

# Alan Crawford

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Placement Officer: Prof. Uta Schönberg  
Placement Co-ordinator: Daniella Harper

## 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

## 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

## 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

## Job Market Paper

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### **“High-dimensional inventories and consumer dynamics: demand estimation for fast moving consumer goods”**

This paper develops a high-dimensional dynamic discrete-continuous demand model for storable fast moving consumer goods. Assumptions of existing models are relaxed while retaining computational tractability. As a result, the model captures rich inter- and intra-temporal substitution patterns, allows for a detailed understanding of dynamic consumer behaviour, and provides a framework with wide applicability. To estimate and solve the dynamic demand model, I use techniques from approximate dynamic programming, large-scale dynamic programming in economics, machine learning, and statistical computing. In this paper I 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 of 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 bias associated with diversion ratios from a static demand model are reduced with minimal additional implementation costs. To illustrate this method, I assess whether anti-competitive conduct in mainland Europe’s 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 I 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), I 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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<b>Dr. Lars Nesheim</b>	<b>Prof. Dennis Kristensen</b>	<b>Dr. Aureo de Paula</b>
Dept. of Economics	Dept. of Economics	Dept. of Economics
University College London	University College London	University College London
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