



AARES
AUSTRALASIAN AGRICULTURAL &
RESOURCE ECONOMICS SOCIETY

AARES FEDERAL WEBINAR

Estimating the Effects of Weather and Climate Change on Agricultural Productivity

When

Wednesday 18 November 2020, 1:00pm AEDT
(10:00am NZDT; 12:00pm AEST; 12:30pm ACDT; 10:00am AWST)

Where

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Webinar Topic:

Measures of productivity are measures of output quantity divided by measures of input quantity. Explaining changes in productivity involves explaining how output and input quantities are determined. Economists have many behavioural models that can be used for this purpose. This paper considers a model that accounts for weather uncertainty (i.e., uncertainty about day-to-day atmospheric conditions), climate uncertainty (i.e., uncertainty about average atmospheric conditions over a long period of time) and output price uncertainty.

The estimated parameters of the model are used to decompose a proper productivity index (i.e., one that satisfies basic axioms from index theory) into four components: technical progress (i.e., a measure of how quickly new technologies are discovered), environmental change (i.e., changes in variables that are outside the control of managers), technical efficiency change (i.e., changes in how well existing technologies are chosen and used), and scale and mix efficiency change (i.e., changes in economies of scale and substitution).

The measure of scale and mix efficiency change is further decomposed into a measure of technical change, a measure of input price change, and various measures of changes in expectations. The methodology is applied to US agricultural data. The effects of changes in weather and climate on agricultural productivity are found to be small relative to the effects of changes in input prices.

Our Speaker:

[Chris O'Donnell](#) is a Professor of Econometrics at the University of Queensland. He is an Associate Editor of the Journal of Productivity Analysis, an Associate Editor of Empirical Economics, and a Distinguished Fellow of the Australian Agricultural and Resource Economics Society. His research is focused on economic and statistical methods for measuring and explaining productivity and efficiency change. He has authored or co-authored three books on this topic. His research works have been cited more than 17,000 times.

What you need to do:

After registering, you will receive a confirmation email containing information about joining the webinar. You can then test your computer audio and connection. If all checks out, use the same link to login at the appointed time. Any problems with registering ring Rod McInnes, AARES Webinar Co-ordinator on 0404 822 314. [View System Requirements](#)