

Coal seam gas regions reverse rural decline trend

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The development of Australia's unconventional gas, specifically coal seam gas (CSG), in the past five years has resulted in significant economic change in agricultural areas. Understanding the social and economic implications of CSG production for rural towns and regions is critical to maximising the benefits and minimising the costs associated with the challenges and opportunities arising from this extractive industry.

Unconventional gas poses different opportunities and risks for rural communities compared with other forms of resource extraction. In particular, the footprint of unconventional gas is extensive rather than intensive. The coal mining industry, which supplies most of Australia's energy, has a relatively small number of large assets which tend to displace other land uses such as agriculture, whereas the unconventional gas industry has a large number of small assets that tend to be co-located with other land uses and across a wider area. This can create new types of conflicts and potential benefits.

The [Monitoring regional transition](#) research project explores how CSG development in Queensland, Australia affects rural decline.

What is meant by the term 'rural decline'?

Rural decline is comprised of a set of factors:

- Migration out of a rural town / region, particularly migration of rural youth (note: young women are more likely to leave rural regions compared to young men).
- Reduced human capital due to skilled and educated young people moving to the city and not returning.
- Increasing rural poverty due to low incomes of rural regions compared to urban areas.

Migration of youth away from rural areas is of particular concern because it skews demographic profiles and leads to a reduction in services and loss of local culture as expressed through festivals and related events. Such migration has been a concern for decades in Australia and other countries. The causes of youth migration are multiple and complex, but partly explained by factors such as a lack of employment for school leavers.

What is happening in regional communities experiencing CSG development?

Initial insights from the research show that regions with [CSG development experienced growth in the youth population](#). For example, in figures 1 and 2, the 15-19 year old age group was tracked through time from 2001 to 2011. In the control group, which is made up of other comparable rural Queensland regions that have not experienced CSG development (dark grey line), the youth population is at its lowest when this group reaches their early 20s. By contrast, for communities in CSG areas (blue line) the youth population is increasing throughout their 20s as more people stay and others come to the region as a result of CSG development. Chinchilla (green line) is singled out as an example of a change in trend from about 2006 with more young people staying in town than leaving as the pace of CSG development speeds up.

These increases are occurring in both male and female populations, suggesting that the wider rural population is experiencing social and economic benefits from the CSG sector, rather than a predominantly male workforce commuting from distant cities, as can happen with fly-in fly-out workforces in other contexts.

CSG regions had slightly more educated populations, but mostly amongst men. An increase in family income was also observed in CSG regions, concentrated particularly in Chinchilla. However, while family income is up, this also has to be balanced against higher housing costs.

More jobs in the resources sector, less in agriculture

Research also shows that for every new job in the resources sector there has been around two new jobs created in the related sectors of construction and professional services. By contrast, for each new job in the resources sector there has been a reduction of 1.7 jobs in agriculture.

These new jobs in CSG areas are not just restricted to males. Focusing on Chinchilla, total female employment

increased 26% from 1204 in 2006 to 1516 in 2011. Over this period, there were fewer women working in agriculture and manufacturing sectors, but more working in mining, construction and hospitality.

The extensive spatial footprint of unconventional gas and increased female youth populations indicate a departure from traditional demographic effects in previous energy booms. Taken together, the results show signs of mitigating (and in some cases reversing) rural community decline.

Figure 1. Changes in female youth over time (data from ABS 2013).

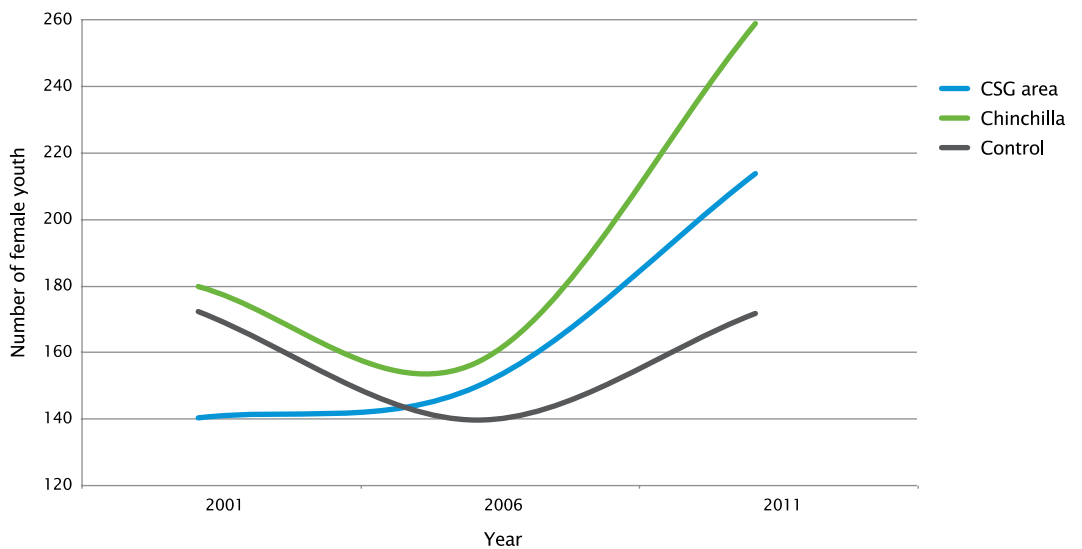


Figure 2. Changes in male youth over time (data from ABS 2013).

