

Curriculum Vitae of Bram De Rock

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Contact information

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Personal details

Born: April 25, 1977, Bruges
Nationality: Belgian
Marital status: Married
Children: Daan, Anna and Klara

Fields of interest

Household decision making, Consumer behaviour, Non parametric production analysis, Revealed preference theory, Fixed point theory.

Teaching

Currently I am teaching the following courses:
Microeconomic theory: consumer and producer choice (ECOBS202, ULB), Statistics (X0A14B and D0W48A, KULeuven), Introduction to Mathematics (DOW10A, KULeuven).

Current and past positions

2011 - ..., Honorary Senior Research Associate at University College London (UCL) and International research fellow at the Institute for Fiscal Studies (IFS).

2009 - ..., Professor in mathematics and statistics at KULeuven, Campus Kortrijk. Tenured since 2015, full professor since 2013.

2007 - ..., Professor in mathematical economics at ECARES, ULB. Tenured since 2010, full professor since 2013.

2006 - 2009, Postdoctoral researcher at KULeuven, Campus Kortrijk.

2006 - 2007, Researcher in the European sixth framework project called Accurate Income Measurement for the Assessment of Public Policies (AIM-AP); contract no 028412.

2000 - 2006, Research and teaching assistant in Mathematics at KULeuven, Campus Kortrijk.

Education

2005-2007, *PhD in Economics*, KULeuven.

Thesis title: “Collective choice behavior: nonparametric characterization”.

Supervisor: L. Cherchye.

Committee: M. Browning, P.-A. Chiappori, I. Crawford, A. Decoster, F. Spinnewyn, F. Vermeulen.

2005-2007, *Master in advanced studies in Economics* (doctum colloquium), KULeuven.

Thesis title: “Opening the black box of intrahousehold decision making: theory and nonparametric empirical tests of general collective consumption models”(supervisor: L. Cherchye).

2002-2003, *Post graduate in Business Administration*, KULeuven.

2000-2006, *PhD in Mathematics*, KULeuven.

Thesis title: “The Anosov relation for Nielsen numbers of maps of infra-nilmanifolds”.

Supervisors: K. Dekimpe and W. Malfait.

Committee: F. Dillen, P. Igodt, W. Veys, P. Wong, A. Szczepanski.

1995-2000, *Master in Mathematics* (undergraduate studies), KULeuven.

Thesis title: “Hilbert’s tenth problem”(supervisor: J. Denef).

Awards

2015: Winner (together with Laurens Cherchye and Frederic Vermeulen) of the Pioneer Price of the KU Leuven. This award is for a research group that has initiated and conducted research that is scientifically innovative and opened a completely new avenue of research.

2015: Francqui chair at the University of Namur.

2012: Winner of the Research Council Award of the KU Leuven. This award is a recognition and stimulation of promising young researchers (i.e. 5 years after PhD) from KU Leuven.

2010: Receiver of a starting grant of the European Research Council (ERC).

2010: The paper “Degrees of cooperation in household consumption models: A revealed preference analysis” was selected as the best paper, written by economists under the age of 35, presented at the conference “International Conference in memoriam of Maria Concetta Chiuri on Household, Labour and Migration Economics” in Bari.

2008: Winner (together with Laurens Cherchye and Frederic Vermeulen) of the prize of the Association of Economics (Vereniging voor Economie) for the paper “The revealed preference approach to collective consumption behavior: testing, recovery and welfare analysis”(awarded every two year to Flemish authors under the age of 35).

Research projects

Promoter of the FNRS grant “Empirical revealed preferences”, 2017-2018.

Co-promoter (with L. Cherchye and F. Vermeulen) of the FWO grant “Marriage markets and household decision behaviour”, 2017-2021.

Co-promoter (with L. Cherchye) of the internal C1 KULeuven grant “Empirical analysis of household consumption and marriage decisions: A structural approach based on revealed preferences”, 2016-2021.

Co-promoter (with K. Decancq, F. Maniquet and E. Schokkaert) of the Belspo grant “Measuring equivalent incomes: The implementation of individual well-being measures from Belgian data (MEQIN)”, 2013-2017.

Co-promoter (with L. Cherchye) of the FWO grant “Multi-output production with joint inputs”, 2012-2016.

Co-promoter (with M. Hudon, P. Verwimp and A. Szafarz) of the FNRS grant “Microfinance and intrahousehold behavior”, 2012-2015.

Co-promoter (with L. Cherchye and T. Demuyne) of the FWO grant “A revealed preference analysis of household consumption models”, 2011-2014.

Promoter of the ERC starting grant “A revealed preference analysis of household consumption models”, 2010-2015.

Promoter of the BNB-grant “Degrees of cooperation in the collective household consumption model: a revealed preference analysis”, 2010-2011.

Co-promoter (with L. Cherchye and F. Spieksma) of the FWO grant “Methods and models for testing the rationality of revealed preferences”, 2010-2013.

Promoter of the FNRS-grant “A revealed preference analysis of collective consumption behavior”, 2009-2010.

Co-promoter (with S. Bruyneel, L. Cherchye and S. Dewitte) of the FWO grant “Experimental analysis of collective consumption decisions”, 2009-2012.

Co-promoter (with C. Dehon and M. Dewatripont) of the FNRS grant “Rankings of Higher Education Institutions: Pertinent Non-Parametric and Robust Approaches”, 2008-2011.

Promoter of the BNB-grant “The revealed preference approach to collective consumption behavior: Steps towards a powerful welfare analysis”, 2008-2009.

Organization of workshops

“Poresp Workshop on Poverty and the Family” (2013), Louvain-La-Neuve (co-organizers: F. Maniquet and M. Leturcq).

“CES Workshop on Advances in Consumption Demand Modelling” (2010), University of Leuven (co-organizers: L. Cherchye and J. Sabbe).

“Workshop for PhD students working on collective consumption models” (2009), Ecares.

“NBB-CES Workshop on Advances in Consumption Demand Modelling” (2007), University of Leuven (co-organizers: L. Cherchye and J. Sabbe).

“Workshop of the AIM-AP project” (2006), University of Leuven (co-organizer A. Decoster).

Scientific advice and academic services

Currently: director of *ECARES* and member of the *board of the research council of ULB*.

In the past: (Co-)director of the doctoral school of ECARES, seminar organizer for ECARES and ECORE.

Associate editor for *Mathematical Social Sciences*

Referee for *Econometrica*, *American Economic Review*, *Review of Economic Studies*, *Journal of Econometrics*, *Economic Journal*, *Journal of Economic Theory*, *Games and Economic Behavior*, *International Economic Review*, *Journal of Applied Econometrics*, *Canadian Journal of Economics*, *European Journal of Operations Research*, *Journal of the Operational Research Society*, *International Journal of Production Economics*, *Econometrics Review*, *Econometric Theory*, *Environmental and Resource Economics*, *Journal of Economic Behavior and Organization*, *Journal of Mathematical Economics*, *Economica*, *Mathematical Social Sciences*, *Social Choice and Welfare*, *Journal of Public Economic Theory*, *Review of Economics of the Household*, *Journal of Productivity Analysis*, *Mathematical Problems in Engineering*, *Journal of Economics*, *Economic Research*, *Fonds voor Wetenschappelijk Onderzoek (FWO)*, *Hiring committee of Aalto university school of business*.

(Co-)supervisor of (8 defended, 5 in progress)

Guillaume Perilleux: PhD in progress on individual well-being in Belgium.

Sarah Rosenberg: PhD in progress on labour supply and gender norms.

Denni Tommasi: PhD in progress on collective models.

Tom Potoms: PhD in progress inter temporal household behaviour.

Alex Wolf: PhD in progress modelling decisions of households.

Rama Lionel Ngenzebuke: PhD obtained in February 2017, ULB, “Essays on Intra-household Decision-making, Gender and Socio-Economic Development”, first job: postdoc position at the Harvard Center for Population and Development Studies.

Barnabé Walheer: PhD obtained in November 2016, ULB, “Efficiency analysis: a multi-output nonparametric approach”, first job: assistant professor at Xi’an Jiaotong-Liverpool University.

Veerle Hennebel: PhD obtained in June 2016, KULeuven, “Nonparametric analysis of production and consumption behavior”, first job: postdoc position at KULeuven.

Olivia D’Aoust: PhD obtained in April 2015, ULB, “Post-War Economics: Micro-level Evidence from the African Great Lakes Region”, first job: development economist at the World Bank.

Bart Smeulders: PhD obtained in March 2015, KULeuven, “Testing theories of choice behaviour”, first job: FNRS postdoct position at University of Liege.

Christopher Bruffaerts: PhD obtained in September 2014, ULB, “Contributions to robust methods in non parametric frontier methods”, first job: BNP Paribas-Fortis.

Thomas Bury: PhD obtained in February 2014, ULB, “Collective behaviors in the stock market: a maximum entropy approach”, first job: Belfius.

Jeroen Sabbe: PhD obtained in December 2010, KULeuven, “Revealed preference analysis of

consumption and production behavior: applications of the collective model”, first job: Bain & Co.

Publications in international peer reviewed journals

For more information about my research profile, please see my page on Google scholar (<http://scholar.google.com/citations?user=GUWT5l8AAAAJ&hl=en>) or on Ideas (<http://ideas.repec.org/f/pde305.html>)

1. “Household consumption when the marriage is stable”(2017), with L. Cherchye, T. Demuyne and F. Vermeulen. To appear in *American Economic Review*.
[Working paper](#).
2. “Measuring the willingness-to-pay for others’ consumption: An application to joint decisions of children.”(2017), with S. Bruyneel, L. Cherchye. S. Cosaert and S. Dewitte. To appear in *Quantitative Economics*.
[Working paper](#).
3. “The Power of the Family: Kinship and Intra-Household Decision-Making in Rural Burundi”(2017), with R. L. Ngenzebuke and Ph. Verwimp. To appear in *Review of Economics of the Household*.
[Working paper](#).
4. “Coordination Efficiency in Multi-Output Settings: a DEA Approach,”(2017), with L. Cherchye. and V. Hennebel. *Annals of Operations Research*, 250, p. 205-233.
[Published version](#); [Working paper](#).
5. “Revealed preference tests of collectively rational consumption behavior: formulations and algorithms”(2016), with F. Nobibon, L. Cherchye, Y. Crama, T. Demuyne and F. Spieksma. *Operations Research*, 64, p. 1197-1216.
[Published version](#); [Working paper](#).
6. “Gorman revisited: Nonparametric conditions for exact linear aggregation”(2016), with L. Cherchye, I. Crawford and F. Vermeulen. *SERIEs, Journal of the Spanish Economic Association*, 7, p. 203-220.
[Published version](#); [Working paper](#).
7. “Multi-Output profit efficiency and directional distance functions”(2016), with L. Cherchye and B. Walheer. *Omega: International Journal of Management Science*, 61, p. 100-109.
[Published version](#); [Working paper](#).
8. “The transfer paradox in welfare space”(2016), with T. Demuyne and V. Ginsburgh. *Journal of Mathematical Economics*, 62, p. 1-4.
[Published version](#); [Working paper](#).
9. “A simple identification strategy for Gary Becker’s time allocation model”(2015), with L. Cherchye and F. Vermeulen. *Economics Letters*, 137, p. 187-190.
[Published version](#); [Working paper](#).

10. "Sharing rule identification for a general collective consumption model"(2015), with L. Cherchye, A. Lewbel and F. Vermeulen. *Econometrica*, 83, p. 2001-2041.
[Published version](#); [Working paper](#).
11. "Transitive preferences in multi-member households"(2015), with B. Smeulders, L. Cherchye, F. Spieksma and F. Talla Nobibon. *Economic Theory Bulletin*, 3, p. 243-254.
[Published version](#); [Working paper](#).
12. "Complexity results for the Weak Axiom of Revealed Preference for collective consumption models,"(2015), with L. Cherchye, F. Spieksma, B. Smeulders and F. Talla Nobibon. *Journal of Mathematical Economics*, 58, p. 82-91.
[Published version](#); [Working paper](#).
13. "Revealed preference tests for weak separability: an integer programming approach"(2015), with L. Cherchye, T. Demuynck and P. Hjertstrand. *Journal of Econometrics*, 186, p.129-141.
[Published version](#); [Working paper](#).
14. "Is utility transferable: A revealed preference analysis "(2015), with L. Cherchye and T. Demuynck. *Theoretical Economics*, 10, p. 51-65.
[Published version](#); [Working paper](#).
15. "Sharp for SARP: Nonparametric bounds on counterfactual demands"(2015), with R. Blundell, M. Browning, L. Cherchye, I. Crawford and F. Vermeulen. *American Economic Journal: Microeconomics*, 7, p. 43-60.
[Published version](#); [Working paper](#).
16. "Multi-output efficiency with good and bad outputs"(2015), with L. Cherchye and B. Walheer. *European Journal of Operational Research*, 240, p. 872-881.
[Published version](#); [Working paper](#).
17. "Consume Now or Later? Time Inconsistency, Collective Choice and Revealed Preference"(2014), with A. Adams, L. Cherchye and E. Verriest. *American Economic Review*, 104, p. 4147-4183.
[Published version](#); [Working paper](#).
18. "Empirical Revealed Preference"(2014), with I. Crawford. *Annual Review of Economics*, 6, p. 503-524.
[Published version](#); [Working paper](#).
19. "Nonparametric analysis of multi-output production with joint inputs"(2014), with L. Cherchye, T. Demuynck and K. De Witte. *Economic Journal*, 124, p. 735-775.
[Published version](#); [Working paper](#).
20. "Revealed preference analysis for convex rationalizations on nonlinear budget sets"(2014), with L. Cherchye and T. Demuynck. *Journal of Economic Theory*, 152, p. 224-236.
[Published version](#); [Working paper](#).
21. "Goodness of fit measures for revealed preference tests: Complexity results and algorithms"(2014), with B. Smeulders, L. Cherchye and F. Spieksma. *Transactions on Economics and Computation*, 2 (1), Article 3.
[Published version](#); [Working paper](#).

22. “The economic meaning of Data Envelopment Analysis: a ‘behavioral’ perspective” (2014), with L. Cherchye and V. Hennebel. *Socio-Economic Planning Sciences*, 48, p. 29-37.
[Published version](#); [Working paper](#).
23. “The Money Pump as a Measure of Revealed Preference Violations: A Comment” (2013), with B. Smeulders, L. Cherchye and F. Spieksma. *Journal of Political Economy*, 121, p. 1248-1258.
[Published version](#); [Working paper](#).
24. “Opening the ‘Black Box’ of Efficiency Measurement: Input Allocation in Multi-Output Settings” (2013), with L. Cherchye, B. Dierynck, F. Roodhooft and J. Sabbe. *Operations Research*, 61, p. 1148-1165.
[Published version](#); [Working paper](#).
25. “Private versus public consumption within groups: testing the nature of goods from aggregate data” (2013), with L. Cherchye and V. Platino. *Economic Theory*, 54, p. 485-500.
[Published version](#); [Working paper](#).
26. “The empirical content of Cournot competition” (2013), with L. Cherchye and T. Demuyneck. *Journal of Economic Theory*, 148, p. 1552-1581.
[Published version](#); [Working paper](#).
27. “Nash bargained consumption decisions: A revealed preference analysis ” (2013), with L. Cherchye and T. Demuyneck. *Economic Journal*, 123, p.195-235.
[Published version](#); [Working paper](#).
28. “The robustness of the hyperbolic efficiency estimator” (2013), with C. Bruffaerts and C. Dehon, *Computational Statistics and Data Analysis*, 57, p. 349-363.
[Published version](#); [Working paper](#).
29. “Married with children. A collective labor supply model with detailed time use and intrahousehold expenditure information” (2012), with L. Cherchye and F. Vermeulen. *American Economic Review*, 102, p. 3377-3405.
[Published version](#); [Working paper](#).
30. “Economic well-being and poverty among the elderly: an analysis based on a collective consumption model” (2012), with L. Cherchye and F. Vermeulen. *European Economic Review*, 56, p. 985-1000.
[Published version](#); [Working paper](#).
31. “Collective consumption models with restricted bargaining weights: an empirical assessment on experimental data” (2012), with S. Bruyneel and L. Cherchye, *Review of Economics of the Household*, 10, p. 395-421.
[Published version](#); [Working paper](#).
32. “Testable implications of general equilibrium models: An integer programming approach” (2011), with L. Cherchye and T. Demuyneck, *Journal of Mathematical Economics*, 47, p. 564-575.
[Published version](#); [Working paper](#).

33. “Revealed preference analysis of noncooperative household consumption”(2011), with L. Cherchye and T. Demuyne, *Economic Journal*, 121, p. 1073-1096.
[Published version](#); [Working paper](#).
34. “Heuristics for deciding collectively rational consumption behavior”(2011), with F. Talla Nobibon, L. Cherchye, J. Sabbe and F. Spieksma, *Computational Economics*, 38, p. 173-204.
[Published version](#); [Working paper](#).
35. “The revealed preference approach to collective consumption behavior: nonparametric testing and sharing rule recovery”(2011), with L. Cherchye and F. Vermeulen. *Review of Economic Studies*, 78, p. 176-198.
[Published version](#); [Working paper](#).
36. “The Anosov theorem for infra-nilmanifolds with a 2-perfect holonomy group”(2011), with K. Dekimpe and P. Penninckx. *Asian Journal of Mathematics*, 15, p. 539-548.
[Published version](#); [Working paper](#).
37. “An Afriat theorem for the collective model of household consumption”(2010), with L. Cherchye and F. Vermeulen. *Journal of Economic Theory*, 145, p.1142-1163.
[Published version](#); [Working paper](#).
38. “Store environment and advertising: investigating two manipulative forces from the supermarket”(2010), with J. Clochet, S. Cosaert and L. Cherchye, *Review of Business and Economics*, 55, p. 90-106.
[Published version](#); [Working paper](#).
39. “Opening the black box of intrahousehold decision making: theory and nonparametric empirical tests of general collective consumption models”(2009), with L. Cherchye and F. Vermeulen, *Journal of Political Economy*, 117, p. 1074-1104.
[Published version](#); [Working paper](#).
40. “The R_∞ property for infra-nilmanifolds”(2009), with K. Dekimpe and P. Penninckx. *Topological Methods in Nonlinear Analysis*, 34, p. 353-373.
[Published version](#); [Working paper](#).
41. “Nonparametric tests of collectively rational consumption behavior: an integer programming procedure”(2008), with L. Cherchye, J. Sabbe and F. Vermeulen, *Journal of Econometrics*, 147, p. 258-265.
[Published version](#); [Working paper](#).
42. “Analyzing cost efficient behavior under economies of scope: a nonparametric methodology”(2008), with L. Cherchye and F. Vermeulen, *Operations Research*, 56, p. 204-221.
[Published version](#); [Working paper](#).
43. “The Collective Model of Household Consumption: A nonparametric characterization”(2007), with L. Cherchye and F. Vermeulen, *Econometrica*, 75, p. 553-574.
[Published version](#); [Working paper](#).
44. “The Anosov theorem for infra-nilmanifolds with cyclic holonomy group”(2007), with K. Dekimpe and W. Malfait, *Pacific Journal of Mathematics*, 229, p. 137-160.
[Published version](#); [Working paper](#).

45. “The Anosov relation for Nielsen numbers of maps of infra-nilmanifolds”(2007), with K. Dekimpe and W. Malfait, *Monatshefte für Mathematik*, 150, p. 1-10.
[Published version](#); [Working paper](#).
46. “The Anosov theorem for infra-nilmanifolds with an odd order abelian holonomy group”(2006), with K. Dekimpe and H. Pouseele, *Fixed Point Theory and Applications*, article ID 63939, p. 1-12.
[Published version](#); [Working paper](#).
47. “The Nielsen numbers of Anosov diffeomorphisms on flat Riemannian manifolds”(2005), with K. Dekimpe and W. Malfait, *Forum Mathematicum*, 17 , p. 325-341.
[Published version](#); [Working paper](#).
48. “The Anosov theorem for flat generalized Hantzsche-Wendt manifolds”(2004), with K. Dekimpe and W. Malfait, *J. of Geometry and Physics* 52, p. 174-185.
[Published version](#); [Working paper](#).

Books

1. “Collective household consumption behavior: Revealed preference analysis”(2012), with L. Cherchye and F. Vermeulen. *Foundations and Trends in Econometrics*, Vol. 4, No. 4, Now publishers, Hanover.
[Published Version](#); [Working paper](#).
2. “The Anosov relation for Nielsen numbers of maps of infra-nilmanifolds”, (2008), VDM Verlag, Saarbrücken..
[Published version](#); [Working paper](#).
3. “Collective choice behavior: nonparametric characterization”, (2007), University of Leuven, Faculty of Economic and Applied Economics, doctoral dissertation.
[Published version](#); [Working paper](#).
4. “The Anosov relation for Nielsen numbers of maps of infra-nilmanifolds”, (2006), University of Leuven, Faculty of Science, doctoral dissertation.
[Published version](#); [Working paper](#).

Other publications and book chapters

1. “Developments in Data for Economic Research ”(2016), with many co-authors, to appear as Chapter 13 in *Economics without Borders*, R.Blundell, E. Cantillon and many others (eds.), Cambridge University Press.
[Working paper](#).
2. “Efficiency measures in regulated industries: History, outstanding challenges and emerging solutions”(2016), with L. Cherchye, A. Estache and M. Verschelde, to appear as Chapter 17 in *The Oxford Handbook of Productivity Analysis*, E. Grifell-Tatje, C. A. K. Lovell and R. C. Sickles (eds.), Oxford University Press.
[Working paper](#).

3. “The implications of household size and children for life-cycle saving”(2015), with Bart Capéau, National Bank of Belgium working paper 286.
[Published version](#); [Working paper](#).
4. “Reducing Energy Use Without Affecting Economic Objectives: A Sectoral Analysis”(2014) with L. Cherchye and B. Walheer, Chapter 4 in *The Next Generation of Economic Issues in Energy Policy in Europe*, A. Estache (ed.), CEPR.
[Published version](#); [Working paper](#).
5. “Revealed preference tests for collective household behavior”(2011), with L. Cherchye, F. Vermeulen and E. Verriest, Chapter 4 in *Household Economic Behaviors*, José Alberto Molina (ed.), Springer.
[Published version](#); [Working paper](#).
6. “The revealed preference approach to demand”(2009), with L. Cherchye, I. Crawford and F. Vermeulen, Chapter 9 in *Quantifying Consumer Preferences: Estimating Demand Systems*, Daniel Slottje (ed.), Contributions to Economic Analysis, Emerald Press.
[Published version](#); [Working paper](#).

Recent working papers

1. “Marital matching, economies of scale and intrahousehold allocations”(2016), with L. Cherchye, K. Surana and F. Vermeulen.
[Working paper](#).
2. “Production with storable and durable inputs: nonparametric analysis of intertemporal efficiency”(2016), with L. Cherchye and P.J. Kerstens.
[Working paper](#).
3. “Normality of demand in a two-goods setting”(2016), with L. Cherchye and T. Demuynck.
[Working paper](#).
4. “Where did it go wrong? Marriage and divorce in Malawi”(2016), with L. Cherchye, S. Telalagic Walther and F. Vermeulen.
[Working paper](#).
5. “Noncooperative household consumption with caring”(2015), with S. Cosaert, L. Cherchye and T. Demuynck.
[Working paper](#).
6. “Transitivity of preferences: when does it matter?”(2015), with L. Cherchye and T. Demuynck.
[Working paper](#).

Non-published working papers

1. “Outlier detection in nonparametric frontier models”(2014), with C. Bruffaerts and C. Dehon.
[Working paper](#).

2. “The Research Efficiency of US universities: a nonparametric frontier modeling approach”(2013), with C. Bruffaerts and C. Dehon.
[Working paper](#).
3. “Are the smart kids more rational?”(2012), with S. Bruyneel, L. Cherchye. S. Cosaert and S. Dewitte.
[Working paper](#).