

Incentive-Constrained Allocation in Macroeconomic/Financial Models

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Summer, 2007

Introductory remarks

Concepts such as “incomplete markets,” “incomplete contracts” and “credit constraint” have a long intellectual history in macroeconomics and financial economics. Traditionally, ad hoc assumptions incorporating these concepts were grafted onto models of market competition that assume, at least implicitly, that there are no constraints on economic agents’ ability to engage mutually beneficial contracting or trade.

A more recent approach, which is the focus of this course, is to derive specific restrictions on contracting or trade from general features of the model environment. The assumed restriction may be simply a generic restriction on the enforcement of contracts or trades or better yet, it may be an inability of some agents to observe the actions or situations of other agents, on which mutually beneficial trades would have to be contingent.

The fact that some trades or contracts are prevalent in markets, while others are not made although prima facie they would be mutually beneficial, is an observation that a good economic theory ought to explain. Moreover, to do welfare analysis under a consistent set of assumptions, it should be assumed that non-market institutions (such as provision of goods and services by the government) are subject to the same environmental constraints as those that apply to markets. There does not seem to be any way to ensure this parity of constraints, except by modeling the constraints on markets explicitly and showing that they imply the features of market performance that are observed.

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Course outline

1. Lack of commitment

- Dilip Abreu. On the theory of infinitely repeated games with discounting. *Econometrica*, 56(2):383–96, March 1988.
- V. V. Chari and Patrick J. Kehoe. Sustainable plans. *Journal of Political Economy*, 98(4):783–802, August 1990.
- Jonathan Thomas and Tim Worrall. Self-enforcing wage contracts. *Review of Economic Studies*, 55(4):541–54, October 1988.
- Narayana R. Kocherlakota. Implications of efficient risk sharing without commitment. *Review of Economic Studies*, 63(4):595–609, October 1996.
- Thorsten Koepl. Differentiability of the efficient frontier when commitment to risk sharing is limited. Technical Report 1049, Queens University, 2004.
- Fernando Alvarez and Urban J. Jermann. Efficiency, equilibrium, and asset pricing with risk of default. *Econometrica*, 68(4):775–97, July 2000.
- Patrick J. Kehoe and Fabrizio Perri. Competitive equilibria with limited enforcement. *Journal of Economic Theory*, 119(1):184–206, November 2004.
- Dirk Krueger and Fabrizio Perri. Does income inequality lead to consumption inequality? evidence and theory. *Review of Economic Studies*, 73(1):163–93, January 2006.
- Eric W. Bond and Jee Hyeong Park. Gradualism in trade agreements with asymmetric countries. *Review of Economic Studies*, 69(2):379–406, April 2002.

2. Private information regarding actions

- Stephen E. Spear and Sanjay Srivastava. On repeated moral hazard with discounting. *Review of Economic Studies*, 54(4):599–617, October 1987.
- Dilip Abreu, David Pearce, and Ennio Stacchetti. Toward a theory of discounted repeated games with imperfect monitoring. *Econometrica*, 58(5):1041–63, September 1990.
- Hugo Hopenhayn and Juan-Pablo Nicolini. Optimal unemployment insurance. *Journal of Political Economy*, 105(2):412–38, April 1997.

- Andrew Atkeson. International lending with moral hazard and risk of repudiation. *Econometrica*, 59(4):1069–89, July 1991.
 - Viktor Tsyrennikov. Capital outflows and moral hazard. unpublished, 2007.
3. Static allocation in environments with private information about types
- Roger B. Myerson. Incentive compatibility and the bargaining problem. *Econometrica*, 47(1):61–73, January 1979.
 - Edward C. Prescott and Robert M. Townsend. Pareto optima and competitive equilibria with adverse selection and moral hazard. *Econometrica*, 52(1):21–45, January 1984.
 - Ian Jewitt. Justifying the first-order approach to principal-agent problems. *Econometrica*, 56(5):1177–90, September 1988.
4. Private information regarding iid shocks to type (e.g., endowment, preference)
- Jonathan Thomas and Tim Worrall. Income fluctuation and asymmetric information: An example of a repeated principal-agent problem. *Journal of Economic Theory*, 51(2):367–90, August 1990.
 - Andrew Atkeson and Robert E. Jr. Lucas. On efficient distribution with private information. *Review of Economic Studies*, 59(3):427–53, July 1992.
 - Emmanuel Farhi and Ivan Werning. Progressive estate taxation. Technical report 365, Federal Reserve Bank of Minneapolis, 2005.
 - Christopher Phelan. Repeated moral hazard and one-sided commitment. *Journal of Economic Theory*, 66(2):488–506, August 1995.
5. Private information regarding persistent type shocks
- Roger B. Myerson. Multistage games with communication. *Econometrica*, 54(2):323–58, March 1986.
 - Ana Fernandes and Christopher Phelan. A recursive formulation for repeated agency with history dependence. *Journal of Economic Theory*, 91(2):223–47, April 2000.
 - Mikhail Golosov, Narayana Kocherlakota, and Aleh Tsyvinski. Optimal indirect and capital taxation. *Review of Economic Studies*, 70(3):569–87, July 2003.
 - Marek Kapicka. Optimal taxation with persistent shocks: a first-order approach. unpublished, 2004.

6. Private information regarding types and actions combined

- Matthias Doepke and Robert M. Townsend. Dynamic mechanism design with hidden income and hidden actions. *Journal of Economic Theory*, 126(1):235–85, January 2006
- Narayana R. Kocherlakota. Figuring out the impact of hidden savings on optimal unemployment insurance. *Review of Economic Dynamics*, 7(3):541–54, July 2004.
- Harold L. Cole and Narayana R. Kocherlakota. Efficient allocations with hidden income and hidden storage. *Review of Economic Studies*, 68(3):523–42, July 2001.