent, in urban areas. Another 23 per cent live in ‘other urban’ areas, which range from relatively small communities, to what can be considered ‘large country towns’. Very small towns or localities with less than 200 people contain 11.5 per cent of the population. This leaves a surprisingly low proportion of only 2.5 per cent living in the slightly ‘larger’ country towns of between 200 and 1000 people. In metropolitan areas, females slightly outnumber males, by 1.4 per cent, while in larger rural centres, the numbers are approximately equal. The opposite to the metropolitan ratio occurs in the small rural communities, where males outnumber females by 1.4 per cent.

The most obvious differences between rural and urban communities is the proportion of people who are employers and self-employed. In metropolitan areas, employers and self-employed comprise nearly 6 per cent of the labour force. In rural areas, this proportion nearly doubles, to 11 per cent. Most notable is that in rural areas of less than 200 people, over 17 per cent of this population are employers or self-employed compared to 7.8 per cent in Australia as a whole. This reveals that around 27 per cent of Australia’s self employed and employers live in small rural areas outside the main country towns. In addition, looking at data specific to women shows that 27.4 per cent of all female self-employed and employers live in small rural areas of less than 200 people. This is likely to be the result of many rural businesses being jointly owned by spouses.

The unemployment rate in larger rural towns is significantly higher than the level of unemployment in metropolitan areas. As Table 1 shows, major urban areas recorded an unemployment rate of 8.8 per cent in 1996. Other urban (large country towns) and rural locality both recorded unemployment rates of nearly 2 per cent higher, at 10.7 per cent. However, the rate of unemployment in small rural localities of less than 200 people was 8.1 per cent, slightly below the metropolitan level. Census data over the past 25 years reveal that this has generally been the case, with the exception of 1986, during a severe rural downturn. When looking at male and female unemployment levels, almost no relative differences occur between regions. Almost all areas in 1996 experienced higher rates of unemployment among men than women, between 1.5 and 2.2 per cent.

Table 1. Population and Workforce by Community Size, 1996.

		Males	%	Females	%	Persons	%
Major	Employee	2489587	82.9	2103092	86.9	4592679	84.7
Urban	Employers	65622	2.2	29753	1.2	95375	1.8
	Self-employed	148252	4.9	73009	3.0	221261	4.1
	Helper	13211	0.4	21215	0.9	34426	0.6
	Unemployed	286733	9.5	193015	8.0	479748	8.8
	Total Labour Force	3003405	100.0	2420084	100.0	5423489	100.0
	Population(a)	5447719	62.0	5682376	63.4	11130095	62.7
Other	Employee	825947	79.9	640584	83.1	1466531	81.3
Urban	Employers	29590	2.9	17007	2.2	46597	2.6
	Self-employed	55185	5.3	29048	3.8	84233	4.7
	Helper	5859	0.6	9404	1.2	15263	0.8
	Unemployed	117271	11.3	74983	9.7	192254	10.7
	Total Labour Force	1033852	100.0	771026	100.0	1804878	100.0
	Population(a)	2032304	23.1	2096534	23.4	4128838	23.3
Rural	Employee	82675	76.3	59586	79.9	142261	77.7
Locality	Employers	3693	3.4	2212	3.0	5905	3.2
	Self-employed	8466	7.8	4345	5.8	12811	7.0
	Helper	1049	1.0	1443	1.9	2492	1.4
	Unemployed	12527	11.6	7035	9.4	19562	10.7
	Total Labour Force	108410	100.0	74621	100.0	183031	100.0
	Population(a)	225398	2.6	221551	2.5	446949	2.5
Rural	Employee	412538	70.2	299897	74.7	712435	72.0
Balance	Employers	29783	5.1	16926	4.2	46709	4.7
	Self-employed	82280	14.0	41725	10.4	124005	12.5
	Helper	11508	2.0	14194	3.5	25702	2.6
	Unemployed	51237	8.7	28926	7.2	80163	8.1
	Total Labour Force	587346	100.0	401668	100.0	989014	100.0
	Population(a)	1069923	12.2	967013	10.8	2036936	11.5
Australia	Employee	3817438	80.5	3103962	84.6	6921400	82.3
	Employers	128722	2.7	65901	1.8	194623	2.3
	Self-employed	294246	6.2	148145	4.0	442391	5.3
	Helper	31645	0.7	46260	1.3	77905	0.9
	Unemployed	467925	9.9	304045	8.3	771970	9.2
	Total Labour Force	4739976	100.0	3668313	100.0	8408289	100.0
	Population	8783426		8969403		17752829	

(a) For population the percentage is that of the total for Australia

Source: ABS, 1996 Population Census

### 3. CHANGES OVER TIME

While the 1996 census provides useful insights into the present population and employment patterns in Australia, it is useful to examine whether changes have been occurring over time. It is important to note the potential bias that 'bracket creep' could cause, when making numerical comparisons of this kind over time. For example, if the whole population increases, it is probable that those communities on the margin of a category, would change categories.

In earlier research (Hugo and Smailes, 1985) it was shown that in the 1970s, the trend for rural inhabitants to drift to metropolitan areas had reversed – referred to as the 'rural turnaround'. Explanations for the turnaround included lower costs of living, particularly housing, and quality of life, which seemed to particularly attract retirees to coastal towns. There is a considerable literature on migration between regions (see, for example, Debelle and Vickery, 1998; Groenewold, 1992) and a thorough analysis is beyond the scope of this paper. However, factors which are likely to contribute to outward migration from rural areas include the higher rates of unemployment in rural areas, and quality of life. When a population starts to decline, facilities and services decline, which starts a vicious circle. Families move to larger urban areas to access services such as education and health. However, Lewis (1991) pointed out that the growth of large rural centres had also had the effect of making smaller towns, within easy reach of large centres, viable communities.

Table 2 shows annual percentage changes in population, labour force, and employment over time, to shed some light on the above factors. Metropolitan population growth rates have experienced minor variations since 1981, growing slightly in the 1990s. Over the same period, large country towns have been continually growing, and population growth rates from 1991 to 1996 exceeded all other metropolitan and rural areas. The relatively high population growth rate of the 1990s, when compared to rural locality and rural balance areas is a major reversal of the trend throughout the 1980s. As Table 2 reveals, population growth rates in smaller rural areas from 1981 to 1991 were significantly higher than 'other urban' areas. For example, over the period 1986 to 1991, the annual growth rate for other urban (large country towns) was 1.6 per cent, while rural locality and rural balance recorded population growth rates of 3 per cent and 1.8 per cent respectively. Over the period 1991 to 1996 rural localities recorded an annual growth rate of -1.7 per cent, with rural balance recording almost no percentage change, far below the national growth rate of 1.1 per cent. It seems clear that in the 1990s, people are leaving the small to medium sized rural towns, and are moving to larger country towns.

The above population changes are mirrored by movements in the labour force. Metropolitan areas and large country towns were experiencing increases in their labour force in the 1990s, while a drop in the size of the labour force was occurring in rural localities, with a zero growth rate occurring in rural balance areas. As seen in Table 2, this is a complete reversal of the labour force growth trends of the 1980s, where the highest growth rates were recorded in rural locality and rural balance areas. The employment data over time also replicate

**Table 2.** Annual Increase in Population, Labour Force and Employment, by Community Size, 1981-1996

	1981-1986			1986-1991			1991-1996		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Annual Percentage Increase Over Base Year									
<b>Major Urban</b>									
Population	1.3	1.3	1.3	1.5	1.6	1.5	1.0	1.1	1.1
Labour Force	0.8	2.4	1.4	1.4	3.7	2.4	0.4	1.6	0.9
Employment	0.1	2.6	0.8	0.5	3.3	1.7	1.0	2.2	1.5
<b>Other Urban</b>									
Population	1.2	1.3	1.3	1.4	1.7	1.6	1.8	1.9	1.9
Labour Force	0.6	2.8	1.4	1.2	4.2	2.3	1.1	2.6	1.7
Employment	-0.3	1.3	0.4	0.5	4.2	1.9	1.6	3.1	2.2
<b>Rural Locality</b>									
Population	1.7	2.2	1.9	3.0	3.1	3.0	-1.7	-1.6	-1.7
Labour Force	0.9	2.6	1.5	3.0	6.1	4.1	-2.8	-1.2	-2.2
Employment	-0.4	1.5	0.3	2.6	6.4	3.9	-2.3	-0.7	-1.7
<b>Rural Balance</b>									
Population	1.8	2.1	1.9	1.8	1.9	1.8	0.2	0.2	0.2
Labour Force	1.5	2.5	1.7	1.7	3.8	2.5	-0.5	0.9	0
Employment	0.3	1.7	0.8	1.3	3.9	2.3	0	1.4	0.5
<b>Australia</b>									
Population	1.4	1.4	1.4	1.5	1.7	1.6	1.0	1.1	1.1
Labour Force	0.8	2.5	1.5	1.4	3.9	2.4	0.4	1.7	0.9
Employment	0.4	1.8	0.7	0.7	3.6	1.8	0.9	2.2	1.5

Source: Derived from ABS, *The Labour Force*. Cat. No. 6203.0.

these changes.

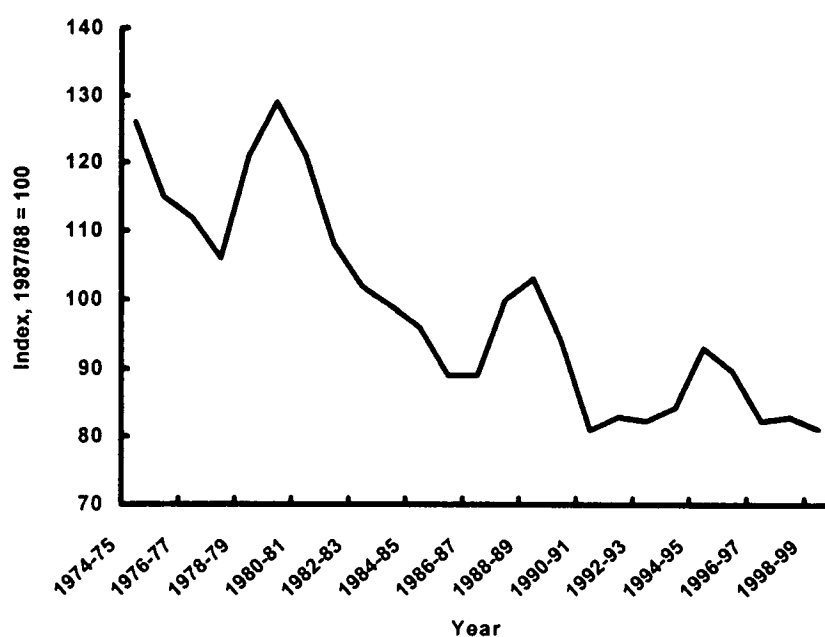
Another major factor with respect to the labour force is the participation of women in the labour force. Nationwide and in all community areas, female labour force participation growth rates far exceed that of males. In the 1990s, growth in female labour force participation was strongest in the large county towns, followed by the metropolitan areas. A similar trend is apparent in female employment rates over time. This is, again, a reversal of the 1986-1991 trend, where the highest growth in female labour force participation was in rural localities, which by 1996, were experiencing negative growth.

Clearly some major changes have caused the drop in growth in population, labour force and employment. Data from the census's between 1971 and 1986 show that this is strictly a 1990s phenomenon (Lewis, 1991).

**Table 3.** Industry of Employment by Community Size, 1996 (per cent)

	Major Urban	Other Urban	Rural Locality	Rural Balance
Agriculture, Forestry and Fishing	0.5	3.3	8.6	25.4
Mining	0.5	2.7	2.2	1.7
Manufacturing	13.5	11.9	11.3	9.4
Services	67	61.7	56.4	47
Other	18.5	20.4	21.5	16.5
Total	100	100	100	100

Source: Australian Bureau of Statistics, Population Census, 1996.

**Figure 1.** Farmers' Terms of Trade, 1976/77 – 1998/99

### 3.1 Employment

Probably the most important factor in determining welfare is the availability of employment. Although agriculture has traditionally played a major role in rural economies, the proportion of the labour force employed directly in agriculture is small except in the smallest rural communities, where it stands at 25 per cent. Table 3 shows employment patterns by industry and community size for 1996. It is clear that in both metropolitan and non-metropolitan areas,

services provide the greatest source of employment.

However, agriculture is responsible for creating employment in other sectors through linkages (Garnett and Lewis, 1991). For instance Tamblin and Powell (1985) estimate that for every person directly employed in agriculture another four jobs are created in other sectors. In many regions rural communities originated to provide labour and services to the agricultural sector. Services such as education, financial services, and the retailing of consumer and capital goods arose and continue in response to demand created in agricultural areas. Therefore, the fortunes of the agricultural sector will impact on the income and employment levels of other industries in rural communities.

Employment in agriculture can be described as the derived demand for labour and, as such, is determined by output prices, input prices and technological change which enhances productivity (Evans and Lewis, 1986). Looking specifically at the agricultural component of rural Australia, terms of trade (the ratio of prices received to prices paid) have been continually declining since the 1970s. Also, productivity gains have been much greater for agriculture than for the economy as a whole (Lewis, Martin and Savage 1988; Knopke, Strappazon and Mullen 1995). As shown in Figure 1, the general trend in the terms of trade for Australian agriculture from the 1970s to the early 1980s has been downwards. However, since the late 1980s, farmers' terms of trade have levelled off, albeit at an historic low. Over the period 1991 to 1996 when there was zero or negative population movements in rural areas, the terms of trade have been quite stable. It appears therefore, that terms of trade cannot explain the recent rural population changes, except to the extent that a 'threshold' level may have been reached causing some agricultural producers to leave the industry. This explanation would need to assume that producers leaving the industry, also leave the region.

Structural adjustment is still occurring in the agricultural sector. Table 4 shows that the number of agricultural establishments in Australia have been declining over time (ABARE, 1998). For example, between 1979/80 and 1989/90, the number of agricultural establishments fell by over 2.8 per cent per year or 51 302 farms, and over the period 1990/91 to 1996/97 by 1.4 per cent per year or 10 788 farms.

Productivity gains and economies of scale could mean that demand for services may fall. However, this depends on whether the output level remains the same, or increases. If the latter occurs due to efficiency gains, the demand for some goods and services could increase. For example, economies of scale may mean that the demand for some inputs will fall (an example is machinery rationalisation). However, productivity gains could lead to a greater use of some inputs, which enhance the productivity of other farm inputs, and overall output may increase (requiring additional processing and transport services).

**Table 4.** Agricultural Establishments and Employment in Agriculture in Australia, 1970/71 to 1997/98

	Agricultural Establishments	Rate of Change (per cent)	Agricultural Employment (000s)	Rate of Change (per cent)
1969/70	192 550	-	406	-
1979/80	179 080	-	379	-6.7
1989/90	127 778	-	402	6.1
1990/91	124 975	-2.2	409	1.7
1991/92	120 558	-3.5	383	-6.4
1992/93	120 655	0.1	377	-1.6
1993/94	117 189	-2.9	383	1.6
1994/95	116 193	-0.8	404	5.5
1995/96	115 430	-0.7	422	4.5
1996/97	114 187	-1.1	427	1.2
1997/98	n/a	n/a	436	2.1

Source: ABARE, *Commodities Statistical Bulletin*, 1998

**Table 5.** Employment in Agriculture and Services to Agriculture 1968-1997 (000s)

		1968	1978	1988	1997
Total Full-time	Male	333.9	267	265	288.2
	Female	37.1	40.6	55.8	71.2
Total Part-time	Male	13.7	14.6	21.2	34
	Female	26	40.7	63.1	66.9
Self-employed	Male	217.4	179.1	172.8	133
	Female	26.2	55.6	77	60
Wages & Salary Earners	Male	124.3	95.5	100.5	141.9
	Female	17.6	18.7	30.3	49.1

Source: ABS, *The Labour Force*, 6203.0

The links between farm size, the demand for inputs (including employment effects) are complex, and are not obviously positive or negative. Multiplier analysis is of little use in this framework, since multipliers are based on the assumption that an increase in output always leads to an increase in demand for other inputs. Technological change and economies of scale change input-output coefficients, therefore changing the multipliers.

Table 5 reveals important structural changes that have occurred in the agricultural sector. Full-time employment for men fell continuously until the late 1980s, after which it has increased quite significantly. For women in agriculture, full-time employment has increased continually and substantially over time. For



both men and women, part-time employment has grown over time, which is consistent with nationwide employment trends. It is interesting to note, however, that from 1988 to 1997, part-time growth in employment of males recorded its most dramatic increase of over 60 per cent from 21 200 to 34 000.

Very revealing, however, is the change in employment in agriculture. From Table 5, the number of self-employed males in agriculture has been declining over time, but a very large drop of 23 per cent occurred between 1988 to 1997. Over this time, the number of males who became wage earners jumped by over 41 per cent, from 100 500 to 141 900. For females, these patterns have varied, but have been similarly dramatic. From 1968 to 1988, the number of self-employed females in agriculture steadily increased (the opposite to the male pattern). A probable explanation for some of this, is that women who previously did not classify themselves as workers on the farm, are now realising their contribution, and have re-classified themselves as self-employed workers, (Evans, 1985; Lewis, Martin and Savage, 1988). However, like men, between 1988 and 1997, the number of women in self employment fell dramatically by 22 per cent. The increase in females who become wage earners is equally as dramatic, jumping by 62 per cent between 1988 and 1997. This closely mirrors the changes in male employment. An examination of the increasing importance of off-farm employment can shed some insight into these changes.

Farmers and spouses who also work off-farm usually do so as wage and salary earners, with less than one-sixth working in self-employed positions. Since the early 1980s, the proportion of farmers and spouses working off-farm has almost doubled. For women, around 18 per cent worked off-farm, mainly on other farms, in the early 1980s but by 1995/96, 34 per cent worked off-farm. Much of this has been in part-time jobs. For men, around 11 per cent worked off-farm in the early 1980s, compared to 19 per cent in 1995/96 (Garnaut, Rasheed and Rodriguez, 1999).

Average earnings for people working off-farm in 1996/97 totalled approximately \$17000 (ABARE, 1998a). For those self-employed off-farm, average off-farm earnings were almost double that. Those who work off-farm usually come from relatively smaller farms. What is clearly apparent is that farmers and spouses who work off-farm do so because their farm income levels are relatively low. The average income generated on the farm by those who do not work off-farm was \$44 731 in 1996/97, whereas for those who seek off-farm work, average on-farm income was \$23 047. Average total family incomes of all farmers are approximately the same for those who work off-farm, and those who do not.

It should also be pointed out that some rural communities originated due to mining. Employment levels in the mining sector have been subject to a significant decline in recent years, falling by 20 per cent nationally over the last 10 years, from 104 thousand in 1989 to 83.2 thousand in 1998. These employment effects may be amplified via flow-on effects, and a consequent decrease in demand for goods and services in rural regions. The more recent mining company policy of 'fly-in/fly-out' for employees, whereby workers are not always required to 'settle' in rural areas, may also contribute to a little to

falls in demand for goods and services in rural areas.

### 3.2 Rural Services

The service sector employs 71 per cent of women and 46 per cent of men in rural localities. To the extent that services in rural areas have declined then it would be expected that there would have been significant impacts on employment. Unfortunately, due to changes in definition, it is not possible to compare employment in the service sector between the 1991 and 1996 censuses. However, to the extent that the output of services can be seen to have declined it can be presumed that employment in services has also fallen.

It is likely that a decline in the availability and/or quality of health, education, and financial services, has contributed to the movement of people from the smaller rural localities to the larger centres. Also, it has been suggested by Powell (1996, 1997) and Jensen (1998) that rural regions in Australia have been hit harder than metropolitan areas by much of the microeconomic reform and structural adjustment of the 1980s and 1990s. This also relates to specific issues such as the quality and availability of services in rural areas.

Looking first at the issue of financial services, the number of non-metropolitan bank branches declined at a rate of 9 per cent between 1970 and 1996 (RBA, 1996). However, between 1993 and 1996, the rate of decline had accelerated to nearly 14 per cent. In contrast, over the same period, the number of metropolitan branches per million inhabitants has been relatively stable, (RBA, 1996). The introduction of new banks and converted building societies in the deregulated environment of the 1980s contributed to this relatively stable metropolitan ratio. In general, branch closures have been carried out to cut operating costs, increase operating efficiency, and because new technologies (EFTPOS, ATMS) have allowed banks to change their method of service delivery.

A survey conducted in 1996 of regions in Queensland and New South Wales, attempted to assess the impact of bank branch closures, with particular emphasis on towns in which the only bank branch had been closed (Beal and Ralston, 1998). Survey results showed that branch closures had led to changes in local spending levels, savings and borrowing patterns, impacting on both local businesses and on the community.

Table 6 illustrates some of the reported effects resulting from bank branch closures. Generally, rural businesses reported falling sales, and a significant increase of cheques cashed and cash accumulation levels. The falling levels of sales is of most concern. From Table 6, low cash handling business respondents, on average, reported a drop in monthly sales to the value of \$675, while the average drop in monthly sales from high cash handling businesses was \$4 475. Some local residents were forced to travel to other, larger, town centres to conduct financial transactions, and also conducted their shopping at the larger centres while they were there.

**Table 6.** Summary of Average Values for Impacts on Business of Closure of the Only Bank Branch in Rural Communities

Impact	Primary Producers	Low Cash Handling Businesses	High Cash Handling Businesses
Loss of Sales/Month	na	\$675	\$4 475
Increase in Cheques Cashed/Month	\$600	\$4 750	\$12 100
Excess Cash Accumulation /Month	\$850	\$1 000	\$4 100
Delayed Cheque Deposits (\$/days)	\$6 600 for 8 days	\$7 500 for 6 days	\$6 800 for 5 days
Increased Bad Debts/Year	na	\$1 000	na

Source: Beal and Ralston, (1998).

Specifically, 53 per cent of individual respondents indicated that bank closures had changed their shopping patterns. Of these, almost 90 per cent claimed that their expenditure in their local town had dropped, with the decrease averaging \$320 per month. Further, 30 per cent of respondents reported that the closure of their local bank branch had led them not to proceed with a loan. Overall, 90 per cent of survey respondents indicated that the bank closure had increased their pessimism about the future, believing that local businesses and services would suffer. Of these, almost 40 per cent stated that they would leave the local town if they could.

Government cuts in funding for rural physical and social infrastructure could also help explain the migration out of smaller rural areas. Although there is a paucity of data on provision of services, in a survey conducted in 1994 in rural Victoria and New South Wales over 42 per cent of respondents believed that government services were worse in 1994 compared to 1989 (Stayner, 1997). Survey results highlight specific issues regarding the provision of health services, such as concern over the down-sizing of rural hospital facilities. This issue, in turn, has contributed to difficulties involved in retaining or attracting doctors to rural areas. A recent survey of rural doctors found that among the main reasons given for why they left rural practice was de-skilling due to the downgrading of hospital facilities (Kamien, 1998). Other significant factors included lack of professional contact with colleagues, lack of locum relief and lack of educational opportunities for their children. Other research has estimated that by the year 2007, only 50 per cent of rural doctors will be in their current practice, with only 20 per cent for Western Australia (Strasser, Kamien and Carson, 1997). A tendency for doctors in small rural towns leaving to join together as a medical practice in larger towns has also been observed (Kamien, 1998).

### 3.3 Rural Education Levels

Finally, it has long been recognised that rural education facilities are worse than those available in metropolitan areas, and participation rates are also lower

(Harrison, 1997). If it is believed that the quality and level of formal education is more important in the competitive labour force of the 1990s, than in previous years, then this may also serve as a partial explanation for people leaving smaller rural communities. It has also been shown that the probability of unemployment has risen significantly since the 1980s, and is greater among those with lower education levels (Norris and Wooden, 1996). Therefore, it is now more likely that responsible parents would view the relatively lower standards of education facilities in rural areas as a significant factor in deciding whether to migrate.

Education is an important contributing factor to labour productivity and efficiency. Therefore an examination of rural education levels, and changes over time, is an important aspect of any analysis of rural labour markets. Table 7 shows major trends, by community classification and gender, in the numbers holding tertiary qualifications from 1971 to 1996. Non-tertiary qualifications have not been reported as most people in recent years who do not hold a tertiary qualification report that they hold a non-tertiary qualification.

The proportion of people holding a degree in rural areas has always been, and remains, substantially lower than in metropolitan areas. This gap has narrowed in more recent years, though the difference is still significant. For example, in 1996, the percentage of men with a degree in the major urban areas was 19.2 per cent, compared with 8.5 per cent in rural localities and 10.9 per cent in rural balances. For women, the pattern is similar, although the educational differences between metropolitan and rural areas are not as great. A possible explanation for this relates to the main types of occupations available in rural areas. Many rural occupations are not in the professional fields, and, therefore, do not offer significant returns to investment in human capital. Therefore, there is less incentive for rural dwellers to pursue a tertiary qualification. Also, people in rural areas are often forced to relocate to major urban areas if they wish to pursue a tertiary qualification. This involves not only leaving family, but also, higher 'living away from home' expenses.

**Table 7.** Tertiary Qualifications by Community Size, 1971, 1981, 1991 and 1996

		Major Urban %	Other Urban %	Rural Locality %	Rural Balance %	Australia %
1971	Male	3.8	2.1	1.3	1.1	3.1
	Female	1.3	0.6	0.5	0.5	1.1
1981	Male	6.8	3.6	2.7	3.3	5.5
	Female	3.5	1.7	1.4	2.3	2.9
1991	Male	14.5	8.5	7.1	8.7	12.3
	Female	14.4	10.6	10.2	13.7	13.4
1996	Male	19.2	10.7	8.5	10.9	16
	Female	18.9	12.6	11.6	15.8	17

Source: ABS, Population Censuses, 1971, 1981, 1991, 1996

Looking again at Table 7, the census data reveal extraordinary developments in rural female education levels. In 1971 and 1981 women in both metropolitan and rural areas had a significantly lower percentage of tertiary degrees compared to men. By 1991 and 1996 the proportions of men and women in metropolitan areas holding degrees had become approximately equal. However, the percentage of females holding a tertiary degree exceeded the male proportion in all rural areas in 1991 and 1996. Further, this difference is substantial. For example, in 1996, the proportion of women holding degrees was around 16 per cent higher than men in other urban regions, is more than 25 per cent higher in rural localities, and is over 30 per cent higher in rural balance.

In 1996/97 showed that female participation rates in off-farm work were substantially higher than for men – 30 per cent compared to 18 per cent (Garnaut, Rasheed and Rodriguez, 1999). In addition, the most common off-farm occupational field for women was professional, in education. For men, the most common off-farm occupation was as a labourer, in the agricultural sector. For rural women off-farm work often requires a tertiary qualification. Men are more likely to remain full-time on their establishments and, therefore, perceive that the returns to investment in a tertiary qualification may not be significant or worthwhile. There may also be a consumption component involved in pursuing a tertiary qualification. Men tied to family businesses and farms may not be as free to pursue further education, and also may not see higher education as holding significant consumption benefits.

#### 4. CONCLUSION

Since 1991 there has been a net outward migration from rural communities to larger towns. Although the state of the agricultural sector is a contributor, the major cause of rural decline would appear to be the decline in rural services such as banking and health. From a policy perspective it is the inequality of provision of basic services which is important. Governments are not in a position to determine how private firms, such as banks, do their business. However, financial deregulation which allows other institutions to effectively offer banking services may provide incentives for such institutions as 'community banks'. Government grants to private sector and community groups plus salary loadings and tax credits are possible incentives. With respect to health, education and services such as Centrelink and Jobnetwork there are positive things governments can do. The recent initiatives to allow overseas doctors to practice if they go to rural areas is one example.

#### REFERENCES

- Australian Bureau of Agricultural and Resource Economics (ABARE) (1998a) *Australian Farm Surveys Report 1998*, Canberra.
- Australian Bureau of Agricultural and Resource Economics (1998b) *Commodities Statistical Bulletin 1998*, Canberra.
- Australian Bureau of Statistics, *Population Census*, 1971, 1981, 1986, 1991, 1996.

- Australian Bureau of Statistics. *The Labour Force*, 6203.0.
- Beal, D. and Ralston, D. (1998) Economic and Social Impacts of the Closure of the Only Bank in Australian Rural Communities. *Studies in Australian Rural Economic Development*, Centre for Rural Social Research, Charles Sturt University.
- Debelle, G. and Vickery, J. (1998) Labour market adjustment: evidence on interstate labour mobility. Research Discussion Paper 9801, Economic Research Department, Reserve Bank of Australia.
- Evans, S.F. (1985) Recent changes in rural employment. *Australian Bulletin of Labour*, 12, (1), December, pp. 57-72.
- Evans, S.F. and Lewis, P.E.T. (1986) Demand, supply and adjustment of farm labour in Australia. *Australian Economic Papers*, 25, No. 47, pp. 236-246.
- Garnaut, J., Rasheed, C. and Rodriguez, G. (1999) *Farmers at Work: The Gender Division*, Australian Bureau of Agricultural and Resource Economics, Research Report 00.1.
- Garnett, A.M. and Lewis, P.E.T. (1997) The effects of agricultural price changes on regional economies in Western Australia. *Australasian Journal of Regional Studies*, 3(1), pp. 57-70.
- Groenewold, N. (1992) The interaction of regional unemployment rates, regional wages and inter-regional migration in Australia. Discussion Paper No. 1992/7, Department of Economics, University of Tasmania.
- Harrison, H. (1997) Trends in the delivery of rural, health, education and banking services. *National Focus*, National Farmers Federation Research Paper, Vol. II, February.
- Hugo, G.J. and Smalies, P.J. (1985) Urban-rural migration in Australia: a process view of the turnaround. *Journal of Rural Studies*, 1(1), pp. 11-30.
- Jensen, R.C. (1998) Rural Australia: past, present and future., In M. Staples, and A. Millmow (eds), *Studies in Australian Rural Economic Development*. Centre for Rural Social Research, Charles Sturt University, pp. 9-20.
- Kamien, M. (1998) Staying in or leaving rural practice: 1996. Outcomes of Rural Doctors' 1986 Intention, *Medical Journal of Australia*, 169, September, pp. 318-321.
- Knopke, P., Strappazon, L. and Mullen, J. (1995) Productivity growth: total factor productivity on Australian broadacre farms. *Australian Commodities*, 2, (4), pp. 486-497.
- Lewis, P. (1991) Rural population and workforce. In D.B. Williams (ed.), *Agriculture in the Australian Economy*. 3<sup>rd</sup> edition, Sydney University Press, pp. 201-214.
- Lewis, P.E.T., Martin, W.J. and Savage, C.R. (1988) Capital and investment in Australian agriculture. *Quarterly Review of the Rural Economy*, 10 (2), pp. 45-52.
- Norris, K. and Wooden, M. (1996) *The Changing Australian Labour Market*, Australian Government Publishing Service, Canberra.
- Powell, R. (1996) Succeeding small towns in rural NSW. Paper presented at Windows on the World, 28<sup>th</sup> Annual International Conference of the Community Development Society, Melbourne.

- Powell, R. (1997) Market economics and small towns. *Regional and Enterprise Development Network*, Bi-monthly Newsletter, 2(1), Centre for Australian Regional and Enterprise Development, South Cross University, Lismore.
- Productivity Commission (1999) *Impact of Competition Policy, Reforms on Rural and Regional Australia*. AGPS: Canberra.
- Reserve Bank of Australia (1996) 'Bank Branch Trends in Australia and Overseas'. *Reserve Bank of Australia Bulletin*, November, pp. 1-6.
- Stayner, R. (1997) The effects of changing rural communities on farming and farm families. Paper presented at *Rural Australia: Toward 2000 Conference*, July.
- Strasser, R., Hays, R., Kamien, M. and Carson, D. (1997) National Rural General Practice Study. Draft Report. Monash University, Centre for Rural Health.
- Tamblyn, C. and Powell, R. (1985) Intersectoral linkages in Australian agriculture. In O'Connor, K. and Batten, D. (eds.), *Papers of the Australian and New Zealand Section*, Regional Science Association, Adelaide.