

BLAISE MELLY

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Curriculum Vitae

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Personal Information:

Date of Birth: March 5, 1978
Citizenship: Swiss
Languages: French (mother tongue), German, English
Married to Katia, one child: Arnaud

Current Position:

Visiting Scholar, MIT Department of Economics (funded by the Swiss National Science Foundation)

Graduate Studies:

St. Gallen University, PhD. in Economics, *Summa cum laude*
Thesis Title: "Applied Quantile Regression"
Completion date: October 2006

Thesis Committee and References:

Professor Joshua Angrist (Reference)
MIT Department of Economics
50 Memorial Drive
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Professor Victor Chernozhukov (Reference)
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Professor Bernd Fitzenberger (Advisor)
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Professor Michael Lechner (Principal Advisor)
University of St. Gallen
Bodanstrasse 8
9000 St. Gallen, Switzerland
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Prior Education:

Program for doctoral students, Study Center Gerzensee, Summa Cum Laude, 2003
Prof. Mark Watson, Bo Honoré (Econometrics), Klaus Schmidt, Jean-Charles Rochet, Mathias Dewatripont, David Martimort (Microeconomics), Robert King, Sergio Rebelo, Jordi Gali (Macroeconomics)
Lic. oec., University of St. Gallen, Price of the Department of Economics for the best diploma thesis at the University of St. Gallen, 2001

Teaching and Research Fields:

Primary fields: Theoretical and Applied Econometrics
Secondary fields: Labor Economics

Teaching Experience:

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|-------------|---|
| 2002-2006 | Teaching assistant to Prof. Lechner, University of St. Gallen, courses: Methoden der empirischen Wirtschaftsforschung (bachelor), Econometrics Methods (master) |
| Spring 2006 | Lecturer, University of St. Gallen, Quantitative Analysis with Gauss (master) |
| Fall 2006 | |
| Spring 2007 | Lecturer, University of St. Gallen, Data Analysis using Stata (master) |

Professional Activities:

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| Referee for | <i>Computational Statistics and Data Analysis, Empirical Economics, Journal of Econometrics, Labour Economics, Oxford Bulletin of Economics and Statistics, Public Finance Review, Review of Economics and Statistics, Singapore Economic Review, Swiss Journal of Economics and Statistics.</i> |
| Seminars (selection) | ESEM in Madrid (August 2004), EALE in Lisbon (September 2004), Research Seminar at Darmstadt University (June 2005), SOLE/EALE in San Francisco (June 2005), EEA in Amsterdam (August 2005), Econometrics in Rio (July 2006), European Winter Meeting of the Econometric Society in Torino (November 2006), Econometrics Seminar at Boston University (October 2007) |

Publications:

Public-private sector wage differentials in Germany: evidence from quantile regression, *Empirical Economics*, 30(2), 505-520, 2005.

Decomposition of differences in distribution using quantile regression, *Labour Economics*, 12(4), 577-590, 2005.

Research Papers:

“Unconditional Quantile Treatment Effects under Endogeneity” (with Markus Frölich)

Job Market Paper

This paper develops IV estimators for unconditional quantile treatment effects (QTE) when the treatment selection is endogenous. In contrast to conditional QTE, i.e. the effects conditional on some covariates X , the unconditional QTE summarize the effects of a treatment for the entire (complier) population. They are usually of most interest in policy evaluations because the results can easily be conveyed and summarized. Last but not least, unconditional QTE can be estimated at the root n rate without any parametric assumption, which is obviously impossible for conditional QTE (unless all X are discrete). In this paper we extend the identification of unconditional quantile treatment effects to endogenous treatments. Identification is based on the presence of an instrument satisfying a monotonicity assumption in the treatment choice equation but is achieved without any functional form restrictions. Several types of estimators are suggested: regression, propensity score and weighting estimators. Root n consistency, asymptotic normality and attainment of the semiparametric efficiency bound are shown for our weighting estimator, which is extremely simple to implement. We also show that including covariates in the estimation is needed for efficiency even when the instrumental variable is not confounded, e.g. when the instrument has been randomized. Monte Carlo simulations and two empirical applications illustrate the use of the proposed estimators.

“Estimation of Counterfactual Distributions using Quantile Regression”

This paper proposes estimators of unconditional counterfactual distributions based on the estimation of the conditional distribution by (parametric or nonparametric) quantile regression. In the parametric setting, we use these methods to extend the Oaxaca / Blinder decomposition of means to the full distribution. In the nonparametric setting, we develop an efficient local-linear-regression-based estimator for quantile treatment effects. We show root n consistency and asymptotic normality of the estimators and present analytical estimators of their variance. Monte-Carlo simulations show that the procedures perform well in finite samples. An application to the black-white wage gap illustrates the usefulness of the estimators.

“Earnings Effects of Training Programs” (with Michael Lechner)

In an evaluation of a job training program, the influence of the program on the individual earnings capacity is important, because it reflects the program effect on human capital. Estimating these effects is complicated because earnings are observed for employed individuals only, and employment is itself an outcome of the program. Point identification of these effects can only be achieved by usually implausible assumptions. Therefore, weaker and more credible assumptions are suggested that bound various average and quantile effects. For these bounds, consistent, nonparametric estimators are proposed. In a re-evaluation of Germany’s training programs of 1993 and 1994, we find that the programs considerably improve the long run earnings capacity of its participants.

“Public and private sector wage distributions controlling for endogenous sector choice”

“Public Pay Gap in France: New Evidence using Panel Data” (with Olivier Bargain)

Research Papers in Progress

“Inference on Counterfactual Distributions” (with Victor Chernozhukov and Iván Fernández-Val)

In this paper we develop procedures to make inference in regression models about how counterfactual changes in the explanatory variables affect the marginal distribution of the response variable. We construct uniformly consistent estimates and simultaneous confidence sets for the entire marginal distribution function or marginal quantile function of the response variable after a counterfactual change. These estimates are based on several principal approaches to estimating conditional quantile and distribution functions, including quantile regression and proportional hazard models. Our procedures are general and accommodate both simple unitary changes in the values of a given covariate as well as changes in the distribution of the covariates of general form. An empirical application and a Monte Carlo example illustrate the results.

“Sample selection, heteroscedasticity, and quantile regression” (with Martin Huber)

In almost all sample selection models, the independence of the error term from the covariates is a crucial assumption. When this assumption is not satisfied, for instance because of heteroscedasticity, both mean and quantile estimators are inconsistent. This naturally limits the usefulness of quantile estimators since all quantile functions are parallel under independence. However, such estimators can be used to build tests for the independence assumption. We propose powerful tests based on the whole conditional quantile regression process. If the independence assumption is violated the quantile functions are not point identified but we show that it is still possible to bound the coefficients of interest. This can be considered as a generalization of the identification at infinity strategy.

“Privatization and changes in wage structures – Evidence from firm personnel records” (with Patrick Puhani)

We investigate wage and employment effects of privatization using person-level firm-based data sets in a privatized and non-privatized public sector firm in the same country. Our observation period covers the years immediately before and after privatisation. Hence we can analyse before-after effects of privatisation controlling for individual and time fixed effects and allowing for firm-specific trends. We find significant changes in the wage structure in the privatized, but not in the non-privatized firm. The distribution of wages and of wage growth became significantly wider after privatization. We also find that younger employees and those with shorter tenure had gained from privatization. There is also evidence that high-skilled gained relative to middle-skilled workers. Surprisingly, low-skilled workers also gained; this seems to be a compensation given by the firm in order to increase the acceptance of privatization.