

# Yuliya Lovcha

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## Contact Information:

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## Positions held

Assistant professor (Profesora Asistente), Economics Department, University of Navarra, 2010 -

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## Personal Information

Date, place of birth: August 27, 1981, Dnipropetrovsk, Ukraine  
Citizenship: Ukraine  
Residence: Permanent residence in Spain, working permit  
Languages: Fluent in English and Spanish, native in Russian and Ukrainian, beginner in French

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## Fields of Interest

Applied Macroeconomics, Time series and Finance

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## Education

PhD PhD in economics, University of Alicante, 2010  
Spain, Supervisors: Gabriel Perez Quiros, Maximo Camacho  
MA Economics Education and Research Consortium (Kyiv School of  
Economics from 2007), Ukraine, 2005  
Specialist 5 year degree, (diploma with distinction), Dnipropetrovsk National  
University, Ukraine, 2003  
BA BA in Economics, (diploma with distinction), Dnipropetrovsk National  
University, Ukraine, 2002

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## Teaching Experience

### University of Navarra

Fall term 2010 Calculus I (in English and Spanish)

### Teaching assistant at the University of Alicante

#### Graduate courses:

Spring 2009, Spring 2008 Macroeconomics III (in English)

Fall 2007 Macroeconomics I (in English)

#### Undergraduate courses:

Spring 2009 Advanced Macroeconomics II (in English)

Spring 2009, Spring 2010 Macroeconomics I (in Spanish)

Spring 2008, Spring 2007 Advanced Macroeconomics II (in Spanish)

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## Working Papers and Work in Progress

### ***Hours worked – Productivity Puzzle: a seasonal fractional integration approach***

The central finding of the recent structural VAR literature is that the response of hours worked to a technology shock depends on the assumption of the order of integration of hours. In this work, the series are assumed to be fractionally integrated at zero and seasonal frequencies. Thus, I do not make the assumption on the order of integration of hours worked, I estimate it. I found that the magnitude of the estimated impulse responses of hours to a positive technology shock depends crucially on the assumptions applied to identify them. I analyze appropriateness of the identification assumptions applying the procedure described in Sims (1989). I show that the long-run identification is not appropriate to recover the impulse responses of hours to a technology shock, whereas the short-run identification is. The general conclusion is that the hours rise on impact in response to a positive technology shock when short-run identification is applied. The conclusion holds for five different data sets I use for the analysis.

**JEL Classification:** C22, E32

**Keywords:** technology shocks, fractional integration, hours worked, structural VAR, identification

### ***Seasonal misspecification in long memory processes: a simulation study*** (with Alejandro Perez-Laborda)

Negative seasonal fractional integration is a common feature of many macroeconomic time series that appears as a result of seasonal adjustment. However, this characteristic is frequently ignored. In this simulation work, we study the influence of the omission of negative seasonal fractional integration on the estimate of the parameter of fractional integration at zero frequency. Through a spectral-density bootstrap approach, we simulate pure and mixed ARFISMA processes. For each of them, we estimate a set of ARFIMA processes, omitting seasonal fractional integration. On the basis of the testing procedure described in the paper we choose the one that fits data better and compare estimation results with the true specification. The bias in the estimate of the fractional integration parameter at zero frequency under seasonal misspecification is positive for the majority of the specifications considered and for all the specifications which can be clearly identified as processes with negative seasonal fractional integration. High negative bias appears only for processes with strong negative short memory (-0.9). In this extreme case, even under the true specification, it is impossible to distinguish this process from one with positive fractional integration at frequency  $\pi$ . Thus, it cannot be clearly identified as a process with negative seasonal fractional integration. This case is studied deeply in the paper. For illustration purposes, we provide two empirical examples.

**JEL Classification:** C15, C22, C52

**Keywords:** ARFISMA models, long memory, fractional integration, seasonality, frequency domain estimation

### ***Is Exchange rate – Customer order flow relationship linear? Evidence from Hungarian FX market*** (with Alejandro Perez-Laborda), MNB Working papers, 2010/10, Magyar Nemzeti Bank (The Central Bank of Hungary)

Over the last decade, the microstructure approach to exchange rates has become very popular. The underlying idea of this approach is that the order flows at different levels of aggregation contain valuable information to explain exchange rate movements. The bulk of empirical literature has focused on testing this hypothesis in a linear framework. This paper analyses nonlinearities in the relation between exchange rates and customer order flows. We demonstrate that the relationship evolves over time and that it is different under different market conditions defined by volatility. Further, we find that the nonlinearity can be successfully captured by the Threshold and Markov Switching models, which provide substantial explanatory power beyond the constant coefficient approach. In particular, explicit modeling of nonlinearities is crucial for understanding the information content of the order flows for different groups of customers. The data on consumer order flows is provided by the Central Bank of Hungary.

**JEL Classification:** C22, F31, G15

**Keywords:** customer order flows, nonlinear models, microstructure, exchange rate.

***Dynamic forecasting of the Euro-area GDP with seasonally not adjusted data*** (with Gabriel Perez-Quiros and Maximo Camacho)

We propose a model which allows using quarterly and monthly data in the same time, treating quarterly series as monthly with missing observations, using series with different lengths and starting point, series with missing observations, with significant delay of publication and the most important - seasonally not adjusted series. The proposed model can compute forecasts for seasonally not adjusted series as well as adjusted, producing adjustment of the series internally. We perform a series of simulation experiments to show that the inclusion of stochastic seasonality into the model increase its in-sample fitting and forecasting performance compared with model that uses the data adjusted by standard techniques.

**JEL Classification:** C22, E27, E32

**Keywords:** business cycles, GDP growth, seasonal adjustment, unobserved component model

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**Referee activities:** SERIES

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**Internships and Research Positions**

Autumn 2009	Vrije Universiteit Amsterdam, Visiting research student
Summer 2009	National Bank of Hungary, Visiting researcher, Project: "Is Exchange rate – Consumer order flow relationship linear?"
2005	Research Assistant, Economics Educational Research Consortium, Ukraine
2004-2005	Research Assistant, Commerce Department of Swedish Trade Council, Embassy of Sweden in Ukraine
Autumn 2004	Internship in Budget Committee, Parliament of Ukraine (Verkhovna Rada)
Summer 2004	Internship in Ukrainian Chamber of Commerce and Industry

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**Seminars and Conferences**

January 2010	5 <sup>th</sup> PhD RES Meeting, London
December 2009	XXXIV Simposio de Análisis Económico, Valencia
November 2009	Internal seminar, Vrije Universiteit Amsterdam
October 2009	3 <sup>rd</sup> International Conference on Computational and Financial Economics (CFE'09), Limassol, Cyprus
September 2009	Internal seminar, Central Bank of Hungary, Budapest, Hungary
April 2009	QED Conference, Amsterdam, the Netherlands
October 2008	Econometrics Workshop, University of Alicante

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**Computer Skills:** Matlab, GAUSS, EViews, STATA, MS Office

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**Scholarships**

Autumn 2009	Grant for Brief Stays in Foreign Centers, Ministry of Education & Signs
2006-present	Scholarship FPU from the Ministry of Education & Signs, Spain
2005	Scholarship from the University of Alicante, Spain
2003-2004	Alexander Frantskevich Scholarship, ING Bank, Ukraine

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**References:**

**Gabriel Perez-Quiros**, Banco de España (Central Bank of Spain), Servicio de Estudios, Alcalá, 50, Madrid, 28014, Spain , e-mail: [gabriel.perez@bde.es](mailto:gabriel.perez@bde.es)  
**Maximo Camacho**, Departamento de Métodos Cuantitativos, Universidad de Murcia, 30100, Murcia, Spain, e-mail: [mcamacho@um.es](mailto:mcamacho@um.es)