Public Debt, Business Cycles and Institutions

Public Debt, Business Cycles and Institutions

Spyridon Sichlimiris

Dissertation for the Degree of Doctor of Philosophy, Ph.D.,
in Economics
Stockholm School of Economics, 2015

Public Debt, Business Cycles and Institutions
© SSE and Spyridon Sichlimiris, 2015

ISBN 978-91-7258-964-3 (printed)
ISBN 978-91-7258-965-0 (pdf)

This book was typeset by the author using LaTeX.

Front cover illustration:
© master_art/Shutterstock

Back cover photo:
© Nicklas Gustafsson/Arctistic, 2014

Printed by:
Ineko, Göteborg, 2015

Keywords:
sovereign debt, news shocks, authority, social norms.

Foreword

This volume is the result of a research project carried out at the Department of Economics at the Stockholm School of Economics (SSE).

This volume is submitted as a doctor's thesis at SSE. In keeping with the policies of SSE, the author has been entirely free to conduct and present his research in the manner of his choosing as an expression of his own ideas.

SSE is grateful for the financial support provided by the Jan Wallander and Tom Hedelius Foundation which has made it possible to fulfill the project.

Göran Lindqvist
Director of Research
Stockholm School of Economics

Richard Friberg
Professor and Head of the
Department of Economics
Stockholm School of Economics

Acknowledgements

This Ph.D. thesis has received the support of many individuals. Some of them have been on the foreground and some others on the background.

First, I would like to thank the ones on the foreground, my supervisors and co-authors. I particularly thank my main supervisor Tore Ellingsen for his countless effort and time spent to train me as a researcher. No words can explain my gratitude for Tore's professional approach in supervising me. He has immensely contributed to this thesis from the development of the idea until the format it has today. I thank Lars Ljungqvist for acting as a second supervisor (inevitably) and being a very passionate teacher. His attention to detail improved greatly many chapters of this thesis.

I thank my co-authors Paola Di Casola and Eleonora Freddi. Paola has the ability to realize what is a realistic/feasible target and commit to it, a rare-characteristic for a young researcher. She is a passionate researcher, open to new ideas, a great problem solver and a really patient person. That made her a magnificent co-author. Eleonora's enthusiastic character, attention to detail, curiosity and it-makes-sense approach contributed tremendously to the last chapter of this thesis. I feel privileged to have met them and I look forward to our collaboration on new or existing research projects.

Without any doubt many people on the background contributed intentionally or unintentionally to this Ph.D. thesis. All chapters in the thesis started as a term paper for a course. I thank Tobias Broer, Rickard Sandberg and Tore Ellingsen for encouraging the term paper approach to evaluate the performance of the students in their courses. In addition, all of them were open for discussion and comments at later stages of this work. I am grateful to all my teachers for equipping me with the tools to do research. I was fortunate to be a TA for various courses during the last years. I thank David Domeij, Tore Ellingsen and Johanna Wallenius for giving me the chance to meet students who were extremely curious about economics.

I thank the department of Economics at SSE for offering me a position as a Ph.D. student and the peaceful atmosphere to do research. The department heads during my stay at SSE, Magnus Johannesson and Richard Friberg, deserve a praise for running the department smoothly. The administrative staff of the department did more than an excellent job during my Ph.D. appointment. In that sense, I would like to thank Ritva Kiviharju, Carin Blanksvärd, Lilian Öberg, Pia Ylinen and Idha Hobro. Thanks a lot to Martina Björkman Nyqvist and Johanna Wallenius for all their effort as job market placement coordinators. I thank Markus Sigonius for designing the Latex template for the Ph.D. thesis. His initiative led to a fast compilation of all the papers in one document.

During the last five years I have spent my time in Stockholm with many interesting colleagues. I thank my friends Ana Maria Ceh (also officemate) and Theodoros Rapanos for being always there in easy or difficult moments of the Ph.D. process. Ana is a true encyclopedia of mathematics and Theodoros just an encyclopedia. I feel lucky to have met Taneli Mäkinen, Björn Ohl and Alberto Vesperoni at SSE. They transmitted me their passion for research and helped my transition from the *student status* to the *researcher status*. I am always astonished and interested in Jakob Almerud's unlimited production of research ideas. I would like to thank Luca Facchinello (colleague and ex-flatmate) for our numerous discussions about empirical economics, Leda Pateli for sharing her pragmatic approach to economic research, Egle Karmaziene and Kristoffer Milonas for all the finance-related discussions.

Of course many other people shared their time with me, among which especially Elena Mattana, Abel Schuman, Paul Elger, Niklas Amberg, Markus Sigonius, Evelina Bonnier, Anna Sandberg, Karin Hederos Eriksson, Niels-Jakob Harbo Hansen, Simon Wehrmüller, Alex Schmitt, Mustafa Yildirim, Marta Giagheddu, Nadiia Lazhevska, Arieda Muco, Valentina Gavazza, Paolo Bonomolo, Audinga Baltruinate, André Richter, Ricardo Lopez Aliouchkin, Mahdi Heidari, Mathias Pronin, Hanna Buhl, Eleonora Mura and Ondrej Kutina.

Thanks to Paola Di Casola for managing immensely well her multiple roles during all these years as officemate, co-author, personal administrative assistant and wife. Finally, special thanks to my Greek and Italian family for supporting my decision to pursue a Ph.D., even if they thought I was trying to postpone finding a "real" job.

Stockholm, June 7, 2015

Spyridon Sichlimiris

Contents

Chapter 1

Introduction

This Ph.D. thesis consists of four chapters. "Domestic and External Sovereign Debt" provides a model to explain the level and the composition of public debt in developing countries across two dimensions a) the business cycle and b) the level of financial development. "Composition of Sovereign Debt and Financial Development: A Dynamic Heterogeneous Panel Approach" empirically analyses the relationship between composition of public debt and financial development for a large sample of developing countries. "News Shocks and Structural Breaks" studies news shocks as a driving force of business cycle fluctuations. We build on the identification strategy for news shocks proposed by Beaudry and Portier (2006, AER) and propose improvements. "Social Norms and Authority: In Quest for Social Order" explores the interplay between authority and internalized social norms in achieving social order. We classify different types of authority (Conformist, Charismatic and Punitive) based on the support they receive and individuals' attitude towards social norms.

Domestic and External Sovereign Debt
We develop a theory of sovereign debt in the presence of limited enforcement, by analysing both domestic and external debt. In a financially repressed economy, a government that exploits its market power in the domestic asset market can increase its debt capacity in the international asset market. The reason is the additional endogenous default cost: a government in default loses the gains from trading across these segmented asset markets. We can account for the empirically observed composition of sovereign debt for developing coun-

tries. We obtain a higher share of external debt over domestic debt and higher default incentives in recessions than in booms. We also find a run up in external debt before default. After re-entering the markets, the external debt increases rapidly. Finally, the level of financial development affects the long-run domestic-to-total-debt ratio in a non-monotonic way. For low levels of financial development the effect is positive, for higher levels it is negative.

Composition of Sovereign Debt and Financial Development: A Dynamic Heterogeneous Panel Approach
This paper studies the long-run impact of financial development on the composition of sovereign debt in a large sample of developing countries. We use the dynamic heterogeneous panel model to distinguish between long-term and short-term effects and allow for cross-country heterogeneity in time-invariant features and dynamics. Moreover, we control for the presence of unknown common factors that can affect all countries. We find a non-monotonic long-term effect of financial development on the share of domestic debt over total debt. This effect is robust to different proxies of financial development and the inclusion of relevant macroeconomic variables. Inflation has a positive long-run effect on the domestic debt share, which is consistent with the presence of financial repression.

News Shocks and Structural Breaks
Do news shocks explain business cycle fluctuations? A positive answer is provided by Beaudry and Portier (2006), who develop an identification strategy for "news shocks" in a vector error correction model (VECM) with TFP and Stock Prices on US data. Refining their analysis, we find evidence of a structural break in the long-run relationship between Stock Prices and TFP in 1980, at the beginning of the Volcker Era. In the second part of the paper we extend the sample period and analyse the news shock before and after 1980. Our results support the news view of the business cycle only after 1980. The news shock explains the majority (65 to 80 percent) of business cycle fluctuations of output, consumption and investment at any horizon and generates strong comovement among them. Moreover, TFP movements are well explained at medium and long-term horizons.

Social Norms and Authority: In Quest for Social Order
An agent is said to have real authority when that agent's prescriptive messages affect others' behavior. An agent is said to have internalized a social

norm if the agent suffers disutility from deviating from the norm's prescription. We study the interplay between authority and internalized social norms in achieving social order. We say that authority is Conformist if it supports the prevailing norm, Punitive when it entails a Pareto-worsening violation of the prevailing norm, and Charismatic if it entails a violation of the prevailing norm and the violation benefits some player. For any social situation we derive different social norms, depending on how society regards equality, justice and efficiency. We find that Charismatic authority requires less support to emerge in games with conflicting interests than in games with common interests. Conformist and Punitive authority are relevant when Rawlsian or Paretian norms generate a common interest game. Charismatic authority is relevant when an egalitarian norm generates a game with conflicting interests. We apply our theoretical framework to the context of media and politics to explain recent events, such as the role of Twitter messages in the "Arab Spring".

Bibliography

Abbas, S M Ali and Jakob E Christensen, "The Role of Domestic Debt Markets in Economic Growth: An Empirical Investigation for Low-Income Countries and Emerging Markets," *IMF Staff Papers*, April 2010, *57* (1), 209–255.

Abiad, Abdul, Enrica Detragiache, and Thierry Tressel, "A New Database of Financial Reforms," IMF Working Papers 08/266, International Monetary Fund December 2008.

Aghion, Philippe and Jean Tirole, "Formal and real authority in organizations," *Journal of political economy*, 1997, pp. 1–29.

Aguiar, Mark and Gita Gopinath, "Defaultable debt, interest rates and the current account," *Journal of International Economics*, June 2006, *69* (1), 64–83.

_ **and Manuel Amador**, "Sovereign debt," *chapter prepared for the Handbook of International Economics*, 2013, *4.*

Aizenman, Joshua, "Financial Opening and Development: Evidence and Policy Controversies," *American Economic Review*, May 2004, *94* (2), 65–70.

_ **and Gurnain Kaur Pasricha**, "Why do emerging markets liberalize capital outflow controls? Fiscal versus net capital flow concerns," *Journal of International Money and Finance*, 2013, *39* (0), 28 – 64.

Akerlof, George A, "The Economics of Caste and of the Rat Race and Other Woeful Tales," *The Quarterly Journal of Economics*, November 1976, *90* (4), 599–617.

Arellano, Cristina, “Default Risk and Income Fluctuations in Emerging Economies,” *American Economic Review*, June 2008, *98* (3), 690–712.

_ **and Ananth Ramanarayanan**, “Default and the Maturity Structure in Sovereign Bonds,” *Journal of Political Economy*, 2012, *120* (2), 187 – 232.

Arendt, Hannah, *Between past and future: Six exercises in political thought*, Viking Press, 1961.

Arrow, Kenneth, “Political and Economic Evaluation of Social Effects and Externalities,” in “The Analysis of Public Output” NBER Chapters, National Bureau of Economic Research, Inc, 1970, pp. 1–30.

Barsky, R. B. and E. R. Sims, “News shocks and business cycles,” *Journal of Monetary Economics*, 2011, *58* (3), 273–289.

Basu, S., J. G. Fernald, and M. S. Kimball, “Are Technology Improvements Contractionary?,” *American Economic Review*, December 2006, *96* (5), 1418–1448.

Battaglini, Marco, “Comments on Prat and Strömberg, and Robinson and Torvik,” in Daron Acemoglu, Manuel Arellano, and Eddie Dekel, eds., *Advances in Economics and Econometrics: Volume 2, Applied Economics: Tenth World Congress*, 2013.

Beaudry, P. and F. Portier, “Stock Prices, News and Economic Fluctuations,” NBER Working Papers 10548, National Bureau of Economic Research, Inc June 2004.

_ **and** _ , “The "news view" of economic fluctuations: Evidence from aggregate Japanese data and sectoral US data,” *Journal of the Japanese and International Economies*, December 2005, *19* (4), 635–652.

_ **and** _ , “Stock Prices, News, and Economic Fluctuations,” *American Economic Review*, September 2006, *96* (4), 1293–1307.

Beaudry, Paul and Bernd Lucke, “Letting Different Views about Business Cycles Compete,” in “NBER Macroeconomics Annual 2009, Volume 24” NBER Chapters, National Bureau of Economic Research, Inc, October 2010, pp. 413–455.

_ **and Franck Portier**, "News-Driven Business Cycles: Insights and Challenges," *Journal of Economic Literature*, 2014, *52* (4), 993–1074.

Beck, Thorsten, Aslı Demirgüç-Kunt, and Ross Levine, "Financial institutions and markets across countries and over time - data and analysis," Policy Research Working Paper Series 4943, The World Bank May 2009.

Benjamin, David and Mark L. J. Wright, "Recovery Before Redemption: A Theory Of Delays In Sovereign Debt Renegotiations," CAMA Working Papers 2009-15, Centre for Applied Macroeconomic Analysis, Crawford School of Public Policy, The Australian National University April 2009.

Bicchieri, Cristina and Ryan Muldoon, "Social Norms," in Edward N. Zalta, ed., *The Stanford Encyclopedia of Philosophy*, spring 2014 ed. 2014.

Binswanger, M., "Stock market booms and real economic activity: Is this time different?," *International Review of Economics & Finance*, October 2000, *9* (4), 387–415.

_ , "How do stock prices respond to fundamental shocks?," *Finance Research Letters*, June 2004, *1* (2), 90–99.

_ , "How important are fundamentals?–Evidence from a structural VAR model for the stock markets in the US, Japan and Europe," *Journal of International Financial Markets, Institutions and Money*, April 2004, *14* (2), 185–201.

BIS, *Financial stability and local currency bond markets* number 28. In 'CGFS Papers.', Bank for International Settlements, 2007.

Blackburne, Edward F and Mark W Frank, "Estimation of nonstationary heterogeneous panels," *Stata Journal*, 2007, *7* (2), 197.

Blanchard, O. J. and D. Quah, "The Dynamic Effects of Aggregate Demand and Supply Disturbances," *American Economic Review*, September 1989, *79* (4), 655–73.

Bolton, Patrick, Markus K Brunnermeier, and Laura Veldkamp, "Economists' perspectives on leadership," 2008.

Boz, Emine, "Sovereign default, private sector creditors, and the IFIs," *Journal of International Economics*, January 2011, *83* (1), 70–82.

Breitung, Jorg, "The local power of some unit root tests for panel data," in "Advances in Econometrics, Vol. 15: Nonstationary Panels, Panel Cointegration, and Dynamic Panels, JAI" Press 2000, pp. 161–178.

Brutti, Filippo, "Sovereign defaults and liquidity crises," *Journal of International Economics*, May 2011, *84* (1), 65–72.

Bulow, Jeremy and Kenneth Rogoff, "Sovereign Debt: Is to Forgive to Forget?," *American Economic Review*, March 1989, *79* (1), 43–50.

Chari, V.V., Alessandro Dovis, and Patrick J. Kehoe, "On the Optimality of Financial Repression," Mimeo 2015.

_, P. J. Kehoe, and E. R. McGrattan, "Are structural VARs with long-run restrictions useful in developing business cycle theory?," *Journal of Monetary Economics*, November 2008, *55* (8), 1337–1352.

Chatterjee, Satyajit and Burcu Eyigungor, "Maturity, Indebtedness, and Default Risk," *American Economic Review*, October 2012, *102* (6), 2674–99.

_, Dean Corbae, Makoto Nakajima, and José-Víctor Ríos-Rull, "A Quantitative Theory of Unsecured Consumer Credit with Risk of Default," *Econometrica*, November 2007, *75* (6), 1525–1589.

Choi, In, "Unit root tests for panel data," *Journal of international money and Finance*, 2001, *20* (2), 249–272.

Christensen, Jakob, "Domestic Debt Markets in Sub-Saharan Africa," *IMF Staff Papers*, 2005, pp. 518–538.

Chudik, Alexander and M. Hashem Pesaran, "Common Correlated Effects Estimation of Heterogeneous Dynamic Panel Data Models with Weakly Exogenous Regressors," CESifo Working Paper Series, CESifo Group Munich 4232, CESifo Group Munich 2013.

Čihák, Martin, Aslı Demirgüç-Kunt, Erik Feyen, and Ross Levine, "Benchmarking financial systems around the world," Policy Research Working Paper Series 6175, The World Bank August 2012.

Claessens, Stijn, Daniela Klingebiel, and Sergio L Schmukler, "Government Bonds in Domestic and Foreign Currency: the Role of Institutional and Macroeconomic Factors*," *Review of International Economics*, 2007, *15* (2), 370–413.

Cole, Harold L. and Patrick J. Kehoe, "Models of Sovereign Debt: Partial Versus General Reputations," *International Economic Review*, 1998, *39* (1), pp. 55–70.

_ **and Timothy J. Kehoe**, "Self-Fulfilling Debt Crises," *Review of Economic Studies*, January 2000, *67* (1), 91–116.

Coleman, James S, "Rational organization," *Rationality and Society*, 1990, *2* (1), 94–105.

Cowan, Kevin, Eduardo Levy-Yeyati, Ugo Panizza, and Federico Sturzenegger, "Sovereign debt in the Americas: New data and stylized facts," Technical Report, IDB Working Paper 2006.

Crawford, Vincent, "A survey of experiments on communication via cheap talk," *Journal of Economic theory*, 1998, *78* (2), 286–298.

Cuadra, Gabriel and Horacio Sapriza, "Sovereign default, interest rates and political uncertainty in emerging markets," *Journal of International Economics*, September 2008, *76* (1), 78–88.

D'Erasmo, Pablo, Enrique Mendoza, and Jing Zhang, "What is a Sustainable Public Debt?," *Handbook of Macroeconomics*, 2015, *2.*

D'Erasmo, Paolo, "Government reputation and debt repayment," Mimeo 2011.

_ **and Enrique Mendoza**, "Optimal Domestic Sovereign Default," Mimeo 2014.

Di Casola, P. and S. Sichlimiris, "Composition of Sovereign Debt and Financial Development: A Dynamic Heterogeneous Panel Approach," Mimeo 2015.

_ **and** _ , "Domestic and External Sovereign Debt," Mimeo 2015.

Djankov, Simeon, Caralee McLiesh, and Andrei Shleifer, "Private credit in 129 countries," *Journal of financial Economics*, 2007, *84* (2), 299–329.

Doan, Thomas A, "RATS handbook for vector autoregressions," *Estima, Evanston*, 2010.

Dooley, Michael P., "A Survey of Academic Literature on Controls over International Capital Transactions," NBER Working Papers 5352, National Bureau of Economic Research, Inc November 1995.

Dovis, Alessandro, "Capital mobility and optimal fiscal policy without commitment: a rationale for capital controls?," Mimeo 2012.

Du, Wenxin and Jesse Schreger, "Local Currency Sovereign Risk," International Finance Discussion Papers 1094, Board of Governors of the Federal Reserve System (U.S.) December 2013.

Durdu, C. Bora, Ricardo Nunes, and Horacio Sapriza, "News and sovereign default risk in small open economies," *Journal of International Economics*, 2013, *91* (1), 1 – 17.

Eaton, Jonathan and Mark Gersovitz, "Debt with Potential Repudiation: Theoretical and Empirical Analysis," *Review of Economic Studies*, April 1981, *48* (2), 289–309.

Edmond, Chris, "Information manipulation, coordination, and regime change," *The Review of Economic Studies*, 2013.

Edwards, Lee, *Mediapolitik: How the mass media have transformed world politics*, CUA Press, 2001.

Ellingsen, Tore and Erik Mohlin, "Situations and Norms," Mimeo 2014.

_ **and Robert Östling**, "When Does Communication Improve Coordination?," *The American Economic Review*, 2010, *100* (4), pp. 1695–1724.

Farrell, Joseph and Matthew Rabin, "Cheap talk," *The Journal of Economic Perspectives*, 1996, pp. 103–118.

Faust, J. and E. M. Leeper, "When Do Long-Run Identifying Restrictions Give Reliable Results?," *Journal of Business & Economic Statistics*, July 1997, *15* (3), 345–53.

Fernald, J., "A quarterly, utilization-adjusted series on total factor productivity," Working Paper Series 2012-19, Federal Reserve Bank of San Francisco 2012.

Fernández, Andrés, Alessandro Rebucci, and Martín Uribe, "Are capital controls prudential? an empirical investigation," Technical Report, National Bureau of Economic Research 2013.

Féve, Patrick and Ahmat Jidoud, "Identifying News Shocks from SVARs," *Journal of Macroeconomics*, 2012, *34* (4), 919–932.

Fisher, Jonas D. M., "The Dynamic Effects of Neutral and Investment-Specific Technology Shocks," *Journal of Political Economy*, June 2006, *114* (3), 413–451.

Fisher, Lance A and Hyeon seung Huh, "Weak exogeneity and long-run and contemporaneous identifying restrictions in VEC models," *Economics Letters*, 1999, *63* (2), 159–165.

Forni, Mario, Luca Gambetti, and Luca Sala, "No News in Business Cycles," *Economic Journal*, December 2014, *124* (581), 1168–1191.

Forslund, Kristine, Lycia Lima, and Ugo Panizza, "The determinants of the composition of public debt in developing and emerging market countries," *Review of Development Finance*, 2011, *1* (3-4), 207 – 222.

Foss, Nicolai J, "Leadership, beliefs and coordination: An explorative discussion," *Industrial and corporate change*, 2001, *10* (2), 357–388.

Gennaioli, Nicola, Alberto Martin, and Stefano Rossi, "Sovereign Default, Domestic Banks, and Financial Institutions," *The Journal of Finance*, 2014, *69* (2), 819–866.

Giovannini, Alberto and Martha de Melo, "Government Revenue from Financial Repression," *American Economic Review*, September 1993, *83* (4), 953–63.

Gordon, Roger H. and Wei Li, "Government as a discriminating monopolist in the financial market: the case of China," *Journal of Public Economics*, February 2003, *87* (2), 283–312.

Gourinchas, Pierre-Olivier and Olivier Jeanne, "Global safe assets," BIS Working Papers 399, Bank for International Settlements December 2012.

Gregory, Allan W and Bruce E Hansen, "Tests for Cointegration in Models with Regime and Trend Shifts," *Oxford Bulletin of Economics and Statistics*, August 1996, *58* (3), 555–60.

Guidotti, Mr Pablo Emilio and Mr Manmohan S Kumar, *Domestic Public Debt of Externally Indebted Countries (EPub)* number 80, International monetary fund, 1991.

Guscina, Anastasia, *Impact of macroeconomic, political, and institutional factors on the structure of government debt in emerging market countries*, International Monetary Fund, 2008.

_ **and Olivier Jeanne**, *Government debt in emerging market countries: A new data set*, International Monetary Fund, 2006.

Hadri, Kaddour, "Testing for stationarity in heterogeneous panel data," *The Econometrics Journal*, 2000, *3* (2), 148–161.

Hansen, H. and S. Johansen, "Some tests for parameter constancy in cointegrated VAR-models," *Econometrics Journal*, 1999, *2* (2), 306–333.

Hatchondo, Juan Carlos and Leonardo Martinez, "Long-duration bonds and sovereign defaults," *Journal of International Economics*, September 2009, *79* (1), 117–125.

_ , _ , and Horacio Sapriza, "Heterogeneous Borrowers In Quantitative Models Of Sovereign Default," *International Economic Review*, November 2009, *50* (4), 1129–1151.

_ , _ , and _ , "Quantitative properties of sovereign default models: solution methods matter," *Review of Economic Dynamics*, October 2010, *13* (4), 919–933.

Hellwig, Christian and Guido Lorenzoni, "Bubbles and Self-Enforcing Debt," *Econometrica*, 2009, *77* (4), 1137–1164.

Hendry, D. F. and K. Juselius, "Explaining Cointegration Analysis: Part II," Discussion Papers 00-20, University of Copenhagen. Department of Economics December 2000.

Hoyos, Rafael E De and Vasilis Sarafidis, "Testing for cross-sectional dependence in panel-data models," *Stata Journal*, 2006, *6* (4), 482.

Huang, Yongfu, *Determinants of financial development*, Palgrave Macmillan, 2011.

Huggett, Mark, "The risk-free rate in heterogeneous-agent incomplete-insurance economies," *Journal of Economic Dynamics and Control*, 1993, *17* (5-6), 953–969.

Hume, David, "A treatise of human nature," *London: John Noon*, 1739.

Im, Kyung So, M. Hashem Pesaran, and Yongcheol Shin, "Testing for unit roots in heterogeneous panels," *Journal of econometrics*, 2003, *115* (1), 53–74.

IMF, "The Liberalization and Management of Capital Flows: An Institutional View," IMF Staff Paper 2012.

Jeske, Karsten, "Private International Debt with Risk of Repudiation," *Journal of Political Economy*, 2006, *114* (3), pp. 576–593.

Johansen, S., "Identifying restrictions of linear equations with applications to simultaneous equations and cointegration," *Journal of Econometrics*, 1995, *69* (1), 111 – 132. Annals of Econometrics: Bayesian and Classical Econometric Modelling of Time Series.

_ **, R. Mosconi, and B. Nielsen**, "Cointegration analysis in the presence of structural breaks in the deterministic trend," *Econometrics Journal*, 2000, *3* (2), 216–249.

Juselius, K., *The Cointegrated VAR Model: Methodology and Applications* Advanced Texts in Econometrics, OUP Oxford, 2006.

King, Robert G., Charles I. Plosser, James H. Stock, and Mark W. Watson, "Stochastic Trends and Economic Fluctuations," *American Economic Review*, September 1991, *81* (4), 819–40.

Kirkegaard, J, C Reinhardt, and M. B. Sbrancia, "Financial Repression Redux," *Finance & Development*, 2011, *48* (1).

Kose, M. Ayhan, Eswar Prasad, Kenneth Rogoff, and Shang-Jin Wei, *Financial Globalization and Economic Policies*, Vol. 5 of *Handbook of Development Economics*, Elsevier, January

Krugman, P., "The IMF and Capital Controls," The New York Times, December 4 2012.

Krupka, Erin L. and Roberto A. Weber, "Identifying social norms using coordination games: why does dictator game sharing vary?," *Journal of the European Economic Association*, 2013, *11* (3), 495–524.

Kurmann, A. and E. Mertens, "Stock Prices, News, and Economic Fluctuations: Comment," *American Economic Review*, April 2014, *104* (4), 1439–45.

Kutivadze, Natia, "Public debt and financial development," Departmental Working Papers 2011-13, Department of Economics, Management and Quantitative Methods at Universitá degli Studi di Milano May 2011.

La Porta, Rafael, Florencio Lopez de Silanes, Andrei Shleifer, and Robert W. Vishny, "Law and Finance," *Journal of Political Economy*, December 1998, *106* (6), 1113–1155.

Langlois, Richard N, "Personal capitalism as charismatic authority: the organizational economics of a Weberian concept," *Industrial and Corporate Change*, 1998, *7*, 195–214.

Lanne, M. and H. Lütkepohl, "Stock Prices and Economic Fluctuations: A Markov Switching Structural Vector Autoregressive Analysis," Economics Working Papers ECO2008/29, European University Institute 2008.

Leeson, Peter T and Christopher J Coyne, "The reformers' dilemma: media, policy ownership, and reform," *European Journal of Law and Economics*, 2007, *23* (3), 237–250.

Lemert, James B, *Does mass communication change public opinion after all?: a new approach to effects analysis*, Burnham Inc Pub, 1981.

Levin, Andrew, Chien-Fu Lin, and Chia-Shang James Chu, "Unit root tests in panel data: asymptotic and finite-sample properties," *Journal of econometrics*, 2002, *108* (1), 1–24.

Lizarazo, Sandra Valentina, "Default risk and risk averse international investors," *Journal of International Economics*, 2013, *89* (2), 317–330.

López-Pérez, Raúl, "Aversion to norm-breaking: A model," *Games and Economic Behavior*, 2008, *64* (1), 237–267.

Lorenzoni, Guido, "News and Aggregate Demand Shocks," *Annual Review of Economics*, 09 2011, *3* (1), 537–557.

Lucke, B. and T. Haertel, "Do News Shocks Drive Business Cycles? Evidence from German Data," *Economics - The Open-Access, Open-Assessment E-Journal*, 2008, *2* (10), 1–21.

Lütkepohl, H. and M. Krätzig, eds, *Applied time series econometrics*, Cambridge University Press, 2004.

Mendoza, Enrique G. and Vivian Z. Yue, "A General Equilibrium Model of Sovereign Default and Business Cycles," *The Quarterly Journal of Economics*, 2012, *127* (2), 889–946.

Mengus, Eric, "Honoring Sovereign Debt or Bailing out Domestic Residents? A Theory of Internal Costs of Default," Mimeo 2013.

_ , "Foreign Debt and Ricardian Equivalence," Mimeo 2014.

Neumeyer, Pablo A. and Fabrizio Perri, "Business cycles in emerging economies: the role of interest rates," *Journal of Monetary Economics*, March 2005, *52* (2), 345–380.

Nickell, Stephen J, "Biases in Dynamic Models with Fixed Effects," *Econometrica*, November 1981, *49* (6), 1417–26.

Nyblom, J. and A. Harvey, "Tests Of Common Stochastic Trends," *Econometric Theory*, April 2000, *16* (02), 176–199.

Obstfeld, Maurice, "International Capital Mobility in the 1990s," NBER Working Papers 4534, National Bureau of Economic Research, Inc November 1993.

Pal, Sudeshna, "Media Freedom and Socio-Political Instability," *Peace Economics, Peace Science, and Public Policy*, March 2011, *17* (1), 1–23.

Panizza, Ugo, "Domestic and external public debt in developing countries," Discussion Paper 188, United Nations Conference on Trade and Development 2008.

_ , **Federico Sturzenegger, and Jeromin Zettelmeyer**, "The Economics and Law of Sovereign Debt and Default," *Journal of Economic Literature*, September 2009, *47* (3), 651–98.

Pedroni, Peter, " Critical Values for Cointegration Tests in Heterogeneous Panels with Multiple Regressors," *Oxford Bulletin of Economics and Statistics*, Special I 1999, *61* (0), 653–70.

Persyn, Damiaan, Joakim Westerlund et al., "Error-correction-based cointegration tests for panel data," *Stata Journal*, 2008, *8* (2), 232.

Pesaran, M. Hashem, "The role of economic theory in modelling the long run," *The Economic Journal*, 1997, pp. 178–191.

_ , "General Diagnostic Tests for Cross Section Dependence in Panels," CESifo Working Paper Series 1229, CESifo Group Munich 2004.

_ , "Estimation and Inference in Large Heterogeneous Panels with a Multifactor Error Structure," *Econometrica*, 2006, *74* (4), pp. 967–1012.

_ , "A simple panel unit root test in the presence of cross-section dependence," *Journal of Applied Econometrics*, 2007, *22* (2), 265–312.

_ **and Ron Smith**, "Estimating long-run relationships from dynamic heterogeneous panels," *Journal of econometrics*, 1995, *68* (1), 79–113.

_ **and Yongcheol Shin**, "An autoregressive distributed-lag modelling approach to cointegration analysis," *Econometric Society Monographs*, 1998, *31*, 371–413.

_ , _ , **and Ron P. Smith**, "Pooled Mean Group Estimation of Dynamic Heterogeneous Panels," *Journal of the American Statistical Association*, 1999, *94* (446), pp. 621–634.

Pouzo, Demian and Ignacio Presno, "Sovereign default risk and uncertainty premia," Technical Report 2012.

Reinhart, Carmen M. and Kenneth S. Rogoff, *This Time Is Different: Eight Centuries of Financial Folly*, Vol. 1 of *Economics Books*, Princeton University Press, 2009.

_ **and** _ , "The Forgotten History of Domestic Debt," *Economic Journal*, 05 2011, *121* (552), 319–350.

Ribba, Antonio, "A note on the equivalence of long-run and short-run identifying restrictions in cointegration systems," *Economics Letters*, 1997, *56* (3), 273–276.

Seymen, A., "Sequential identification of technological news shocks," Technical Report 2013.

Sherman, M., "A short history of financial deregulation in the United States," Report, Center for Economic and Policy Research July 2009.

Shiller, R. J., *Irrational exuberance*, Princeton University Press, Princeton, NJ, 2000.

Singh, Naunihal, *Seizing power: the strategic logic of military coups*, JHU Press, 2014.

Spencer, Martin E, "Weber on legitimate norms and authority," *British Journal of Sociology*, 1970, pp. 123–134.

Stähler, Nikolai, "Recent Developments In Quantitative Models Of Sovereign Default," *Journal of Economic Surveys*, 09 2013, *27* (4), 605–633.

Strömberg, David, "Media and Politics," CEPR Discussion Papers 10426, C.E.P.R. Discussion Papers February 2015.

Teorell, Jan, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Felix Hartmann, and Richard Svensson, "The Quality of Government Standard Dataset," Technical Report, University of Gothenburg: The Quality of Government Institute Jan 2015.

Tomz, Michael and Mark L.J. Wright, "Empirical Research on Sovereign Debt and Default," *Annual Review of Economics*, 05 2013, *5* (1), 247–272.

Valenzuela, Sebastián, "Unpacking the Use of Social Media for Protest Behavior The Roles of Information, Opinion Expression, and Activism," *American Behavioral Scientist*, 2013, *57* (7), 920–942.

Vasishtha, Garima, "Domestic versus External Borrowing and Fiscal Policy in Emerging Markets," *Review of International Economics*, November 2010, *18* (5), 1058–1074.

Wärneryd, Karl, "Transaction cost, institutions, and evolution," *Journal of Economic Behavior & Organization*, October 1994, *25* (2), 219–239.

Weber, Max, "The theory of economic and social organization," *Trans. AM Henderson and Talcott Parsons. New York: Oxford University Press*, 1947[1920].

_ , *Economy and society: An outline of interpretive sociology*, Univ of California Press, 1978[1922].

Westerlund, Joakim, "Testing for error correction in panel data," *Oxford Bulletin of Economics and statistics*, 2007, *69* (6), 709–748.

Wright, Mark L.J., "Theory of sovereign debt and default," in Amsterdam: Elsevier, ed., *Handbook of Safeguarding Global Financial Stability*, 2013, pp. pp 187–193.

Yanagizawa-Drott, David, "Propaganda and conflict: Evidence from the Rwandan genocide," *The Quarterly Journal of Economics*, 2014, *129* (4), 1947–1994.

Young, H. Peyton, "Social Norms," in Steven N. Durlauf and Lawrence E. Blume, eds., *The New Palgrave Dictionary of Economics*, Basingstoke: Palgrave Macmillan, 2008.

Yue, Vivian Z., "Sovereign default and debt renegotiation," *Journal of International Economics*, March 2010, *80* (2), 176–187.

Zhang, Harold H., "Endogenous Borrowing Constraints with Incomplete Markets," *Journal of Finance*, December 1997, *52* (5), 2187–2209.