

# Centre for Health Economics

## Seminar Series

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### 'Modelling tobacco consumption with a zero-inflated ordered probit model'

Presented by

#### Dr Mark Harris

**Date:** Friday 25<sup>th</sup> November 2005  
**Time:** 1:00-2:00pm  
**Venue:** RB Scotton Room  
2<sup>nd</sup> Floor, Building 75  
Monash University  
Clayton, 3800



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Data for discrete ordered random variables are often characterised by “excessive” zero observations. Traditional ordered probit models have limited capacity in explaining this preponderance of zero observations, especially when the zeros may relate to two distinct situations of non-participation and infrequent consumption, for example. We propose a zero-inflated ordered probit (ZIOP) model using a double-hurdle combination of a split (probit) model and an ordered probit model which, potentially, relate to different sets of covariates. Monte Carlo results suggest that the new model performs well. Finally, the model is applied to a consumer choice problem of tobacco consumption and gives clear indications that policy advice based on key variables, could be very misleading if the splitting process is ignored.

#### Presenter

Dr Mark Harris is a senior lecturer in the Department of Econometrics & Business Statistics (Monash University). He has a Graduate Diploma in Economics and PhD from Monash University, and BA(Hons) in Economics from Sussex University, England.

His research and publications have generally been in various areas of applied economics and econometrics. A major area has been in the area of dynamic panel data models, and their application, for example to neoclassical growth models. Another theme has been in the econometrics and applications of limited dependent variable models. This includes the use and application of existing models, and the development of new models. Of late, there has been a growing development of research into the workings of the labour market. While most of his research has been in applied microeconomics, he has undertaken work on applied macroeconomic topics, such as growth models and trade flows.

**VISITORS ARE MOST WELCOME.** The Seminar Series is free of charge. For confirmation of your attendance and further information please telephone 9905 0733 or email [che@buseco.monash.edu.au](mailto:che@buseco.monash.edu.au)