

European University Institute
Department of Economics
Fall 2011

8:45 – 10:45: October 28,
November 4, 8, 11 & 15

Advanced micro-macro: Dynamic Games and Contracts
Part I (DG, David Levine)

Part II

Recursive Contracts: Theory and Applications

Ramon Marimon

This second part of the course on Dynamic Games and Contracts provides a comprehensive introduction to “Recursive Contract” theory and some of its applications, mostly in macroeconomics. The course is self-contained, but familiarity with basic maximization theory (Lagrange saddle-points, Bellman equations) and general equilibrium theory (Complete vs. incomplete markets, Nash equilibrium) will be assumed. Due to time limitations, the course will not cover computational aspects, but students with computational skills (matlab, ...) will be encouraged to solve basic models.

Syllabus

1. Recursive Contracts: The basic theory with exogenous constraints. Recursive contracts vs. Promise Utilities. Decentralization of contracts.

Abreu, Dilip, David Pearce and Ennio Stachetti. 1990. ”Towards a Theory of Discounted Repeated Games with Imperfect Monitoring”, *Econometrica*, 58.

Alvarez, Fernando and Urban J. Jermann. 2000. ”Efficiency, Equilibrium, and Asset Pricing with Risk of Default”, *Econometrica*, 68.

Chien, YiLi and Hanno Lustig. 2009. “The Market Price of Aggregate Risk and the Wealth Distribution”. *The Review of Financial Studies*, 23(4), 1596-1650.

Kehoe, Timothy and David Levine. 2001. “Incomplete markets versus debt

constrained markets,” *Econometrica* 69, 575–598.

*Krueger, Dirk, Hanno Lustig and Fabrizio Perri, 2008. "[Evaluating Asset Pricing Models with Limited Commitment Using Household Consumption Data](#)," [Journal of the European Economic Association](#), 6(2-3), 715-726.

*Ljungqvist, Lars and Thomas Sargent. 2004. *Recursive Macroeconomic Theory* (Second Edition, MIT Press) Chs. 19 & 20.

Luenberger, D. G.: 1969, *Optimization by Vector Space Methods*, John Wiley & Sons, Inc., New York.

*Marcet, Albert and Ramon Marimon. 2011. “Recursive Contracts.” European University Institute, MWP, 2011/03, ECO, 2011/15.

Phelan, Christopher and Ennio Stacchetti. 2001. Sequential Equilibria in a Ramsey Tax Model. *Econometrica* 69.

2. Risk sharing, social insurance, and redistribution with limited enforcement.

Broer, Tobias, 2009. “Stationary equilibrium distributions in economies with limited commitment,” IIES, U. of Stockholm.

Kehoe, Patrick J. and Fabrizio Perri. 2002. ”International business cycles with endogenous incomplete markets”, *Econometrica*, 70.

Kocherlakota, Narayana. 1996. ”Implications of Efficient Risk Sharing without Commitment”, *Review of Economic Studies*, 63.

*Krueger, Dirk and Fabrizio Perri. 2006. “Does income inequality lead to consumption inequality? Evidence and theory,” *Review of Economic Studies* 73, 163–193.

Krueger, Dirk and Fabrizio Perri. 2011. “Public versus private risk sharing,” *Journal of Economic Theory*, 146, 920-956.

Krueger, Dirk and Harald Uhlig. 2006. "Competitive risk sharing contracts with one-sided commitment," *Journal of Monetary Economics*, Elsevier, 53.

*Ljungqvist, Lars and Thomas Sargent. 2004. *Recursive Macroeconomic Theory* (Second Edition, MIT Press) Ch. 21.

3. Asset Prices, lending and firm dynamics, and sovereign debt

*Albuquerque, Rui and Hugo A. Hopenhayn. 2004. "Optimal Lending Contracts and Firm Dynamics" *Review of Economic Studies*, 71(2), 285-315.

*Arellano, Cristina. 2008. "[Default Risk and Income Fluctuations in Emerging Economies](#)," *American Economic Review*, 98(3), 690-712.

Arellano, Cristina, Ales Bulir, Timothy Lane and Leslie Lipschitz, 2009. "[The dynamic implications of foreign aid and its variability](#)," *Journal of Development Economics*, 88(1), 87-102.

Bulow, Jeremy and Kenneth Rogoff. 1989. "Sovereign debt: is to forgive to forget?" *American Economic Review* 79, 43-50.

Cooley, Thomas and Vincenzo Quadrini. 2001. "Financial Markets and Firm Dynamics", *American Economic Review*, 91.

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

Grossman Herschel and John Van Huyck. 1988. "Sovereign Debt as a Contingent Claim: Excusable Default, Repudiation and Reputation," *American Economic Review* 78, 1088-1097.

Kehoe, Timothy and David Levine. 2001. "Incomplete markets versus debt constrained markets," *Econometrica* 69, 575-598.

*Marcet Albert, and Ramon Marimon. 1992. "Communication, Commitment and Growth", *Journal of Economic Theory*, 58.

Perri, Fabrizio. 2007. "Default and enforcement constraints" in *The New Palgrave Dictionary of Economics (2nd edition)*, edited by S. Durlauf and L. Blume, Palgrave Macmillan (Basingstoke and New York)

4. Labor contracts, human capital accumulation. Non-exclusive participation constraints. (2nd generation)

Rudanko, Leena. 2009. "Labor Market Dynamics under Long Term Wage Contracting," *Journal of Monetary Economics*, 56(2), 170-183.

Cooley, Thomas, Ramon Marimon and Vincenzo Quadrini. 2004. "Aggregate Consequences of Limited Contract Enforceability", *Journal of Political Economy*, 112(4), 817-847.

*Marimon, Ramon and Vincenzo Quadrini. 2011. "Competition, human capital and income inequality with limited commitment," *Journal of Economic Theory*, 146, 978-1008.

5. Endogenous threats (3rd generation contracts) and applications: Hold-ups, asset ownership, and on-the-job search

Che, Y.K. and J. Sakovics. 2004. "A dynamic theory of holdup," *Econometrica*, 72.

de Meza, David and Ben Lockwood. 2007. "Too much investment? a problem of endogenous outside options," *Mimeo, University of Warwick*.

Hart, Oliver and John Moore. 1990. "Incomplete contracts and renegotiation." *Journal of Political Economy*, 98.

MacLeod, W.B. and J.M. Malcomson. 1993. "Investments, holdup, and the form of market contracts," *American Economic Review*, 83.

Marimon, Ramon and Pontus Rendahl. 2010. "Recursive Bargaining and Endogenous Threats," EUI.

Postel-Vinay, F. and J-M. Robin. 2004. "Too much or not too much?: Optimal wage policy with endogenous worker intensity," *Review of Economic Dynamics*

Shimer, Robert. 2006. "On-the-job search and strategic bargaining," *European Economic Review*, 50.