



**Marijn VERSCHELDE**

**Ph.D. in Economics**

**Full Professor, Quantitative Methods**

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## **EDUCATION**

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- 2012** Ph.D. in Economics, Ghent University, Belgium
- 2008** Research Master in Economics, Université catholique de Louvain, Belgium
- 2007** Master in Economics, Ghent University, Belgium

## **PROFESSIONAL CERTIFICATION**

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- 2018** Pedagogical Certificate, IÉSEG School of Management, France

## **RESEARCH INTERESTS**

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Applied microeconometrics, Performance evaluation, Microeconomics

## **COURSES TAUGHT**

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- Imperfectly competitive markets, Grande école (bachelor cycle)
- Advanced econometrics, Grande école (bachelor cycle)
- Introduction to econometrics, Grande école (bachelor cycle)
- Managerial economics, Grande école (master cycle)
- Network economy, Msc in international business
- International business
- Markets and prices
- International business

## **INTELLECTUAL CONTRIBUTIONS**

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### Published

Cherchye L., De Rock B., Saelens D., Verschelde M., Roets B., (2024), Productive efficiency analysis with unobserved inputs: An application to endogenous automation in railway traffic management, *European Journal of Operational Research*, 313(2), pp. 678-690

Sobrie L., Verschelde M., (2024), Real-time decision support for human-machine interaction in digital railway control rooms, *Decision Support Systems*, 181(2024), pp. 114216

Sobrie L., Verschelde M., Roets B., (2024), Explainable real-time predictive analytics on employee workload in digital railway control rooms, *European Journal of Operational Research*, 317(2), pp. 437-448

Sobrie L., Verschelde M., Hennebel V., Roets B., (2023), Capturing complexity over space and time via deep learning: An application to real-time delay prediction in railways, *European Journal of Operational Research*, 310(3), pp. 1201-1217

Atmaca S., Schoors K., Verschelde M., (2020), Bank Loyalty, Social Networks and Crisis, *Journal of Banking & Finance*, 112(1), pp. 105269

Dewitte R., Dumont M., Merlevede B., Rayp G., Verschelde M., (2020), Firm-Heterogeneous Biased Technological Change: A Nonparametric Approach under Endogeneity, *European Journal of Operational Research*, 283(3), pp. 1172–1182

Roets B., Verschelde M., Christiaens J., (2018), Multi-output efficiency and operational safety: An analysis of railway traffic control centre performance, *European Journal of Operational Research*, 271, pp. 224-237

Gavoille N., Verschelde M., (2017), Electoral competition and political selection: An analysis of the activity of French deputies, 1958-2012, *European Economic Review*, 92(February), pp. 180-195

Hennebel V., Simper R., Verschelde M., (2017), Is there a prison size dilemma? An empirical analysis of output-specific scale economies, *European Journal of Operational Research*, 262(1), pp. 306-321

Dumont M., Rayp G., Verschelde M., Merlevede B., (2016), The contribution of start-ups and young firms to industry-level efficiency growth, *Applied Economics*, 48(59), pp. 5786-5801

Verschelde M., Dumont M., Rayp G., Merlevede B., (2016), Semiparametric metafrontier efficiency of European manufacturing firms, *Journal of Productivity Analysis*, 45(1), pp. 53-69

Rogge N., Simper R., Verschelde M., Hall M., (2015), An analysis of managerialism and performance in English and Welsh male prisons, *European Journal of Operational Research*, 241(1), pp. 224-235

Verschelde M., Hindriks J., Rayp G., Schoors K., (2015), School staff autonomy and educational performance: within-school-type evidence, *Fiscal Studies*, 36(2), pp. 127-155

Rogge N., Verschelde M., (2013), A composite index of citizen satisfaction with local police services, *Policing: An International Journal of Police Strategies & Management*, 36(2), pp. 319-342

Verschelde M., D'Haese M., Rayp G., Vandamme E., (2013), Challenging small-scale farming: a non-parametric analysis of the (inverse) relationship between farm productivity and farm size in Burundi, *Journal of Agricultural Economics*, 64(2), pp. 319-242

Verschelde M., Rogge N., (2012), An environment-adjusted evaluation of citizen satisfaction with local police effectiveness: Evidence from a conditional Data Envelopment Analysis approach, *European Journal of Operational Research*, 223(1), pp. 214-225

### Forthcoming

Nasini S., Verschelde M., Merlevede B., (2024), Optimal transfer prices and technology in decentralized business groups, *European Journal of Operational Research*, NA(NA), pp. NA

Cherchye L., De Rock B., Saelens D., Verschelde M., (2023), Productive efficiency analysis with incomplete output information, *Journal of Productivity Analysis*, NA(NA), pp. NA

## Communications in refereed conferences

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### International

Nasini S., Vershelde M., Merlevede B., (2020), *Endogenous Technology Sharing In Decentralized Production* INFORMS Annual Meeting, Online, USA

Vershelde M., (2019), *Nonparametric analysis of multiproduct pricing behavior* European Workshop on Efficiency and Productivity Analysis (EWEPA), London, United Kingdom

Vershelde M., (2018), *Identifying financing constraints from production behavior* 10th North American Productivity Workshop, Miami, USA

Vershelde M., (2018), *Nonparametric identification of technological heterogeneity in production* 33rd Annual congress of the European Economic Association, Cologne, Germany

Vershelde M., (2018), *Nonparametric identification of unobserved technological heterogeneity in production* 45th European Association for Research in Industrial Economics Annual Conference, Athens, Greece

Cherchye L., De Rock B., Demuynck T., Vershelde M., (2017), *Nonparametric production analysis with unobserved heterogeneity* 15th International Conference on Data Envelopment Analysis, Prague, Czech Republic

Cherchye L., Demuynck T., De Rock B., Vershelde M., (2017), *Nonparametric production analysis with unobserved heterogeneity* 15th European Workshop on Efficiency and Productivity Analysis (EWEPA), London, United Kingdom

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## Other conference and seminar presentations

### International

Vershelde M., (2023), *Explainable real-time predictive analytics on employee workload in digital railway control rooms* 2023 Inform's Annual Meeting, Phoenix, USA

Vershelde M., (2021), *Endogenous Technology Sharing in Decentralized Production* EURO 2021: 31st European Conference on Operational Research, Athens, Greece

Vershelde M., (2021), *Endogenous technology sharing in decentralized production* Inform's 2021 Annual Meeting, Anaheim, CA, USA

Vershelde M., (2020), *Real-time Delay Prediction in Railway Transportation: An Application of a Recurrent Neural Network Approach with Spatial Features* Virtual 2020 INFORMS Annual Meeting, Virtual, USA

Vershelde M., (2017), *Firm heterogeneity in factor biased technological change* TU Darmstadt, Darmstadt, Germany

Vershelde M., (2016), *The firm characteristics of factor biased technical change* BICEPS, Stockholm School of Economics, Riga, Latvia

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## Chapters in books

### Published

Cherchye L., De Rock B., Estache A., Vershelde M., (2018), Efficiency measures in regulated industries: History, outstanding challenges and emerging solutions, in: Grifell-Tatjé, Emili, Lovell, C.A. Knox and Sickles, Robin C.(Eds.), *Oxford Handbook of Productivity Analysis*, 9780190226718, Oxford University Press, Oxford, chapter 15, pp. 493-521

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## Research reports

Cherchye L., Demuynck T., De Rock B., Vershelde M., (2018), *Nonparametric identification of unobserved technological heterogeneity in production*, National Bank of Belgium Working Paper Series 335, 38 pages

Vershelde M., Dumont M., Rayp G., Merlevede B., (2014), *European competitiveness - A semiparametric stochastic metafrontier analysis at the firm level*, ECB Working Paper Series 1701, 145 pages

Vershelde M., Dumont M., Merlevede B., Rayp G., (2014), *A constrained nonparametric regression analysis of factor-biased technical change and TFP growth at the firm-level*, National Bank of Belgium Working Paper Series 266, 51 pages

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## Working papers

## Grants

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- 2022** Balancing workload to improve employee well-being in digital operations, ANR (Agence Nationale de la Recherche) (France)
- 2020** On Track Lab, IÉSEG School of Management (France)
- 2016** Nonparametric identification of financing constraints, European Central Bank (Germany)
- 2013** Depositor loyalty revealed: life events, the social network, branch activities and the financial crisis, Anonymous private bank (Belgium)
- 2012** Total Factor Productivity Research Grant, National Bank of Belgium (Belgium)
- 2011** Competitiveness Research Grant, National Bank of Belgium (Belgium)

## GRANTS AND HONORS

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### Award

- 2012 Triennial Joseph Merlot - Joseph Leclercq price 2012, CIRIEC, Belgium

## RESEARCH ACTIVITIES

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### COMMITTEE CHAIR

#### Course Coordinator

- 2021 - 2024** Imperfectly Competitive Markets, IÉSEG School of Management, France
- 2015 - 2024** Managerial Economics, IÉSEG School of Management, France

#### Supervision of Ph.D. Thesis:

- 2024** Co-director, Explainable predictive analytics and decision support for real-time control room management