

# Anthony Savagar

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## Academic Positions

Jun 2016 Assistant Professor, University of Kent

## Education

Sep 2013 MRes Economics, Cardiff University, *Not Graded*

Sep 2012 MSc Economics, Cardiff University, *Distinction (GPA 4.0)* with rank 1 grade

Jun 2011 BSc Economics, Cardiff University, *First (GPA 4.0)* with rank 1 grade

## Graduate Studies

2011 - 2016 PhD Economics, Cardiff University (incl. MSc MRes taught years)

Visiting KU Leuven (Spring, 2015 and 2016), ISEG Lisbon (Summer, 2014)

Thesis "*Firm Dynamics and the Macroeconomy*"

References Prof. Patrick Minford, [minfordP@cardiff.ac.uk](mailto:minfordP@cardiff.ac.uk)

Prof. Huw Dixon (supervisor), [dixonH@cardiff.ac.uk](mailto:dixonH@cardiff.ac.uk)

Prof. Akos Valentinyi, [valentinyiA@cardiff.ac.uk](mailto:valentinyiA@cardiff.ac.uk)

## Teaching and Research Fields

Primary Macroeconomics, Mathematical Economics.

Secondary Industrial Organization.

## Teaching *Postgraduate PG Undergraduate UG*

2016- PG Financial Economics, University of Kent

2015-16 UG Macroeconomics, Cardiff University, Dr. M Le and Prof Dixon.

2013-15 PG Dissertation Assistant, Cardiff University.

2014-15 PG Mathematical Economics, Cardiff University, Dr. J Li.

2014-15 UG Macroeconomics, Cardiff University, Prof. Minford and Prof. Dixon.

2012-14 UG Advanced Econometrics, Cardiff University, Dr. J Li.

### Teacher Training

2015 Workshop the Economics Network on Electronic lectures, UCL

2012 Economics Network GTA Certificate (professional standards)

## Professional Activities

Jun 2017 SED, Edinburgh

May 2017 Midwest Economic Theory, Kentucky

May 2017 Invited Discussion, Aix-Marseille

Apr 2017 Invited Presentation, Groningen

Mar 2017 Invited Presentation, Swansea  
 Mar 2017 T2M Workshop Catolica, Lisbon  
 Mar 2017 Invited Presentation, Brunel  
 Jan 2017 Invited Presentation, University of Buckingham  
 Jan 2017 Monetary Policy with Hetero Firms Discussion, University of Surrey  
 Oct 2016 Internal Presentation, UoK  
 Nov 2016 Association of Southern European Economic Theorists, Thessaloniki  
 Jul 2016 The Centre for Growth and Business Cycle Research, Manchester  
 Jun 2016 National Institute of Economic and Social Research, London  
 Jun 2016 Macroeconomics and Banking Workshop, Exeter University  
 May 2016 Firm Entry Workshop, KU Leuven  
 Apr 2016 MMF PhD Conference, University of Birmingham  
 Mar 2016 RES Annual Conference, Sussex University  
 Feb 2016 EEA Conference, Washington DC  
 Nov 2015 Faculty Internal Seminar, Cardiff University  
 Sep 2015 Money Macro Finance Conference, Cardiff University  
 Jun 2015 Society for Computational Economics, Taiwan  
 May 2015 ICMAIF, University of Crete  
 May 2015 Quantitative Economics Doctorate Jamboree, Cardiff University  
 Apr 2015 MMF PhD Conference, University of York  
 Apr 2015 RES PhD Symposium, Manchester University  
 Apr 2015 RES Annual Conference, Manchester University  
 Mar 2015 Warwick Annual PhD Conference, University of Warwick  
 Jan 2015 RES PhD Conference, UCL London  
 Dec 2014 International PhD Conference, University of Leicester  
 Sep 2014 Money Macro Finance Conference, Durham University  
 Jun 2014 Dynamic Macroeconomics Workshop, Strasbourg University

### [Memberships, Refereeing, Committees](#)

Memberships AEA, Econometric Society, RES, EEA  
 Committees RES Junior Scientific Committee

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### [Honours, Scholarships and Extra Training](#)

2016 £3100 Kent Teaching Grant for Electronic Teaching Methods  
 2015/6 £10000 RES Junior Fellowship, *10 awards nationwide*  
 Sep 2014 Harry Johnson PhD Poster Prize, Money Macro Finance Conference, Durham  
 Aug 2014 Hetero Agent Macroeconomics Summer School, LSE (Den Haan)  
 Apr 2014 RES Easter School Scholarship: Financial Frictions and Robustness (Kiyotaki, Ellison)  
 Aug 2013 Real Analysis Summer School, LSE  
 Jul 2013 Nonstationary Nonlinear Modelling Summer School, Pompeu Fabra  
 Jul 2013 Dynare Summer School, Bank of France, CEPREMAP.

- Apr 2013 RES Easter School Scholarship: Financial Frictions and Computational DSGE (Pearlman, Levine)
- Aug 2012 LSE Advanced Econometrics Summer School, First class mark.
- Jan 2012 UCL CEMMAP Dynamic Programming Masterclass, (Sargent).
- 2012 MSc Dissertation Prize, “The Econometrics of DSGE Modelling”.
- 2011-2015 ESRC 2+2 Scholarship. *National Scholarship, most competitive.*
- 2008-2011 Academic Prize, highest mark in BSc Economics for whole degree.
- 2011 Academic Prize, highest mark in BSc Economics 2010/11.
- 2010 Academic Prize, highest mark in BSc Economics 2009/10.

### Computing

Qualifications Foundation Certificate Computer Science.

Skills git, C, C++, R, MATLAB/Octave, Python, Sage, Maple, Latex, Emacs, Stata, Eviews, BASH shell, Linux, Supercomputing.

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## Research Papers

Title *Explaining Productivity Puzzles with Frictional Firm Entry: Endogenous Markups Versus Dynamic Reallocation*

Abstract I present a theory of firm entry and exit in the business cycle that links short-run productivity overshooting to long-run persistence, a dynamic observed in contemporary ‘*productivity puzzles*’. The theory emphasizes two mechanisms: (1) slow firm entry/exit and (2) firm pricing that reflects the number of competitors in the market. Given these mechanisms, economic contraction causes a short-run exacerbated fall in productivity (overshooting) because the negative shock is absorbed by incumbents due to slow exit responses. This weakens incumbents’ returns to scale, thus worsening productivity. However, the productivity overshooting recedes over time as firms exit which *dynamically reallocates* resources among incumbents, reviving the remainders returns to scale and thus productivity. This process of exit consolidating the market is not purely beneficial for productivity because the remaining firms face fewer competitors and thus charge higher markups which damages productivity. Therefore despite some reversion from the initial fall, there is a long-run persistent negative effect on productivity due to higher markups responding to the fall in number of firms. To analyze the trade-off between productivity improving dynamic reallocation and productivity degrading endogenous markups, I develop a continuous time, analytically tractable DGE model. The main mechanisms are dynamic entry so firms are slow to respond causing initial overshooting, and endogenous markups so pricing behaviour depends on the number of competitors firms face.

Title *Firm Entry, Excess Capacity and Aggregate Productivity* (with Huw Dixon)

**Abstract** low firm entry over the business cycle causes measured TFP to vary endogenously because incumbent firms bear shocks and consequently vary capacity utilization. Our main theorem shows that imperfect competition and dynamic firm entry from endogenous sunk costs are necessary and sufficient conditions for these endogenous productivity fluctuations. The result focuses on the short-run absence of entry, rather than entry per se, which distinguishes it from research on entry over the business cycle that focuses on entry affecting markups or heterogeneous firm composition. When firm entry is slow moving (dynamic), it creates a short-run period, absent of entry, in which technology shocks are borne by incumbent firms with quasi-fixed capital. Consequently incumbents vary their production (through labor) as shadow prices diverge from actual prices, which manifests as temporary non-zero profits. Capacity utilization is this variation in production whilst number of firms and capital are quasi-fixed; it creates productivity fluctuations through returns to scale that exist because monopolistic firms do not fully utilize their overhead costs.

### Working Papers

**Title** *Imperfect Competition, Overshooting and the Speed of Adjustment in Dynamic General Equilibrium with Entry* (with Huw Dixon)

**Abstract** We reduce a four-dimensional economic system with entry to a two-dimensional stable manifold. Whence we derive analytical solutions for the model within a neighborhood of the hyperbolic fixed point. Analytical solutions show that imperfect competition reduces the set of complex dynamics, and raises eigenvalues which hastens convergence to steady state. The intuition is that imperfect competition raises profits, so an entrant reduces industry profits more thus arbitrage quickens.