The Australian Journal of Agricultural and Resource Economics
Journal of the Australian Agricultural and Resource Economics Society
Australian Journal of Agricultural and Resource Economics, 61, pp. 341–343

Drought special edition: introductory comments

Lin Crase

Drought, its impact on Australian farms, and the policy response has long been a topic of interest to authors and readers of this journal (e.g. Dillon and Lloyd 1962; Freebairn 1983). Contributions have illustrated that agricultural firms can cope with periods of drought, given sufficient thoughtfulness and planning. This is not to deny the negative impacts of drought on individuals and farm businesses, and hence policy responses that typically have subsidised inputs during periods of drought. Collectively, these contributions have focussed on the efficacy of government policies.

This special edition continues that tradition by considering the implications of drought and also reviewing policy options. The four papers deploy differing empirical techniques and analyse the behavioural responses of farmers in different contexts. Overall, the papers reiterate the importance of considering drought as a norm, rather than presenting it as an extraordinary occurrence, an approach likely to be increasingly important given predictions of greater climate variability in the future.

Ross Kingwell and Vilaphonh Xayavong focus on a subset of farm businesses in Western Australia. Their study takes advantage of a novel dataset that traces the impact of drought on farm financial performance over a number of years. This includes data that describe postdrought performance, which gives insights into the longer-term consequences and influence of drought. Overall they find that exposure to drought has quite different impacts on farms. This is perhaps not that surprising but it does emphasise the heterogeneity of farm businesses generally and that every drought has its own nuances – thus the challenge of establishing a national approach to drought phenomena. Their results illustrate that farm financial performance deteriorates in times of drought, although they also find that farm wealth increases over time, regardless of drought. Of particular interest is their finding showing positive and significant impacts for farm businesses experiencing consecutive years of drought. This latter finding is attributed to the accelerated adjustments that attend consecutive years of drought and that longer-term financial gains can follow from adjustment. The role of management expertise is also revealed by the analysis of Kingwell and Xayavong, leading them to conclude that a focus on enhanced management might deliver better outcomes than subsidies targeted at other farm inputs.

The paper by Adam Loch and David Adamson also sheds light on farmer adaption in response to drought, but does so by focussing on irrigated agriculture in the heavily scrutinised Murray-Darling Basin. Their analysis also differs insomuch as it uses state contingent modelling to consider the collective impacts of water policies (as distinct from drought policies) that

© 2017 Australian Agricultural and Resource Economics Society Inc.
doi: 10.1111/1467-8489.12219

impact the cost of irrigation inputs combined with increased exposure to more severe droughts. The use of contingent analysis allows for an extension of the earlier work of by Connor *et al*. (2009) published in this journal and showing the shifting values of perennial and annual production when droughts become extended over longer time frames. Loch and Adamson similarly find that expansion of perennials raises the exposure of irrigated agriculture where droughts become more severe. They further find that the current water policies, which seek to encourage uptake of water-saving infrastructure, adds significantly to those risks. Their paper raises important questions about the prospect of maladaptation under the current policy settings.

Sarah Wheeler and Alec Zuo also focus on irrigated agriculture and the Murray-Darling Basin. Like Kingwell and Xayavong, their contribution uses data collected over time to explore the behaviour of farmers during and postdrought but does so with unbalanced panel data sourced from ABARES. Wheeler and Zuo focus specifically on farmer exit and intentions to exit and attempt to trace this to water scarcity and related trends. Of particular interest is whether less efficient irrigators are exiting, as would be the standard hypothesis offered by most readers of this journal. An important finding from their analysis is that the impacts of drought on farm exit may not be realised until postdrought and is also likely influenced by a range of other considerations, including proximity to retirement age. Some of their findings also cast some doubt on the capacity of governments to design exit packages that target the most stressed farm businesses.

A similar concern about contemporary policy settings is expressed by Bruce Chapman and Linda Botterill in their analysis of drought policy responses. Their manuscript also provides a comprehensive description of the political economy of drought and emphasises the requirement to seek policy responses that enhance equity and efficiency within a context where drought assistance is unlikely to be abandoned in full. Their analysis extends the earlier work of Kelly, Chapman and Botterill (2004) by tracing the budgetary impacts of revenue contingent loans provided at different rates to farmers in drought. In keeping with their ambition to find tractable policy reforms, they find that a revenue contingent loan scheme would: (a) offer significant enhancements over the status quo; (b) deliver on the risk management role of government; and (c) be highly compatible with some elements of current policy, like the Farm Management Deposit Scheme.

Collectively, the papers offer both a concise review of extant drought policies and expose policy challenges of the future.

References

Connor, J., Schwabe, K., King, D., Kaczan, D. and Kirby, M. (2009). Impacts of climate change on Lower Murray irrigation, *Australian Journal of Agricultural and Resource Economics* 53(3), 437–456.

© 2017 Australian Agricultural and Resource Economics Society Inc.

Dillon, J. and Lloyd, A. (1962). Inventory analysis of drought reserves for Queensland graziers: Some empirical analytics, *Australian Journal of Agricultural and Resource Economics* 6(1), 50–67.

Freebairn, J. (1983). Drought assistance policy, *Australian Journal of Agricultural and Resource Economics* 27(3), 185–199.

Kelly, S., Chapman, B. and Botterill, L. (2004). *Income related loans for drought relief: repayment projections*, A Report for the Rural Industries Research and Development Corporation Canberra, RIRDC Publication No 04/053, April 2004.

© 2017 Australian Agricultural and Resource Economics Society Inc.