

8. The role of place





Key Findings

- Females in rural areas experience shocks more often than those who reside in urban areas. The differences for males are less discernible.
- People who live in the areas with the lowest poverty rate experience slightly fewer shocks.
- For males (but not for females) urban living and low poverty rate is associated with faster recoveries.

8.1

Introduction



In this chapter, we investigate the role geography might play in the probability that a person experiences earnings shocks. In the previous *Breaking Down Barriers* reports, we have explored the role of community in poverty entrenchment. While our previous analysis in this area relied only on three observations per person separated by five years, the tax data allows us to observe the same person for many years in a row.

In this section, to investigate the role of location, we demonstrate the potential difference in the shares of people experiencing earnings shocks in association with the poverty rate of the place where they live. We also demonstrate the association between the place where a person lives and their propensity to exit the shock within three years. This allows us to draw conclusions about the community-level determinants of earnings shocks and recoveries.

We define poverty level according to the definition employed in Payne and Samarage (2020): a share of families whose total income is lower than 60 percent of median income adjusted

for family composition. Here, we use data on poverty rate in 2011. Because in the tax data we only observe SA4 level where an individual resides (and not SA2 level), we use the previously calculated poverty rates for SA2 areas to roll them up, adjusting for the population, to the SA4 level. Next, we separate SA4 areas into quartiles based on their poverty rates. We also record an urban status of every individual: whether a person is residing in an area denoted by the ABS to be ‘a significant urban area’ (a locality or a cluster of localities with the population higher than 10,000 people). The construction of the urban status variable is described in Appendix E.

As in our previous chapters, we separate the analysis by gender. We find that the highest incidence of shocks is for males residing in high-poverty urban areas, while the slowest recovery is observed among those who live in high-poverty rural areas. Our results in this section reinforce the importance of place in analysing and addressing earnings shocks and their long-term consequences.

8.2

Shock distribution by urban/rural residence, poverty rate, and gender

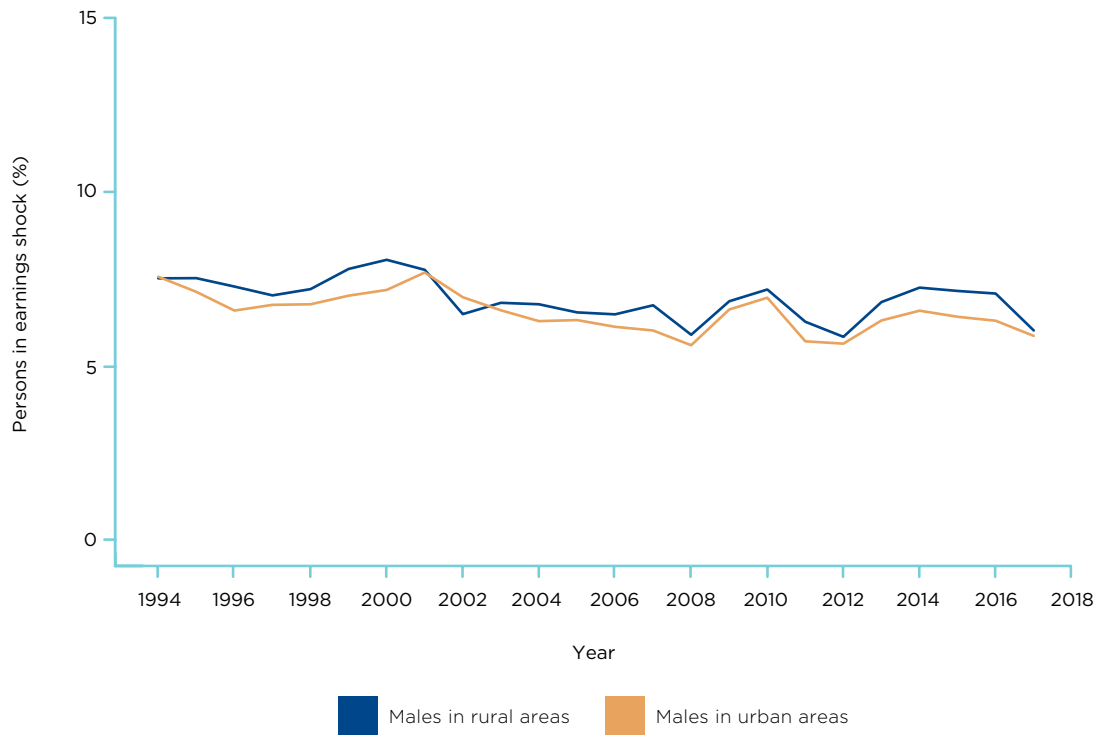


We begin by comparing vulnerability to shocks of people who reside in urban and rural areas. Urban status can be important for shocks in several ways. First, cities are usually places with diverse economies and many employers are located in one area, so that even if a person loses work, they may quickly find employment in another organisation. The concentration of economic activity may shield people from economic shocks. If, however, all the different types of organisation concentrated in cities are vulnerable to the same type of downturn, then it may exacerbate the shocks. For example, if a significant proportion of businesses in a particular area depend on tourism, then the decline in the flow of tourists may spread to all other businesses. Which of the effects prevails is an empirical question that can be answered with our data.

Figure 8.1 compares the percentages of males who experience earnings shocks in urban and rural areas. We find that, on average, males living in rural areas are more likely to experience shocks. The trends and the differences between the periods are broadly similar. Males living in rural areas, however, experienced larger increases in the incidence of shocks during the 'dog days'. It is possible that rural mining areas were more affected by the end of the mining boom than other areas.

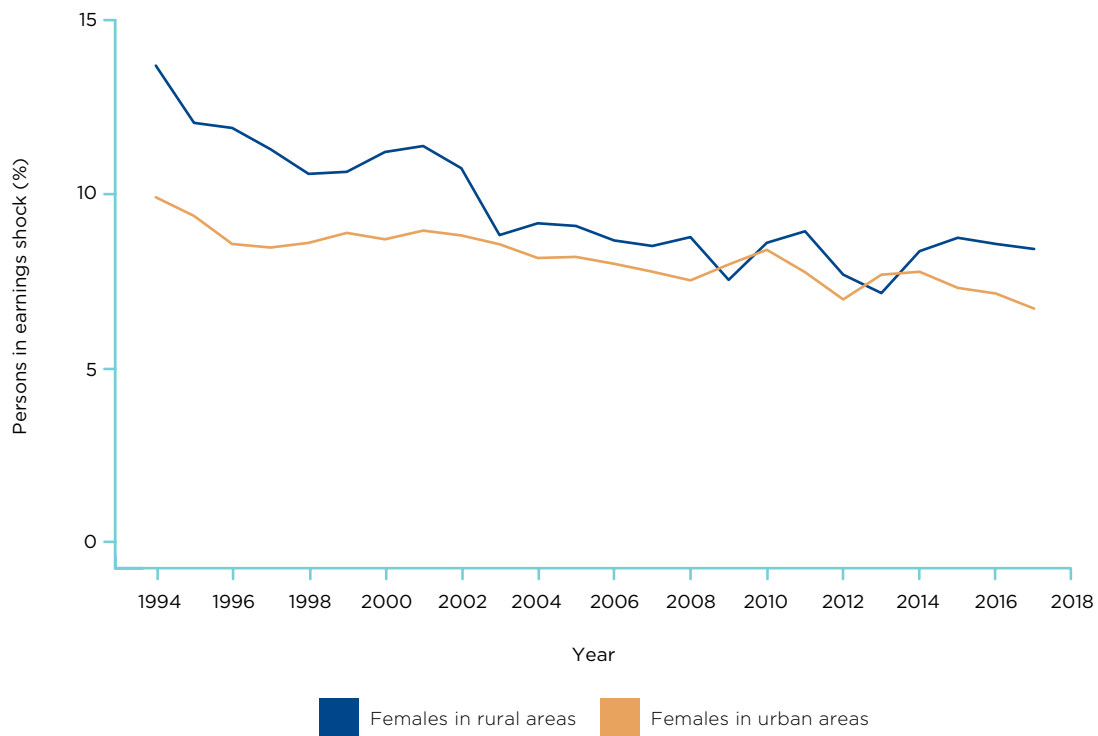
Figure 8.2 compares the percentages of females who experience earnings shocks. We find that females have a higher incidence of shocks than males, despite the incidence of shocks gradually declining. The incidence of shocks and the decline in the 1990s and early 2000s is especially pronounced for females living in rural areas. These trends might be explained by the changing norms around fertility decisions and caring for newborn children. As with the males residing in rural areas, we find an increase in the incidence of shocks during the Dog Days.

Figure 8.1. Persons experiencing an earnings shock, by urban/rural status—Males



Notes: See Appendix D for definition of urban/rural areas.

Figure 8.2. Persons experiencing an earnings shock, by urban/rural status—Females



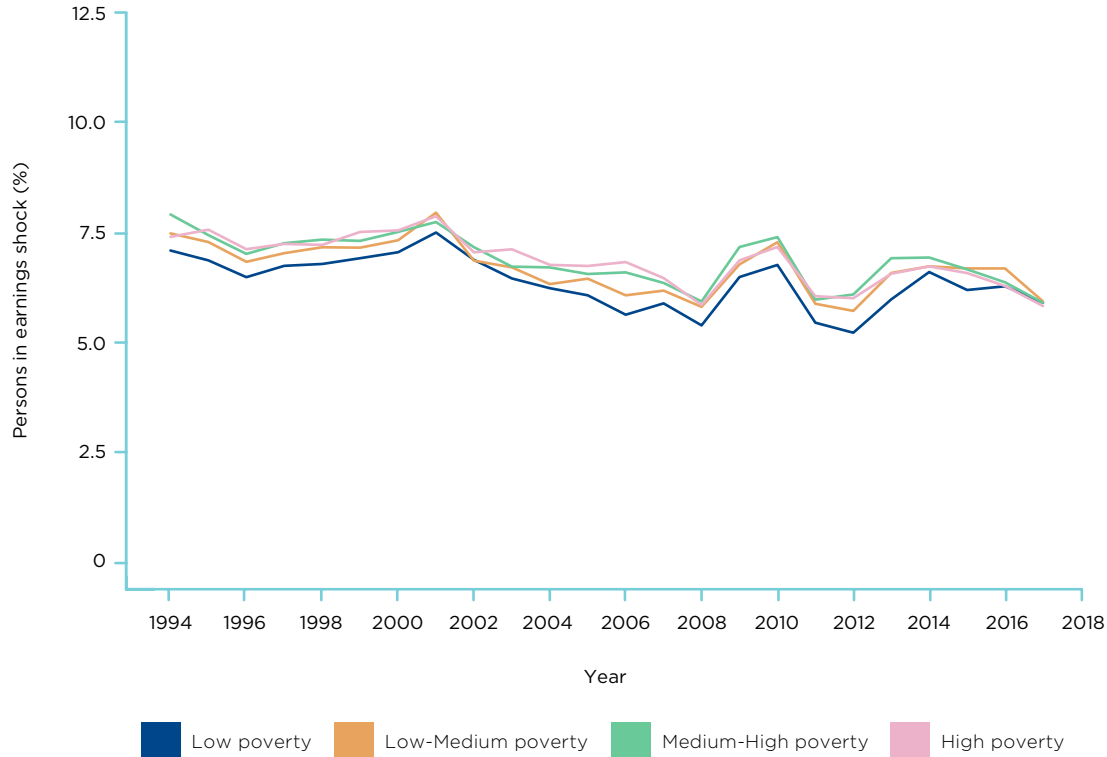
Notes: See Appendix D for definition of urban/rural areas.

It is also worth pointing out that urban and rural areas differ in terms of their poverty rate. For example, in 2017, only 9.8 percent of males and 9.7 percent of females lived in rural areas. But if we only look at those who lived in areas with the highest poverty rate (top quartile), then 26.4 percent and 27.6 percent of females lived in rural areas. Thus, another factor contributing to the higher incidence of shocks for males and for females must be overall higher poverty rates in those areas.

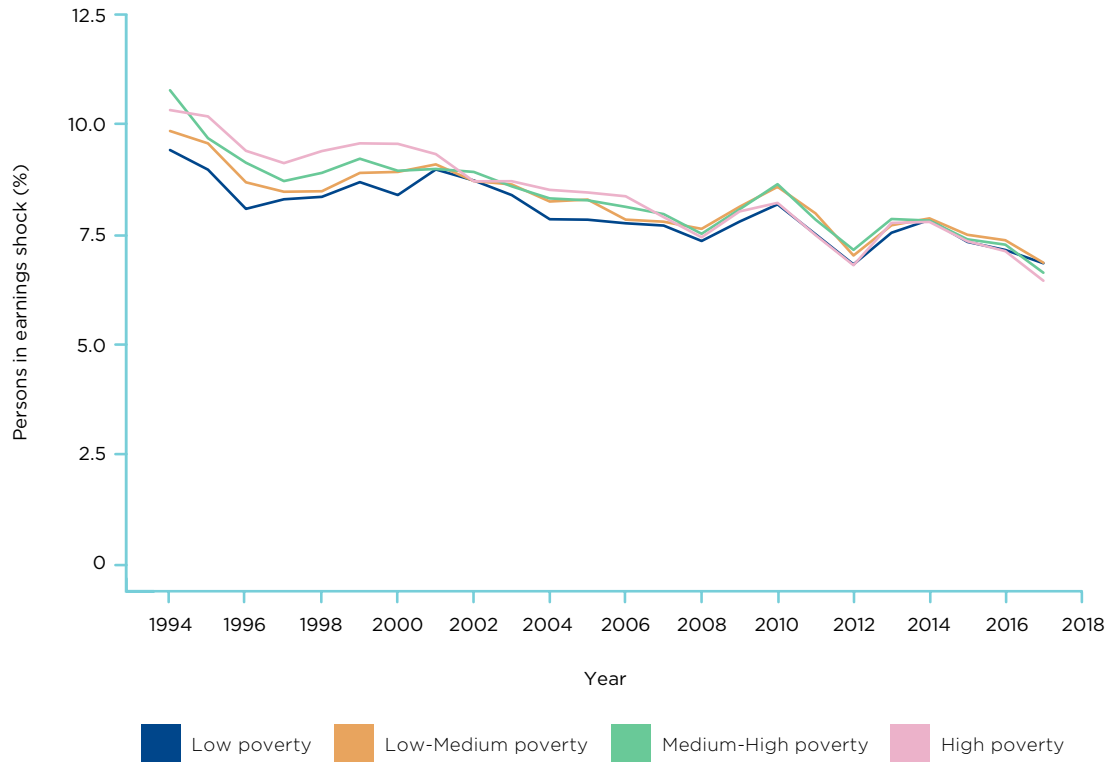
To study the association between the poverty rate and the incidence of shocks even further, we show the plots of shocks, separating individuals by the poverty rate of the SA4 where they live into the four categories based on the quartile of the poverty rate. The 'poorest' areas are in the top quartile—those areas have the highest poverty rate.

Figure 8.3 shows the plot of earnings shock for males throughout the period, by the area's poverty rate. We find that, consistently in every period, the lowest incidence of shocks was observed in the areas with the lowest poverty rate. We do not observe many differences among the other three quartiles. This observation supports the hypothesis that the areas with the lowest poverty rates are more likely to have vibrant economies that somewhat shield their residents from the shocks.

Figure 8.3. Persons experiencing an earnings shock, by SA4 poverty rate—Males



Notes: Poverty rate is defined as share of households below 60 percent of median adjusted family income in 2011.

Figure 8.4. Persons experiencing an earnings shock, by SA4 poverty rate—Females

Notes: Poverty rate is defined as share of households below 60 percent of median adjusted family income in 2011.

Figure 8.4 shows the changes in the incidence of earnings shock over time for females by the area's poverty rate. We find that in the initial years of our data, the difference is significant, with the areas of highest poverty rate experiencing the highest rates of income shocks. For later years, we do not observe many differences. This trend could be explained by improving work opportunities for females who may come from differentially affected high-poverty areas.

8.3

Recovery by residential location and community poverty

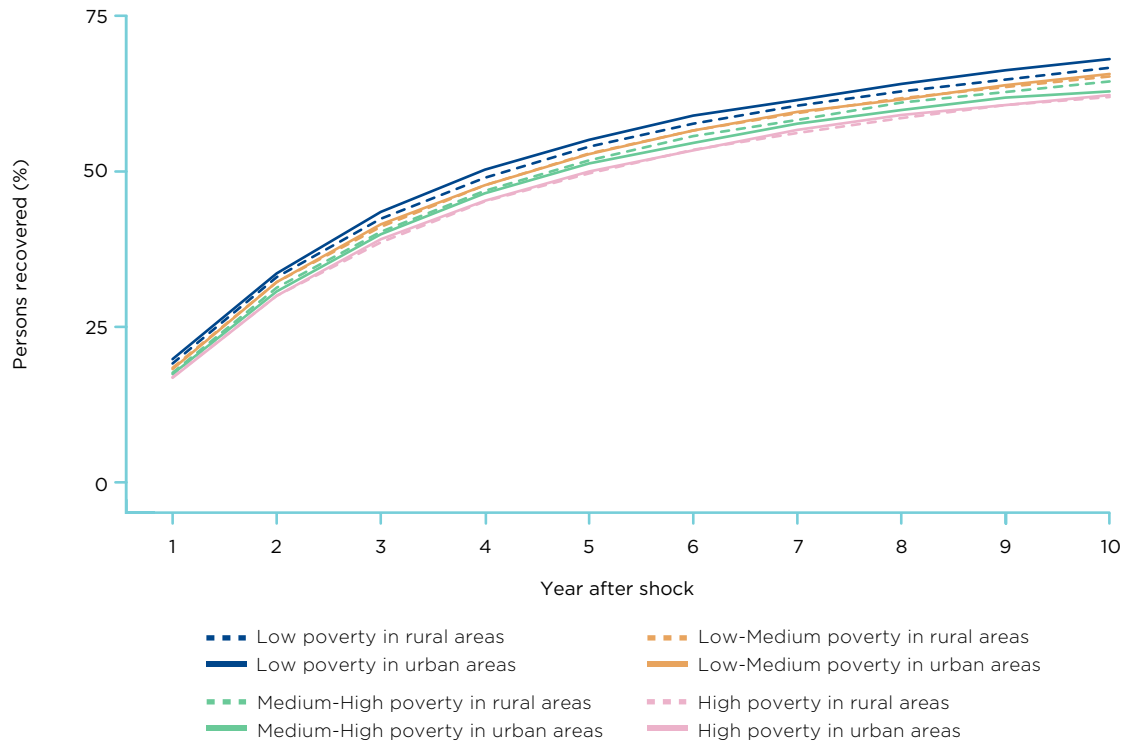


Now we turn to the analysis of recoveries. To adjust for the fact that we may not observe all the recoveries due to people dropping out of the sample, we calculate estimated chances for experiencing recoveries using the Cox duration model (see Appendix F for details). Our expectations are the same as in the analysis of the incidences of shocks: we expect people living in low poverty/urban areas to have faster recoveries due to higher density of economic activity and diversity in their industrial composition.

Figure 8.5 shows the results for males, confirming the intuitions based on our previous analysis. The highest probability of recovery is observed in urban areas with the lowest poverty rate, while the lowest probability of recovery is observed in rural areas with the highest poverty rate. These results suggest that both factors discussed above are important for the experiences of shocks: urban status, since urban areas usually have more types of economic activity, and poverty rate, since areas with low poverty rates, whether they are urban or rural, provide more economic opportunities.

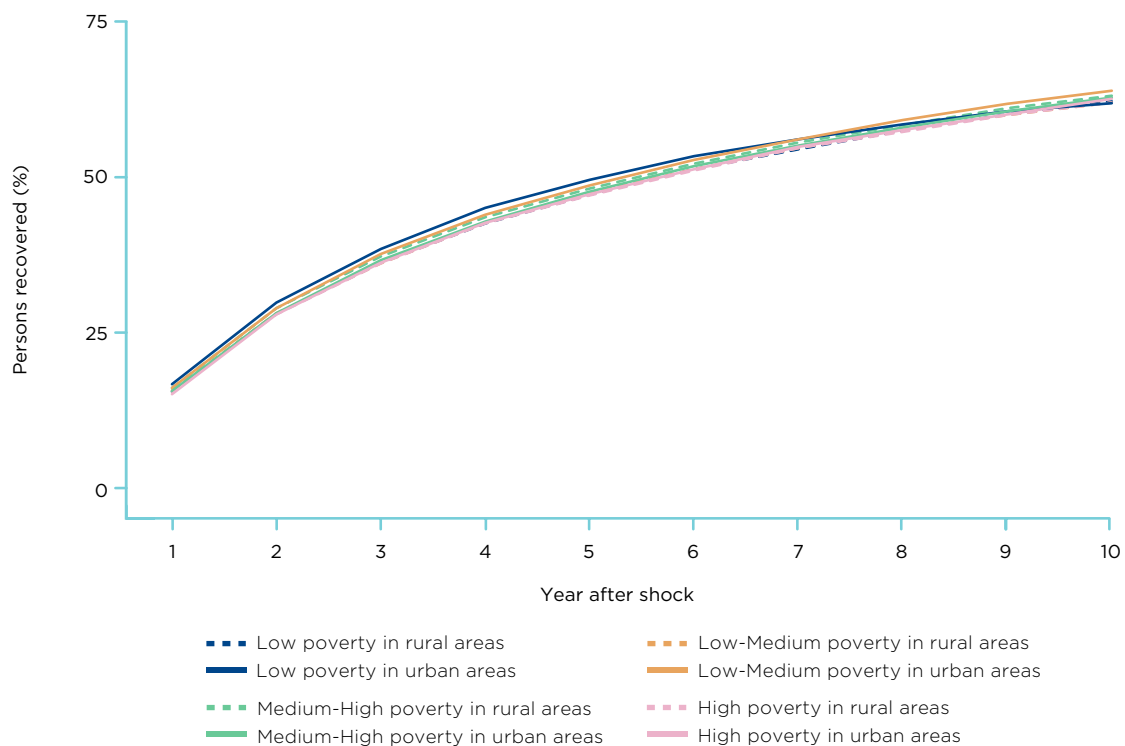
Figure 8.6 shows the results for females. We find that the differences in recovery rate by urban/rural status and poverty rates are much more muted than in the case of males. This is consistent with changing norms around fertility decisions and caring for the newborn children being a major factor in females experience of earnings shocks, since those factors represent a secular trend and may not differ by areas.

Figure 8.5. Predicted recoveries from an earnings shock, by urban/rural status and SA4 poverty rate—Males



Notes: Poverty rate is defined as share of households below 60 percent of median adjusted family income in 2011.

Figure 8.6. Predicted recoveries from an earnings shock, by urban/rural status and SA4 poverty rate—Females



Notes: Poverty rate is defined as share of households below 60 percent of median adjusted family income in 2011.

8.4

Summary



In this chapter, we looked at the experience of earnings shocks of males and females who reside in different areas: urban or rural, and areas of different poverty rates. The results here confirm the importance of place of residence. Both males and females in rural areas experience shocks more often on average throughout the studied period than those who reside in urban areas. We explore the same pattern when we are separating persons by the poverty rate of areas in which they live. While we do not observe differences among females, when we look at the rates of earnings shocks experienced by males, we find that people who live in the areas with the lowest poverty rate experience fewer shocks. When we look at recoveries, we, again, find no difference among females, but important differences among males: both urban status and low poverty rate in the community are associated with faster recoveries. Thus, the characteristics of places where a person lives are important determinants of their frequency and experience of earnings shock. Further research is needed that dives more deeply into the specific geographical factors that facilitate shocks and recoveries and the gender differences in such experiences.