

# Alan Crawford

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## Education

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2012-18     Ph.D. Economics, University College London  
2011-12     MRes. Economics, University College London  
2004-05     MPhil. Economics with Finance, Cambridge University  
1999-02     BSc. Economics (Hons), London School of Economics

## Research Interests

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Empirical Industrial Organisation, Computational Economics, Applied Economics

## Scholarships

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2016             UCL Studentship for Postgraduate Work in Economics  
2011-2015     Advanced Quantitative Methods Scholarship, ESRC  
2011-2015     UCL Studentship, ESRC

## Relevant Experience

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2017-             Research Assistant at the Centre for Microdata Methods and Practice (CEMMAP),  
                       Institute for Fiscal Studies  
2011-15          Economic Advisor, SEEC

2005-11      Consultant, RBB Economics LLP

2002-04      Analyst, London Economics

## Teaching Experience

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2015-2016    Ph.D. Computational Methods

## Job Market Paper

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### “Dynamic demand estimation for storable goods”

This paper develops a dynamic discrete-continuous demand model for storable goods - a class of goods that account for a large fraction of grocery expenditures. To estimate and solve the dynamic demand model, we use techniques from: (i) Approximate Dynamic Programming, (ii) large scale dynamic programming in economics, (iii) machine learning, and (iv) statistical computing. The benefits of this approach are three-fold. First, the dynamic demand model relaxes assumptions of existing models while retaining computational feasibility. Second, it can capture rich inter- and intra-temporal substitution patterns. Third, it can incorporate high-dimensional choice sets. As a result, the model is easily adapted to other storable good industries - widening the applicability of this class of demand models. In this paper we apply the model to the UK laundry detergent sector using household level purchase data.

## Working Papers

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### “Approximating demand dynamics in antitrust policy”

The use of accounting margins in empirical analysis in antitrust policy is rising due to the increasing popularity of merger screening tools. This paper shows how these margins can be combined with static demand estimation to approximate the long-run dynamic diversion ratios used for policy analysis. Beneficially, the severe bias associated with diversion ratios from a static model are reduced with minimal additional implementation costs. To illustrate this method, I assess whether anti-competitive conduct in mainland Europe laundry detergent industry had any spillover effects on the UK laundry detergent market.

**“The effect of the financial crisis on bank lending to SMEs”** joint with Ben Hemingway

In this paper we develop a model of bank lending to small-to-medium enterprises (SMEs). Combining a bi-annual survey of European SME financing decisions with a contemporaneous EU-wide banking conditions survey, we empirically evaluate the determinants of successful loan applications during the financial crisis.

**“Storability and alcohol taxation: the demand for beer”** joint with Lars Nesheim

We develop a dynamic demand framework in which consumers can stock alcohol for future consumption and incorporate their price expectations when making purchases. Using this dynamic demand model, we explore the impact on consumption of alcohol price restrictions that limit the depth and frequency of promotional activity.

**“Ex-post merger evaluation in industries with price dynamics”**

For storable goods, price dynamics are a key component of consumer demand. This paper examines whether a change in industry structure not only impacts on the price level, but also on price dynamics. To this end we conduct an ex-post evaluation of a merger between Heinz and HP - two large UK table sauce manufacturers. Using the methodology developed by Cheng, Liao and Schorfheide (2015), we investigate whether there were structural changes to a low rank approximation to price dynamics in the UK table sauces industry following the merger.

**References**

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**Dr. Lars Nesheim**  
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