

## **Antonio ESTACHE**

**Business Address:** The World Bank, 1818 H street, room H3-145; Washington, D.C., 20433

**Contact:** Office Phone:202-458-14-42; Fax: 202-334-83-50,  
e-mail: aestache@worldbank.org

**Education:** **Ph.D. in Economics** (1994) (Focus on Regulation/Industrial Organization/Public Economics),  
Université Libre de Bruxelles, Belgium  
**MA in Economics** (1987), (Focus on International Economics and Public Economics)  
University of Maryland  
**Licence en Sciences Economiques (B.A. in Economics)** (1980)  
Université Libre de Bruxelles, Belgium

**Languages:** Fluent in **English, French, Portuguese and Spanish**  
Passive knowledge of **Dutch and German**

**Personal Data:** Born in Liege (Belgium), March 20, 1957; married, one child born in 1988

### **Professional Experience**

Since 1982, I have been working at the World Bank in Africa, Asia and Latin America on:

- **Reforms, Public-Private partnerships and regulation of utilities and transport services**
- **Pricing of infrastructure services**
- **Public sector and public enterprise performance monitoring and reform**
- **Decentralization of infrastructure services**
- **Provincial and municipal reform**
- **National and subnational environmental management**
- **Tax reform, public expenditure reviews and price liberalization**
- **Macroeconomic performance evaluation**

### **Current Position**

**Senior Economic Advisor** to the Vice President for Infrastructure at the World Bank which involves:

- Leading the upgrading of infrastructure economic and policy work at the World Bank
- Develop internationally comparable information to be used in identifying policy priorities in terms of contributions to poverty alleviation and monitoring of aid effectiveness in the sector
- Advise on technical and strategic dimensions of infrastructure regulation and privatization, including in emergency situations (e.g. Argentina, China, Mali, Senegal)
- Teaching in English, French, Spanish and Portuguese to infrastructure regulators
- Conduct applied research on regulatory designs and effects of reform in developing countries

### Current Research

- The measure of efficiency in regulated network industries
- The measure of the cost of capital and of risk in regulated network industries
- The needs of the poor and the design of regulation
- The measure of the impact of regulatory reforms
- The nexus between infrastructure regulation and competition policy
- The practice of access pricing in network industries

### Recent Professional Awards

- World Bank spot award by LAC FPSI for emergency assistance to Argentina (2004)
- World Bank award for Excellence for Development of Training Program on Regulation (2002)
- World Bank spot award by LAC FPSI for emergency assistance to Argentina (2002)
- Government of Brazil Award for my role in the Privatization of its Railways (2002)
- World Bank award for Excellence for Contribution to World Wide Railways Privatization (2000)

### Other professional activities:

- Fellow at the ECARES research center, Université Libre de Bruxelles
- Member of the Research Advisory Board of the World Bank
- Member of the Advisory Board, Journal of Network Industries (2003-now), Utilities Policy (2003-now), World Bank Economic Review (2000-2004)
- Reviewer for the Economic Journal, International Journal of Industrial Organization, International Public Finance Journal, Journal of Development Economics, Journal of Productivity Analysis, Journal of Public Economics, Journal of Transport Economics and Policy, Revue Française d'Economie, Utilities Policy, World Bank Economic Review, World Bank Research Observer, World Development

### Previous Professional Experiences

- 1981-1982: International Monetary Fund, Institute, Lecturer in Econometrics and Macroeconomic Financial Programming
- 1980-1981: DULBEA, Economics Department, Université Libre de Bruxelles: Researcher and co-manager of a project on corporate financial modeling

## Recent Refereed Publications

### **Articles and Book Chapters**

1. “*Is Debt Replacing Equity in Regulated Privatized Infrastructure in Developing Countries?*”, **Utilities Policy** (forthcoming 2005) (with S. Jarvela and L. Correia)
2. “*The limits of competition in urban buses in developing countries*”, **Transport Reviews** (2005) (with A. Gomez-Lobo), Vol. 25, 2, pp139-158, March
3. “*On Latin America’s Infrastructure Privatization and Its Distributional Effects*”, in J. Nellis and N. Birdsall, N. (forthcoming in 2005), **Glass Half Full: Assessing the Distributional Impact of Privatization**, The Center for Global Development, Washington, D.C.
4. “*Do Regulation and Ownership Drive the Efficiency of Electricity Distribution? Evidence from Latin America*”, **Economics Letters** (2004) (with M. Rossi)
5. “*Sources of Efficiency Gains in Port Reform: A DEA Decomposition of a Malmquist TFP Index for Mexico*”, **Utilities Policy**, (2004) (with B. Tovar and L. Trujillo), December, Vol.12, 4, pp231-230
6. “*The Case for International Coordination of Electricity Regulation: Evidence from the Measurement of Efficiency in South America*”, **Journal of Regulatory Economics**, (2004) (with M. Rossi and C. Ruzzier), May, pp. 271-295
7. “*Downsizing with labor sharing and collusion*”, **The Journal of Development Economics** (2004), vol. 73, 2, pp 519-540 (with JJ Laffont and X. Zhang)
8. “*Argentina Privatization: A Cure or a Disease?*” in Hirschhausen, C., T. Beckers and K. Mitusch (2004), **Trends in Infrastructure Regulation and Financing: International Experience and Case Studies from Germany**, Edward Elgar, Cheltenham, UK and Northampton, MA., USA
9. “*Las Privatizaciones en América Latina*”, **Revista Asturiana de Economía**, Vol 31 (2004) (with L. Trujillo) pp37-59
10. “*Where do We Stand on Transport Infrastructure Deregulation and Public-Private Partnerships?*” **OECD-ECMT Round Table 129**, (2004) (with T. Serebrisky)
11. “*Efficiency effects of “Privatization” in Argentina’s Water and Sanitation Services*”, **Water Policy** (2003) volume 5 issue 4, pages 369-380 (with L. Trujillo)
12. “*Processes and accounting matter for regulators: Learning from Argentina’s railways privatization*”, **Journal of Network Industries** (2003), Vol. 4, No1, 3-28 (with J. Campos and L. Trujillo)
13. “*Price caps, efficiency pay-offs and infrastructure contract renegotiation in Latin America*”, in Bartle, I. (2003), **The UK Model of Utility Regulation: a 20<sup>th</sup> anniversary collection to mark the “Littlechild Report” retrospect and prospect**”, CRI Proceedings 31 (with L. Guasch and L. Trujillo), pp173-198
14. “*Macroeconomic Effects of Private Sector Participation in Infrastructure*”, in Easterly, W. and L. Serven (2003), **The Limits of Stabilisation**, Stanford University Press, Stanford (with J. Campos, N. Martin and L. Trujillo), pp139-170
15. “*Access by the poor in Latin America’s utility reform: subsidies and service obligations*” in Ugaz, C. and C. Waddams Price, ed. (2003), **Utility Privatization and Regulation: A Fair Deal for Consumers?**, Edward Elgar, Northampton, MAS, USA (with O. Chisari and C. Waddams Price) pp25-53

16. “*Can the gains from Argentina’s utilities reform offset credit shocks?*”, in Ugaz, C. and C. Waddams Price, ed. (2003), **Utility Privatization and Regulation: A Fair Deal for Consumers?**, Edward Elgar, Northampton, MAS, USA (with D. Benitez and O. Chisari) pp175-202
17. “*Making Infrastructure Reform Work for the Poor: Policy Options Based on Latin America’s Experience*”, **The CEPAL Review** (2002) (with V. Foster and Q. Wodon), December, 105-124
18. “*What Does Privatization Do for Efficiency? Evidence from Argentina’s and Brazil’s Railways*”, **World Development**, (2002), Vol. 30, No11, November (with M. Gonzalez and L. Trujillo), 1885-1897
19. “*Dealing with Demand Forecasting Games in Transport Privatization*”, **Transport Policy** (2002) (with L. Trujillo and E. Quinet), Vol. 9, No4, October, 325-33
20. “*Telecoms Reform, Access Regulation and Internet Adoption in Latin America*”, **Economia** (2002), Spring, (with T. Valletti and M. Manacorda), 153-218
21. “*Efficiency Gains from Port Reform and the Potential for Yardstick Competition: Lessons from Mexico*”, **World Development**, (2002), Vol. 30, No.4, April (with M. Gonzalez and L. Trujillo), 545-560
22. “*How different is the efficiency of Public and Private Water Companies in Asia*”, **The World Bank Economic Review**, (2002), Vol. 16, No1(with M. Rossi), 139-148
23. “*Railways Reform in Brazil*”, **The Journal of Industry, Competition and Trade**, (2002), Vol. 1, Number 2, June (with A. Goldstein and R. Pittman), 203-235
24. “*The Potential Role of Economic Cost Models in the Regulation of Telecommunications in Developing Countries*”, **Information Economics and Policy**, (2002), March, Vol 14, No.1 (with D. Benitez, M. Kennet and C. Ruzzier), 21-38
25. “*Utilities Privatization and the Poor: Lessons and evidence from Latin America*” (2001), **World Development**, July (with A. Gomez-Lobo and D. Leipziger), vol. 29, Number 7
26. “*Privatization and Regulation of Transport Infrastructure in the 1990s*” (2001), **The World Bank Research Observer**, Vol 16, Number 1, pp85-108
27. “*A few things transport regulators should know about risk and the cost of capital*” (2001), **Utilities Policy**, Volume 9 (with I. Alexander and A. Oliveri), 1-13
28. “*Industry restructuring and regulation: Building a base for sustainable growth – lessons from Latin America*”, **Development Southern Africa** (2000), vol. 17, No. 3 (with I. Alexander)
29. “*The Regulation of Transport Infrastructure and Services: A Conceptual Overview*”, in Estache, A. and de Rus, G. (2000), pp 5-50 (with G. de Rus)
30. “*Toll roads*”, in Estache, A. and de Rus, G. (2000), pp. 235-294, (with J. Strong and M. Romero)
31. “*Transaction costs, politics, regulatory institutions and regulatory outcomes*”, in Manzetti, L. ed. (2000), **Regulatory Policy in Latin America: Post-Privatization Realities**, North-South Press Center at the University of Miami (with D. Martimort), pp 49-82
32. “*Reforming electricity in the Southern Cone*”, in Manzetti, L. ed. (2000), **Regulatory Policy in Latin America: Post-Privatization Realities**, North-South Press Center at the University of Miami (with M. Rodriguez-Pardina), pp 171-188
33. «*Les Besoins du Pauvre dans la Privatisation d'Infrastructure:Le Rôle des Obligations de Service Universel*» (2000), **Revue des Concessions et des Délégations de Service Public** (O. Chisari, A. Estache et J.J. Laffont), juin

34. "Privatizing and Regulating Chile's Utilities, 1974-2000: Successes, Failures and Outstanding Challenges"(1999) in Perry, G, and D. Leipziger, **Chile: Recent Policy Lessons and Emerging Challenges** (with E. Bitran, L. Guasch and P. Serra), World Bank Publications, pp327-392
35. "Evaluating the Minimum Asset Tax on Corporations: An Option Pricing Approach" (1999), **Journal of Public Economics**, January, Vol. 77, no 1 (with S. van Wijnbergen)
36. "Winners and Losers from the Privatization and Regulation of Utilities: Lessons from a General Equilibrium Model of Argentina" (1999), **The World Bank Economic Review**, Vol. 13, No 2. (with O. Chisari and C. Romero), pp. 357-378
37. "Regulatory Reform, Development, and Institutions" (1999), **Journal of Quantitative & Technical Economics**, Vol. 16, No 7. (in Chinese)(with X. Zhang)
38. "Development of Regulatory Institutions" (1999). **Journal of Quantitative & Technical Economics**, Vol. 16, No. 3. (in Chinese) (with X. Zhang)
39. "Infrastructure Concessions, Information Flows and Regulatory Risks" (1999), **Public Policy for the Private Sector**, December, (with Phil Burns), December
40. "The Brazilian Electricity Sector" (1999), **Infrastructure Journal**, winter (with M. Rodriguez-Pardina)
41. "Privatización y regulación de infraestructuras de transporte: Un panorama"(1999), **Papeles de Economía Española**, 82, pp196-209
42. "Regulatory Trade-offs in Designing Concession Contracts for Infrastructure Networks"(1998), **Utilities Policy**, 7, (with C. Crampes) pp.1-1
43. "The Argentine and Chilean Electricity Sector" (1998), **Infrastructure Journal**, spring (with M. Rodriguez-Pardina)
44. "La Regulación de Infraestructuras: los casos de la Electricidad y el Agua", (1998), **Economistas-Un balance** ,Colegio de Economistas, Madrid (with J. Campos)
45. "Infrastructure Development and Participation of Private Sector" (1998), **Journal of Quantitative & Technical Economics**, Vol. 15, No. 11. (in Chinese) (with X. Zhang)
46. "Designing Regulatory Institutions: Lessons from Argentina, Public Policy for the Private Sector, World Bank (1997), May
47. "Designing Toll Roads Concessions-Lessons from Argentina"(1997), in **Private Sector in Infrastructure-Strategy, Regulation, and Risk**, The World Bank (with J. Carbajo)
48. "Competing Private Ports-Lessons from Argentina" (1997), in **Private Sector in Infrastructure-Strategy, Regulation, and Risk**, The World Bank (with J. Carbajo)
49. "The Real Possibility of Competitive Generation Markets in Hydro Systems-The Case of Brazil", **Public Policy for the Private Sector**, World Bank, (1997) (with M. Rodriguez), February
50. "Regulatory lessons from Argentina's Power Concessions", **Public Policy for the Private Sector**, World Bank (1996) (with M. Rodriguez-Pardina), September
51. "Regulating Water Concessions: Lessons form the Buenos Aires Concession", **Public Policy for the Private Sector**, World Bank (1996) (with C. Crampes), September
52. "Railways Concessions: Heading Down the Right Track in Argentina?", **Public Policy for the Private Sector**, World Bank (1996) (with J. Carbajo), September
53. "Decentralizing Public Services: what can we learn from the Theory of the Firm?", (1996), **Revue d'Economie Politique**, 106 (1), Jan. Fevr. (with J. Cremer and P. Seabright)
54. "Controlling Brazil's Pollution: Federal vs. State Taxes and Fines", (1996), **Journal of Infrastructure Systems**, vol. 2, No.2, June (with K. Zheng)

55. “*Why Tax Incentives Don’t Promote Investment in Brazil*”(1995) in A. Shah, ed., **Fiscal Incentives for Investment and Innovation**, Oxford University Press (with V. Gaspar)
56. “*Does decentralization increase public infrastructure expenditure?*” (1995), in Estache, A. **Decentralizing Infrastructure: Advantages and Limitations**, World Bank Discussion Paper No 290, (with S. Sinha) pp 63-80
57. “*Does decentralization improve infrastructure performance?*” (1995), in Estache, A. **Decentralizing Infrastructure: Advantages and Limitations**, World Bank Discussion Paper No 290, (with F. Humplick) pp 81-97
58. “*How to Commercialize Public Infrastructure Utilities*” (1994), **Finance and Development**, Vol.31, No3, September

### *Traditional and Interactive Books*

1. **Financial Modeling of Regulatory Policy in Transport- A Course on CD-ROM**, (2004) World Bank Institute
2. **A Primer on Efficiency Measurement for Utilities and Transport Regulators**, (2003) World Bank Institute Publications, Studies in Development Series (with T. Coelli, S. Perelman and L. Trujillo)
3. **Financial Modeling of Regulatory Policy for Utilities- A Course on CD-ROM**, (2002) World Bank Institute
4. **Accounting for Poverty in Infrastructure Reform – Learning from Latin America’s Experience**, (2002) World Bank Institute Publications, Studies in Development Series (with V. Foster and Q. Wodon)
5. **Regulation and Competition in Network Industries** (2000), Chinese Academy of Social Sciences (with J.J. Laffont and X. Zhang)
6. **Privatization and Regulation of Transport Infrastructures: Guidelines for Policymakers and Regulators** (2000), World Bank, World Bank Institute Publications, Studies in Development Series (co-editor with G. de Rus)
7. **Decentralizing Infrastructure: Advantages and Limitations** (1995), editor, World Bank Discussion Paper No 290
8. **World Development Report: Infrastructure for Development** (1994), Oxford University Press (co-author a member of core producing team)

### *Unpublished Working Papers*

1. “PPI Partnerships versus PPI Divorces in Developing Countries (Or are We Switching from PPPI to PPDI?)”, *World Bank Policy Research Working Paper*, No3470, January 2005
2. "Infrastructure Services in Developing Countries: Access, Quality, Costs, and Policy Reform" *World Bank Policy Research Working Paper*, No3468 (with C. Briceno and N. Shafik), December 2004
3. "Emerging Infrastructure Policy Issues in Developing Countries: A Survey of the Recent Economic Literature" *World Bank Policy Research Working Paper*, No3442, November 2004
4. “Universal Service Obligations in Developing Countries”, *World Bank Policy Research Working Paper*, No3421 (with J.J. Laffont and X. Zhang), September 2004

5. "Have Consumers Benefited from the Reforms in the Electricity Distribution Sector in Latin America?" *World Bank Policy Research Working Paper*, (2004) No3420 (with M. Rossi), September
6. "Are Returns to Private Infrastructure in Developing Countries Consistent with Risks since the Asian Crisis" (2004) *World Bank Policy Research Working Paper*, No3373 (with M.E. Pinglo) September
7. "Downsizing with Labor Sharing and Collusion", (2003), *IDEI Working Paper*, September
8. "An introduction to Financial and Economic Modeling for Utility Regulators", (2003), *World Bank Policy Research Working Paper*, No3001 (with M. Rodriguez-Pardina, J.M Rodriguez and G. Sember)
9. "Sector Organization, Governance and the Inefficiency of African Water Utilities", (2002), *World Bank Policy Research Working Paper*, No3374 (with E. Kouassi)
10. "Concession contract Renegotiations: Some Efficiency vs Equity Dilemmas", (2001), *World Bank Policy Research Working Paper*, No3374 (with L. Quesada)
11. "Labor Redundancy, Retraining and Outplacement during Privatization: The Experience of Brazil's Federal Railway", (2000), *World Bank Policy Research Working Paper*, No2460 (with E. Sydentsticker and J.A. de Azevedo)
12. "The Rise, the Fall and ...the Emerging Recovery of Project Finance in Transport", (2000), *World Bank Policy Research Working Paper*, No2385 (with J. Strong)
13. "The Theory of Access Pricing: An Overview for Infrastructure Regulators", (1999), *World Bank Policy Research Working Paper*, No2097 (with . Valletti)
14. "Information, Accounting and the Regulation of Concessioned Infrastructure Monopolies", (1998), *World Bank Policy Research Working Paper*, No1854 (with P. Burns)
15. "Trade Reform Design as a Signal to Foreign Investors: Lessons for Economies in Transition", (1995) *World Bank Policy Research Working Paper*, 1490, (with S. Bond)

### Recent World Bank Report Managed

- "Strengthening Infrastructure" in World Bank, **Global Monitoring Report** (2004)
- **Eastern Europe:** Recent Economic Developments in the Water and Electricity sectors (2004)
- **Africa:** Recent Economic Developments in the Water and Electricity sectors (2004)
- **South Asia:** Recent Economic Developments in the Electricity sectors (2004)
- **East Asia:** Lessons from the Renegotiation of Infrastructure Concessions (2002)
- **West Africa:** *A Regulator's view of the efficiency of Water Companies* (2002)
- **Argentina:** *Measuring efficiency for regulatory decisions* (2002)
- **Argentina:** *Accounting Requirements for the Regulation of Transport Infrastructures* (2001)
- **Latin America:** *The Macroeconomic effects of infrastructure privatization* (2001)
- **Latin America:** *Utilities Reform and The Needs of the Poor* (2000)
- **Dominican Republic:** *Guidelines for a regulatory agenda in transport* (2000)
- **Asia:** *A Regulator's view of the efficiency of Water Companies* (2000)
- **Mexico:** *: Facing New Challenges for Public-Private Partnership in Transport* (1999)
- **Brazil:** *Public-Private Partnership In Transport Infrastructure* (1999)
- **Peru:** *Getting Ready for Successful Public-Private Partnership in Transport* (1998)
- **Brazil:** *Multimodal Freight Transport: Selected Regulatory Issues* (1997)
- **Brazil:** *Designing Socially Mindful Railways Labor Redundancy Programs* (1997)
- **Brazil:** *Exploring Market Options for the Reform of Brazil's Electricity Sector* (1996)
- **Uruguay:** *Towards a New Role for the State in Uruguay's Utilities* (1996)
- **Uruguay:** *Reform options for the water and sanitation sector* (1996)

- **Argentina:** *Reforming Provincial Utilities: Challenges and Best Practice* (1996)
- **Argentina:** *Transport Privatization and Regulation: The Next Challenges* (1996)
- **Argentina:** *Institutional Options for Environmental Management* (1995)
- **Brazil:** *Managing Pollution Control in the States* (1993)
- **Brazil:** *The Challenge of Municipal Sector Development in the 1990s* (1992)
- **Brazil:** *An Infrastructure Reform Strategy* (1991)
- **Brazil:** *Addressing Intellectual Property Rights Protection Issues* (1991)
- **Brazil:** *An Agenda for Tax Reform* (1990)

### World Bank Projects

- **Argentina:** Transport Sector Reform (Task Manager: M. Pokorny) (2002)
- **West Africa:** Regional Power Pool Development (TM: Marie-Francoise Marie-Nelly) (2002)
- **Senegal:** Private Sector Development Project (TM: Iradj Alikhani) (2001)
- **Brazil:** Railways Privatization (TM: J. Cellier) (1997)
- **Uruguay:** Water Sector Reform (TM: C. Velez) (1996)
- **Brazil:** Water Management: Curitiba (TM: E. Rodriguez) (1993)
- **Brazil:** Pollution Control: Guarapiranga (TM: E. Rodriguez) (1992)
- **Brazil:** Flood Control: Belo Horizonte (TM: E. Rodriguez) (1992)
- **Brazil:** Trade Reform Loan (TM: G. Shepperd) (1990)
- **Brazil:** Public Sector Management Reform Loan (TM: H. Cordeiro) (1989)
- **Ghana:** Structural Adjustment Loan (TM: S. Lateef) (1985)
- **Liberia:** Structural Adjustment Loan (TM: G. Nankani) (1984)

### References

- Prof. François **Bourguignon** (World Bank and Delta, France)
- Dr. Jose **Carbajo** (EBRD)
- Prof. Tim **Coelli** (University of Queensland, Australia)
- Prof. Jacques **Cremer** (Université des Sciences Sociales, Toulouse, France)
- Prof. Claude **Crampes** (Université des Sciences Sociales, Toulouse, France)
- Prof. Mathias **Dewatripont** (Université Libre de Bruxelles, Belgium and MIT, USA)
- Prof. Eduardo **Engel** (Yale University, USA)
- Prof. Andres **Gomez-Lobo** (Universidad de Chile, Chile)
- Prof. Jose-Antonio **Gomez-Ibanez** (Harvard University, USA)
- Prof. Emili **Grifell** (Universidad Autonoma de Barcelona, Spain)
- Prof. Jose-Luis **Guasch** (World Bank and University of California, San Diego, USA)
- Dr. Daniel **Leipziger** (World Bank)
- Prof. Emile **Quinet** (Ecole Nationale des Ponts et Chaussées, France)
- Dr. Nemat **Shafik** (DFID, England)
- Prof. Chris **Snyder** (George Washington University, USA)
- Dr. Nicholas **Stern** (Treasury, England)
- Prof. Jean **Tirole** (Université des Sciences Sociales, Toulouse, France and MIT, USA)
- Prof. Lourdes **Trujillo** (Universidad de Las Palmas de GC, Spain)
- Prof. Tommaso **Valletti** (Imperial College, UK)