

# Dr. Astrid Cullmann

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## Research and Teaching Interests

Applied Microeconometrics, Efficiency and Productivity Analysis  
Industrial Organization, Regulation, Managerial Economics  
Municipal Infrastructure and Network Industries (Energy, Water, Public Transport)

## Current Position

Leader of a Research Group, DIW Berlin, 2013 – current

## Education

DR. RER. OEC in Economics, TU Berlin (summa cum laude), 2009  
Diploma in Economics, FU Berlin, 2006  
University Carlos III, Madrid, Spain, 2003 – 2004  
University Bordeaux III, France, Language Studies, 1997 - 1998

## Academic Positions

Research Associate, Berlin Economics Research Associates (BERA), 2016 – current  
Research Associate, Department of Firms and Markets, DIW Berlin, 2009 – current  
Selection for the Leibniz Association Mentoring Program, 2011 – 2012  
Copenhagen Business School, Denmark, Short Research Visit, 2009  
ETH Zürich, Short Research Visit (2 Months), 2008  
ETH Zürich, Short Research Visit (1 Month), 2007  
World Bank, Washington DC, Short Research Visit (1 Month), 2007  
DIW DC, Washington DC, Research Visit (3 Months), 2007  
PhD Program, Graduate Center on Economic and Social Research, DIW Berlin, 2006 - 2008

## Publications

### Refereed Journals

Regulation and Investment Incentives in Electricity Distribution: An Empirical Assessment, *Energy Economics*, 2016, Vol. 57, pp. 192-203, (with M. Nieswand)

Technical Efficiency and CO<sub>2</sub> Reduction Potentials – An Analysis of the German Electricity Generating Sector, *Energy Economics*, 2016, Vol. 65, pp. 9-19, (with S. Seifert and C. v. Hirschhausen)

R&D Efficiency and Barriers to Entry – A Two Stage Semi-Parametric DEA Approach, *Oxford Economic Papers*, 2012, Vol. 64, No. 1, pp. 176-196, (with J. Schmidt-Ehmcke and P. Zloczynski)

Benchmarking and Firm Heterogeneity: A Latent Class Analysis for German Electricity Distribution Companies, *Empirical Economics*, 2012, Vol. 42, No. 1, pp. 147-169

Unobserved Heterogeneity and Efficiency Measurement in Public Transport, *Journal of Transport Economics and Policy*, 2012, Vol. 46, No. 1, pp. 51-66, (with M. Farsi and M. Filippini)

The Globalization of Steam Coal Markets and the Role of Logistics: An Empirical Analysis, *Energy Economics*, 2012 Vol. 34, No. 1, pp. 105-116, (with A. Zaklan, A. Neumann and C. v. Hirschhausen)

Regional Differences of Production and Efficiency of Mexican Manufacturing: An Application of Nested and Stochastic Frontier Panel Models, *Journal of Developing Areas*, 2012, Vol. 45, pp. 291-311, (with F. Braun)

Nonparametric Efficiency Analysis of German Public Transport Companies, *Transportation Research Part E*, 2010, Vol. 46, No. 3, pp. 436-445, (with C. v. Hirschhausen)

Overcoming Data Limitations in Nonparametric Benchmarking: Applying PCA-DEA to Natural Gas Transmission, *Review of Network Economics*, 2010, Vol. 9, No. 2, (with M. Nieswand and A. Neumann)

Quo Vadis Efficiency Analysis of Water Distribution? A Comparative Literature Review, *Utilities Policy*, 2009, Vol. 17, No. 3-4, pp. 225-232, (with M. Walter, C. v. Hirschhausen and M. Zschille)

Efficiency Analysis of East European Electricity Distribution in Transition – Legacy of the Past? *The Journal of Productivity Analysis*, 2008, Vol. 29, No.2, pp. 155-167, (with C. v. Hirschhausen)

From Transition to Competition – Dynamic Efficiency Analysis of Polish Electricity Distribution Companies, *Economics of Transition*, 2008 Vol. 16, No. 2, pp. 335-357, (with C. v. Hirschhausen)

Efficiency Analysis of East and West German Electricity Distribution Companies - Do the 'Ossis' really beat the 'Wessis'? *Utilities Policy*, 2007, Vol. 15, No. 3, pp. 206-214, (with B. Hess)

Analysis of German Electricity Distribution Utilities – Non-Parametric and a Parametric Test, *Applied Economics*, Vol. 38, 2006, No. 21, pp. 2553-2566, (with C. v. Hirschhausen and A. Kappeler)

### *Under Review and Work in Progress*

Finding the Right Yardstick: Regulation under Heterogeneous Environments, *Revise & Resubmit*; *European Journal of Operational Research*, available as DIW Discussion Paper No. 1555, (with E. Björndal, M. Björndal and M. Nieswand)

Productivity in Electricity Retail after Market Liberalisation: Analysing the Effects of Ownership and Firm's Governance Structure, *Revise & Resubmit*; *German Economic Review*, available as DIW Discussion Paper No. 1531, (with M. Nieswand, and C. Stiel)

Productive Efficiency and Ownership when Market Restructuring affects Production Technologies, submitted for publication, available as DIW Discussion Paper No. 1641, (with J. Rechlitz and M. Nieswand)

Heteroscedastic Four Components Stochastic Frontier Model, (with O. Badunenko, S. Kumbhakar and M. Nieswand)

Productivity and Markups in Times of Demographic Change: Evidence from the Drinking Water Sector

Concessions and Quality of Networks: The Design of Delegated Management Contracts, Research Concept and Draft Proposal, (with P. Baake and M. Nieswand)

R&D and Productivity in Public and Private Utilities, (with C. Stiel and J. Rechlitz)

### Research Grants

Leibniz Association (Senate Competition Committee), third party funding to establish an independent research group, (777,000 Euro), Project Leader, 2013 – 2016

European Commission, 7th Framework Programme, Collaborative Project GRASP, (336,000 Euro), Project Coordinator at DIW Berlin, 2009 – 2013

Federal Network Agency (Bundesnetzagentur): Gutachten zum Investitionsverhalten der Strom- und Gasnetzbetreiber with DIW ECON, 2014

European Commission, 7th Framework Programme, Project NEWJOBS, Collaborative Project, 2011 - 2014

Deutsche Telekomstiftung: Innovationsindikator, 2009

PhD Studies Stipend at DIW Berlin, (ca. 40.000 Euro, 36 months), 2006 – 2009

Federal Network Agency (Bundesnetzagentur), GERNER IV with SUMICSID, 2008

DAAD Research Grant to visit the Department of Economics, ETH Zurich, 2007

European Commission, 6th Framework Programme: Project SESSA, 2005

German-Economic Council of Economic Advisors: Joint project on German and French electricity distribution, 2004 – 2006

## Seminars and Conferences

Invited Research Seminar, University Neuchat el, 2016

Invited Research Seminar, ETH Z urich, 2015, 2008

European Association for Research in Industrial Economics (EARIE), 2015, 2011, 2009, 2008, 2006, 2005

Tagung des Vereins f ur Socialpolitik (VfS), 2015, 2007, 2008, 2009

European Workshop on Efficiency and Productivity Analysis, (EWEPA), 2015, 2011, 2009, 2007

North American Productivity Workshop (NAPW), 2014, 2008

Invited Research Seminar, Kiel University, 2011

European Economic Association, 2007, 2005

International Association of Energy Economics (IAEE), 2006

Halle Efficiency and Productivity Analysis Workshop (HEPAW), 2006

Hellenic Workshop on Efficiency and Productivity Measurement (HEWPME), 2005

## PhD Supervision and Thesis Committee

Stefan Seifert, TU Berlin, 2016

Xiaomei Cheng, Norwegian School of Economics (NHH), 2015

Caroline Stiel, TU Berlin and DIW Berlin 2013 - current

Julia Rechlitz, TU Berlin and DIW Berlin 2016 - current

## Service to the profession

### **Refereeing**

Empirical Economics, Energy Economics, Energy Journal, Energy Policy, European Journal of Operational Research, European Journal of Political Economy, Journal of Comparative Economics, Journal of Economics, Journal of Productivity Analysis, Papers in Regional Science, Small Business Economics, Transport Policy, Public Transport, Transport Economics and Policy, Utilities Policy

### **Organizing**

International PhD Autumn School, Research in Infrastructure Economics, TU Berlin and DIW Berlin, International KOMIED Project Workshop

## Other Publications and Outreach

(Re-)Kommunalisierung in der Energieversorgung. Gibt es Effizienzunterschiede zwischen öffentlichen und privaten Stromnetzbetreibern? *Gesellschaft, Wirtschaft, Politik*, Jg. 65, Nr. 4, 2016, (with M. Nieswand and C. Stiel)

A (Re)Municipalization Trend Among Energy Utilities: Truth or Myth? *DIW Economic Bulletin* 20 / 2016, pp. 227-232, 2016, (with M. Nieswand, S. Seifert and C. Stiel)

No Differences in Efficiency Between Public and Private Utilities, *DIW Economic Bulletin*, 20 / 2016, pp. 233-238, 2016, (with M. Nieswand, S. Seifert and C. Stiel)

Trend zur (Re-)Kommunalisierung in der Energieversorgung: ein Mythos? *DIW Wochenbericht* 20 / 2016, pp. 441-457, 2016, (with M. Nieswand, S. Seifert and C. Stiel)

Keine Effizienzunterschiede zwischen öffentlichen und privaten Energieversorgungsunternehmen, *DIW Wochenbericht* 20 / 2016, pp. 448-453, 2016, (with M. Nieswand, S. Seifert and C. Stiel)

Kein Rückgang der Investitionen in der kommunalen Energie- und Wasserversorgung, *DIW Wochenbericht* 43/2015, pp. 1041-1047, 2015, (with M. Nieswand and C. Stiel)

Keine Investitionshemmnisse in Elektrizitäts- und Gasverteilnetzen durch Anreizregulierung. *DIW Wochenbericht* 6/2015, pp. 98-104, 2015, (with N. Dehnen, M. Nieswand and F. Pavel)

No Barriers to Investment in Electricity and Gas Distribution Grids through Incentive Regulation. *DIW Economic Bulletin* 6/2015, pp. 82-87, 2015, (with N. Dehnen, M. Nieswand and F. Pavel)

Regulierung und Investitionen in der leitungsgebundenen Energieversorgung. *DIW Roundup* 54, 2015, (with M. Nieswand)

Gutachten zum Investitionsverhalten der Strom- und Gasnetzbetreiber im Rahmen des Evaluierungsberichts nach §33 Abs. 1 ARegV: Endbericht; Projekt im Auftrag der Bundesnetzagentur. *DIW Berlin – Politikberatung kompakt* 92, 2014, (F. Pavel, Y. Girard, M. Nieswand, and N. Dehnen)

Growth and Sustainability Policies for Europe (GRASP), Collaborative Project, 7th Framework Programme. Final Report (Chapter II), for EU Commission, 2013, (with D. Gloecker)

Socio-Economic Trends and New Territorial Dynamics in the European Union: Convergence and Agglomeration. *Neujobs Working Paper*, Brussels, 2012, (with K. Geppert)

What is the Story with Natural Gas Markets in Europe? Empirical Evidence from Spot Trade Data. Conference Proceedings of the 9th International Conference on the European Energy Market (EEM) (IEEE), 2012, (with A. Neumann)

Quo Vadis Efficiency Analysis of Water Distribution? A Comparative Literature Review. In: *Wasser: Ökonomie und Management einer Schlüsselressource*. Publikation des DIW Berlins, 2010, (with C. v. Hirschhausen, M. Walter and M. Zschille)

Fallende Preise in der Wasserwirtschaft: Hessen auf dem Vormarsch. *DIW Wochenbericht* 10/2009, 2009 (with C. v. Hirschhausen, M. Walter and M. Zschille)

Wie effizient werden die Forschungsausgaben im internationalen Vergleich eingesetzt? DIW Wochenbericht, 44/2009, 2009 (with J. Schmidt-Ehmcke and P. Zloczynski)

Innovationsindikator 2009: Deutschland hat Aufholbedarf. DIW Wochenbericht 44/2009, 2009 (with H. Belitz, M. Clemens, J. Schmidt-Ehmcke, C. v. Hirschhausen, D. Triebe and P. Zloczynski)

Innovationsindikator Deutschland 2009: Forschungsprojekt im Auftrag der Deutschen Telekom Stiftung und des Bundesverbandes der Deutschen Industrie. DIW Berlin: Politikberatung kompakt 51/2009, 2009, (with H. Belitz, M. Clemens, J. Schmidt-Ehmcke, C. v. Hirschhausen, D. Triebe, J. Herold, A. Kemnitz, R. Ketzler, D. Schäfer, C. Spiess, V. Steiner and P. Zloczynski)

International Benchmarking in Electricity Distribution: A Comparison of French and German Utilities. DIW Discussion Paper No. 830, 2008 (with H. Crespo and M.-A. Plagnet)

Ermittlung möglicher Fusionseffekte im ÖPNV – Eine Effizienzanalyse für Nordrhein Westfalen. Internationales Verkehrswesen 12/2008, 2008, (with C. v. Hirschhausen and M. Walter)

Grössenvorteile bei Busunternehmen des ÖPNV in Deutschland - Eine vergleichende Effizienzanalyse. Internationales Verkehrswesen 06/2008, 2008, (with B. Hess, C. v. Hirschhausen and M. Nieswand)

## Other Skills

Languages: German (native), fluent in oral and written English, French, Spanish

Computer: Econometric Analysis with LIMDEP, R, STATA

## Personal

Married, two children (born 2010 and 2013)