

# THE UNIVERSITY OF FLORIDA

Professor D. Sappington  
Economics 7113

Spring 2021  
Course Syllabus

## INFORMATION AND INCENTIVES

### Course Description

This course is designed to introduce you to models of decision-making and strategic interaction in the presence of limited and asymmetric information. We will begin with a brief review of essential tools and concepts. Then we will proceed to analyze basic moral hazard, adverse selection, and signaling problems. If time permits, we will study some extensions of these basic problems.

### Prerequisites

Economics 7115. A solid knowledge of microeconomic analysis is essential, as is facility with constrained optimization techniques.

### Course Requirements

The primary course requirement is an examination which will be held during class hours on Monday, April 12<sup>th</sup>. The examination will count for 85% of your final grade. The remaining 15% of your grade will be determined by your performance on homework exercises.

### Web Site

The website for this class can be found at <https://elearning.ufl.edu>.

### Primary Readings for Course

Class lectures will be drawn primarily from selected articles on this syllabus. These articles are available on the class website.

The following textbooks might be useful as supplemental reading, but are not required:

*The Theory of Incentives: The Principal-Agent Model* by J. Laffont and D. Martimort (Princeton University Press, 2002).

*An Introduction to the Economics of Information* by I. Macho-Stadler and D. Perez-Castrillo (Oxford University Press, Second Edition, 2001).

### Additional Supplementary Text Books

1. *An Introduction to the Theory of Mechanism Design* by T. Borgers (Oxford University Press, 2015).
2. *Contract Theory* by P. Bolton and M. Dewatripont (MIT Press, 2005).
2. *A Theory of Incentives in Procurement and Regulation* by J. Laffont and J. Tirole (MIT Press, 1993).

The readings that follow include articles that will be discussed in class and other articles that merit study if you ultimately plan to conduct research in this field. The reading list is not comprehensive. Rather, it is intended to suggest a few articles that may help you to begin a more comprehensive and systematic study of the vast literature on contracting in the presence of asymmetric information.

## **Mathematical, Statistical, and Economic Preliminaries**

- L. Anderson and C. Holt, "Understanding Bayes Rule," *Journal of Economic Perspectives*, 10(2), Spring 1996, 179-187.
- N. Barberis, "Thirty Years of Prospect Theory in Economics: A Review and Assessment," *Journal of Economic Literature*, 27(1), Winter 2013, 173-196.
- J. Hadar and W. Russell, "Rules for Ordering Uncertain Prospects," *American Economic Review*, 59(1), March 1969, 25-34.
- B. Koszegi and M. Rabin, "Reference-Dependent Risk Attitudes," *American Economic Review*, 97(4), September 2007, 1047-1073.
- T. O'Donoghue and J. Somerville, "Modeling Risk Aversion in Economics," *Journal of Economic Perspectives*, 32(2), Spring 2018, 91-114.
- J. Pratt, "Risk Aversion in the Small and the Large," *Econometrica*, 32(1), January 1964, 122-136.
- L. Samuelson, "Modeling Knowledge in Economic Analysis," *Journal of Economic Literature*, 42(2), June 2004, 367-403.
- H. Varian, *Microeconomic Analysis*. New York: Norton (2nd Edition), 1994, section on Expected Utility Theory.

## **Overviews and Surveys of the Incentive Literature**

- Laffont and Martimort, Introduction and Chapter 1.
- P. Bolton and M. Dewatripont, *Contract Theory*. MIT Press, 2005, Chapter 1.
- O. Hart, "Incomplete Contracts and Control," *American Economic Review*, 107(7), July 2017, 1731-1752.
- B. Holmstrom, "Pay for Performance and Beyond," *American Economic Review*, 107(7), July 2017, 1753-1777.
- I. Macho-Stadler and D. Perez-Castrillo, *An Introduction to the Economics of Information*. Oxford University Press, 1997.
- D. Mookherjee, "The 2007 Nobel Memorial Prize in Mechanism Design Theory," *Journal of Scandinavian Economics*, 110(2), June 2008, 237-260.
- R. Myerson, "Perspectives on Mechanism Design in Economic Theory," *American Economic Review*, 98(3), June 2008, 586-603.
- C. Prendergast, "Agency Issues," *Journal of Political Economy*, 125(6), December 2017, 1878-1884.
- J. Stiglitz, "Information and the Change in the Paradigm in Economics," *American Economic Review*, 92(3), June 2002, 460-501.

## **Basic Moral Hazard Problems**

Laffont and Martimort, Chapter 4 and Section 5.1.

- S. Grossman and O. Hart, “An Analysis of the Principal-Agent Problem,” *Econometrica*, 51(1), January 1983, 7-46.
- B. Holmstrom, “Moral Hazard and Observability,” *Bell Journal of Economics*, 10(1), Spring 1979, 74-91.
- O. Kadan and J. Swinkels, “On the Moral Hazard Problem without the First-Order Approach,” *Journal of Economic Theory*, 148(6), November 2013, 2313-2343.
- P. Milgrom, “Good News and Bad News: Representation Theorems and Applications,” *Bell Journal of Economics*, 12(2), Autumn 1981, 380-391.

## **The First-Order Approach**

Laffont and Martimort, Section 5.1.3.

- H. Chade and J. Swinkels, “The No-Upward-Crossing Condition, Comparative Statics, and the Moral-Hazard Problem,” *Theoretical Economics*, 15(2), May 2020, 445-476.
- I. Jewitt, “Justifying the First-Order Approach to Principal-Agent Problems,” *Econometrica*, 56(5), September 1988, 1177-1190.
- R. Kirkegaard, “A Unifying Approach to Incentive Compatibility in Moral Hazard Problems,” *Theoretical Economics*, 12(1), January 2017, 25-51.
- W. Rogerson, “The First-Order Approach to Principal-Agent Problems,” *Econometrica*, 53(6), November 1985, 1357-1368.

## **Moral Hazard and Limited Liability**

- R. Innes, “Limited Liability and Incentive Contracting with *Ex Ante* Action Choices,” *Journal of Economic Theory*, 52(1), October 1990, 45-67.
- I. Jewitt, O. Kadan, and J. Swinkels, “Moral Hazard with Bounded Payments,” *Journal of Economic Theory*, 143(1), November 2008, 59-82.
- S. Ollier and L. Thomas, “Ex Post Participation Constraint in a Principal-Agent Model with Adverse Selection and Moral Hazard,” *Journal of Economic Theory*, 148(6), November 2013, 2383-2403.
- J. Poblete and D. Spulber, “The Form of Incentive Contracts: Agency with Moral Hazard, Risk Neutrality and Limited Liability,” *Rand Journal of Economics*, 43(2), Summer 2012, 215-234.

## **Discrete Adverse Selection Problems**

Laffont and Martimort, Sections 2.1 – 2.8, 3.1, 3.5.

- D. Sappington, “Limited Liability Contracts Between Principal and Agent,” *Journal of Economic Theory*, 29(1), February 1983, 1-21.

## **The Revelation Principle**

Laffont and Martimort, Section 2.9.

F. Forges and F. Koessler, "Communication Equilibria with Partially Verifiable Types," *Journal of Mathematical Economics*, 41(7), November 2005, 793-811.

M. Harris and R. Townsend, "Allocation Mechanisms, Asymmetric Information, and the Revelation Principle," in G. Feiwel (ed.), *Issues in Contemporary Microeconomics and Welfare*. London: MacMillan, 1985, pp. 379-394.

## **Basic Continuous Adverse Selection Problems**

Laffont and Martimort, Appendices 3.1 - 3.3.

A. Araujo and H. Moreira, "Adverse Selection Problems without the Spence-Mirrlees Condition," *Journal of Economic Theory*, 145(3), May 2010, 1113-1141.

M. Bagnoli and T. Bergstrom, "Log-Concave Probability and its Applications," *Economic Theory*, 26(2), August 2005, 445-469.

D. Baron and R. Myerson, "Regulating a Monopolist with Unknown Costs," *Econometrica*, 50(4), July 1982, 911-930.

G. Carroll, "When are Local Incentive Constraints Sufficient?" *Econometrica*, 80(2), March 2012, 661-686.

R. Guesnerie and J. Laffont, "A Complete Solution to a Class of Principal-Agent Problems with an Application to the Control of a Self-Managed Firm," *Journal of Public Economics*, 25(3), December 1984, 329-369.

J. Laffont and J. Tirole, "Using Cost Observation to Regulate Firms," *Journal of Political Economy*, 94(3), June 1986, 614-641.

T. Lewis and D. Sappington, "Regulating a Monopolist with Unknown Demand," *American Economic Review*, 78(5), December 1988, 986-998.

## **Countervailing Incentives**

Laffont and Martimort, Section 3.3.

B. Jullien, "Participation Constraints in Adverse Selection Models," *Journal of Economic Theory*, 93(1), July 2000, 1-47.

T. Lewis and D. Sappington, "Countervailing Incentives in Agency Problems," *Journal of Economic Theory*, 49(2), December 1989, 294-313.

G. Maggi and A. Rodriguez-Clare, "On Countervailing Incentives," *Journal of Economic Theory*, 66(1), June 1995, 238-263.

J. Rochet and L. Stole, "Nonlinear Pricing with Random Participation," *Review of Economic Studies*, 69(1), January 2002, 277-311.

### **Adverse Selection and Moral Hazard**

- R. Gary-Bobo and A. Trannoy, "Optimal Student Loans and Graduate Tax under Moral Hazard and Adverse Selection," *Rand Journal of Economics*, 46(3), Fall 2015, 546-576.
- S. Ollier and L. Thomas, "Ex Post Participation Constraint in a Principal-Agent Model with Adverse Selection and Moral Hazard," *Journal of Economic Theory*, 148(6), November 2013, 2383-2403.
- D. Rietzke and Y. Chen, "Push or Pull? Performance-pay, Incentives, and Information," *Rand Journal of Economics*, 51(1), Spring 2020, 301-317.

### **Multidimensional Adverse Selection**

Laffont and Martimort, Section 3.2.

- M. Armstrong and J. Rochet, "Multi-Dimensional Screening: A User's Guide," *European Economic Review*, 43(4-6), April 1999, 959-979.
- J. Asker and E. Cantillon, "Procurement When Price and Quality Matter," *Rand Journal of Economics*, 41(1), Spring 2010, 1-34.
- F. Herweg and K. Schmidt, "Bayesian Implementation and Rent Extraction in a Multi-Dimensional Procurement Problem," *International Journal of Industrial Organization*, 70, May 2020, Article 102521.
- J. Rochet and P. Choné, "Ironing, Sweeping, and Multidimensional Screening," *Econometrica*, 66(4), July 1998, 783-826.

### **Multiple Tasks**

Laffont and Martimort, Section 5.2.

- F. Ederer, R. Holden, and M. Meyer, "Gaming and Strategic Opacity in Incentive Provision," *Rand Journal of Economics*, 49(4), Winter 2018, 819-854.
- B. Holmstrom and P. Milgrom, "Aggregation and Linearity in the Provision of Intertemporal Incentives," *Econometrica*, 55(2), March 1987, 303-328.
- B. Holmstrom and P. Milgrom, "Multi-Task Principal-Agent Analyses: Incentive Contracts, Asset Ownership, and Job Design," *Journal of Law, Economics, and Organization*, 7, Special Issue, 1991, 24-52.
- R. Kirkegaard, "Contracting with Private Rewards," *Rand Journal of Economics*, 51(2), Summer 2020, 589-612.

### **Auditing, Monitoring and Incentives**

Laffont and Martimort, Section 3.6.

- R. Dye, "Optimal Monitoring Policies in Agencies," *Rand Journal of Economics*, 17(3), Autumn 1986, 339-350.

- A. Finkle and D. Shin, “Obstructive Monitoring,” *Journal of Economics and Management Strategy*, 29(4), Winter 2020, 873-891.
- M. Halac and P. Yared, “Commitment versus Flexibility with Costly Verification,” *Journal of Political Economy*, 128(12), December 2020, 4523–4573.
- F. Khalil, “Auditing Without Commitment,” *Rand Journal of Economics*, 28(4), Winter 1997, 629-640.
- W. Xiang, “Who Will Watch the Watchers? On Optimal Monitoring Networks,” *Journal of Economic Theory*, 187, May 2020, Article 105018.

### **Incentive Schemes with Multiple Agents**

- H. Chade and J. Eeckhout, “Competing Teams,” *Review of Economic Studies*, 87(3), May 2020, 1134-1173.
- J. DeVaro and O. Gürtler, “Strategic Shirking in Competitive Labor Markets: A General Model of Multi-Task Promotion Tournaments with Employer Learning,” *Journal of Economics and Management Strategy*, 29(2), Summer 2020, 335-376.
- D. Fang, T. Noe, and P. Strack, “Turning Up the Heat: The Discouraging Effect of Competition in Contests,” *Journal of Political Economy*, 128(5), May 2020, 1940-1975.
- Q. Fu and Z. Wu, “On the Optimal Design of Biased Contests,” *Theoretical Economics*, 14(5), November 2020, 1435-1470.
- B. Holmstrom, “Moral Hazard in Teams,” *Bell Journal of Economics*, 13(2), Autumn 1982, 324-340.
- E. Rasmusen, “Moral Hazard in Risk-Averse Teams,” *Rand Journal of Economics*, 18(3), Autumn 1987, 428-435.

### **Double Moral Hazard**

- B. Bental, B. Deffains, and D. Demougin, “Credibility and Monitoring: Outsourcing as a Commitment Device,” *Journal of Economics and Management Strategy*, 21(1), Spring 2012, 31-52.
- D. O’Brien, “All-Unit Discounts and Double Moral Hazard,” *Journal of Economic Theory*, 170, July 2017, 1-28.
- C. Prendergast, “The Economics of Wild Goose Chases,” *Rand Journal of Economics*, 46(1), Spring 2015, 146-164.

### **Auctions**

- D. Bernhardt, T. Liu, and T. Sogo, “Costly Auction Entry, Royalty Payments, and the Optimality of Asymmetric Designs,” *Journal of Economic Theory*, 188, July 2020, Article 105041.
- J. Bulow and P. Klemperer, “Why Do Sellers (Usually) Prefer Auctions?” *American Economic Review*, 99(4), September 2009, 1544-1575.

- D. Bergemann, B. Brooks, and S. Morris, “Countering the Winner's Curse: Optimal Auction Design in a Common Value Model,” *Theoretical Economics*, 15(4), November 2020, 1399–1434.
- M. Pai and R. Vohra, “Optimal Auctions with Financially Constrained Buyers,” *Journal of Economic Theory*, 150(2), March 2014, 383-425.
- P. Klemperer, “What Really Matters in Auction Design,” *Journal of Economic Perspectives*, 16(1), Winter 2002, 169-189.
- J. Riley and W. Samuelson, “Optimal Auctions,” *American Economic Review*, 71(3), June 1981, 381-392.

### **Signaling**

- M. Baye and D. Sappington, “Revealing Transactions Data to Third Parties: Implications of Privacy Regimes for Welfare in Online Markets,” *Journal of Economics and Management Strategy*, 29(2), Summer 2020, 260-275.
- I. Cho and D. Kreps, “Signaling Games and Stable Equilibria,” *Quarterly Journal of Economics*, 102(2), May 1987, 179-222.
- J. Dana, “Bundling Can Signal High Quality,” *International Journal of Industrial Organization*, 69, March 2020, Article 102579.
- N. Feltovich, R. Harbaugh, and T. To, “Too Cool for School? Signaling and Countersignaling,” *Rand Journal of Economics*, 33(4), Winter 2002, 630-649.
- H. Feng, Q. Fu, and L. Zhang, “How to Launch a New Durable Good: A Signaling Rationale for Hunger Marketing,” *International Journal of Industrial Organization*, 70, May 2020, Article 102621.
- S. Heinsalu, “Dynamic Noisy Signaling,” *American Economic Journal: Microeconomics*, 10(2), May 2018, 225-249.
- I. Macho-Stadler and D. Perez-Castrillo, *An Introduction to the Economics of Information*. Oxford University Press, 2001 (Second Edition), chapter 5.
- A. Mas-Colell, M. Whinston, and J. Green, *Microeconomic Theory*. Oxford University Press, 1995, pp. 450-460, 467-472.
- F. Munoz-Garcia and A. Espinola-Arredondo, “The Intuitive and Divinity Criterion: Interpretation and Step-by-Step Examples,” *Journal of Industrial Organization Education*, 5(1), 2010, Article 7. DOI: 10.2202/1935-5041.1024
- J. Riley, “Silver Signals: Twenty-Five Years of Signaling and Screening,” *Journal of Economic Literature*, 39(2), June 2001, 432-478.

### **Collusion**

- R. Burguet, “Procurement Design with Corruption,” *American Economic Journal: Microeconomics*, 9(2), May 2017, 315-41.

C. von Negenborn and M. Pollrich, "Sweet Lemons: Mitigating Collusion in Organizations," *Journal of Economic Theory*, 189, September 2020, Article 105074.

Y. Hiriart, D. Martimort, and J. Pouyet, "The Public Management of Risk: Separating *Ex Ante* and *Ex Post* Monitors," *Journal of Public Economics*, 94(11-12), December 2010, 1008-1019.

F. Khalil and J. Lawarree, "Incentives for Corruptible Auditors in the Absence of Commitment," *Journal of Industrial Economics*, 54(2), June 2006, 269-291.

### **Delegation**

M. Agastya, P. Bag, and I. Chakraborty, "Communication and Authority with a Partially Informed Expert," *Rand Journal of Economics*, 45(1), Spring 2014, 176-197.

H. Bester and D. Krahmer, "Delegation and Incentives," *Rand Journal of Economics*, 39(3), Autumn 2008, 664-673.

I. Deimen and D. Szalay, "Delegated Expertise, Authority, and Communication," *American Economic Review*, 109(4), April 2019, 1349-1374.

E. Lipnowski and J. Ramos, "Repeated Delegation," *Journal of Economic Theory*, 188, July 2020, Article 105040

### **Experts and Intermediaries**

S. Bhattacharya and A. Mukherjee, "Strategic Information Revelation when Experts Compete to Influence," *Rand Journal of Economics*, 44(3), Fall 2013, 522-544.

G. Biglaiser and F. Li, "Middlemen: The Good, the Bad, and the Ugly," *Rand Journal of Economics*, 49(1), Spring 2018, 3-22.

U. Dulleck and R. Kerschbamer, "On Doctors, Mechanics, and Computer Specialists: The Economics of Credence Goods," *Journal of Economic Literature*, 44(1), March 2006, 5-42.

R. Inderst and M. Ottaviani, "Competition through Commissions and Kickbacks," *American Economic Review*, 102(2), April 2012, 780-809.

### **Information Disclosure**

R. Dye, "Optimal Disclosure Decisions when there are Penalties for Nondisclosure," *Rand Journal of Economics*, 48(3), Fall 2017, 704-732.

J. Hörner and A. Skrzypacz, "Selling Information," *Journal of Political Economy*, 124(6), December 2016, 1515-1562.

F. Moriya and T. Yamashita, "Asymmetric-information Allocation to Avoid Coordination Failure," *Journal of Economics & Management Strategy*, 29(1), Spring 2020, 173-186.

G. Romanyuk and A. Smolin, "Cream Skimming and Information Design in Matching Markets," *American Economic Journal: Microeconomics*, 11(2), May 2019, 250-276.



J. Tirole, “From Bottom of the Barrel to Cream of the Crop: Sequential Screening with Positive Selection,” *Econometrica*, 84(4), July 2016, 1291–1343.

### **Contracting with Subjective Valuations**

J. Chan and B. Zheng, “Rewarding Improvements: Optimal Dynamic Contracts with Subjective Evaluation,” *Rand Journal of Economics*, 42(4), Winter 2011, 758-775.

B. MacLeod, “Optimal Contracting with Subjective Evaluation,” *American Economic Review*, 93(1), March 2003, 216-240.

J. Zabojnik, “Subjective Evaluations with Performance Feedback,” *Rand Journal of Economics*, 45(2), Summer 2014, 341-369.

### **Contracting with Communication Costs**

M. Dewatripont and J. Tirole, “Modes of Communication,” *Journal of Political Economy*, 113(6), December 2005, 1217-1238.

N. Kartik, “Strategic Communication with Lying Costs,” *Review of Economic Studies*, 76(4), October 2009, 1359-1395.

D. Mookherjee and M. Tsumagari, “Mechanism Design with Communication Constraints,” *Journal of Political Economy*, 122(5), October 2014, 1094-1129.

### **Information Acquisition and Dissemination**

D. Bergemann, A. Bonatti, and A. Smolin, “The Design and Price of Information,” *American Economic Review*, 108(1), January 2018, 1-48.

D. Condorelli and B. Szentes, “Information Design in the Holdup Problem,” *Journal of Political Economy*, 128(2), February 2020, 681-709.

D. Krämer, “Information Disclosure and Full Surplus Extraction in Mechanism Design,” *Journal of Economic Theory*, 187, May 2020, Article 105020.

L. Mathevet, J. Perego, and I. Taneva, “On Information Design in Games,” *Journal of Political Economy*, 128(4), April 2020, 1370-1404.

J. Rüdiger and A. Vigier “Who Acquires Information in Dealer Markets?” *American Economic Review*, 110(4), April 2020, 1145-1176.

M. Yang, “Optimality of Debt under Flexible Information Acquisition,” *Review of Economic Studies*, 87(1), January 2020, 487-536.

### **Cheap Talk**

Sobel, Joel, “Giving and Receiving Advice,” in Daron Acemoglu, Manuel Arellano, and Eddie Dekel (eds.), *Advances in Economics and Econometrics, Tenth World Congress, Volume I, Economic Theory*. New York: Cambridge University Press, 2013, pp. 305-341.

### **Contracting with Bounded Rationality**

J. Glazer and A. Rubinstein, "A Model of Persuasion with Boundedly Rational Agents," *Journal of Political Economy*, 120(6), December 2012, 1057-1082.

A. Jakobsen, "A Model of Complex Contracts," *American Economic Review*, 110(5), May 2020, 1243-1273.

M. Rabin, "Incorporating Limited Rationality into Economics," *Journal of Economic Literature*, 51(2), June 2013, 528-43.

### **Behavioral Economics and Contracting**

B. Koszegi, "Behavioral Contract Theory," *Journal of Economic Literature*, 52(4), December 2014, 1075-1118.

B. Koszegi and M. Rabin, "A Model of Reference-Dependent Preferences," *Quarterly Journal of Economics* 121(4), November 2006, 1133-1166.

S. Levitt, J. List, S. Neckermann, and S. Sadoff, "The Behavioralist Goes to School: Leveraging Behavioral Economics to Improve Educational Performance," *American Economic Journal: Economic Policy*, 8(4), November 2016, 183-219.

### **Social Preferences**

S. Bowles and S. Polania-Reyes, "Economic Incentives and Social Preferences: Substitutes or Complements?" *Journal of Economic Literature*, 50(2), June 2012, 368-425.

E. Fehr, A. Klein, and K. Schmidt, "Fairness and Contract Design," *Econometrica*, 75(1), January 2007, 121-154.

U. Gneezy, S. Meier, and P. Rey-Biel, "When and Why Incentives (Don't) Work to Modify Behavior," *Journal of Economic Perspectives*, 25(4), Fall 2011, 191-210.

### **Simple Contracts**

A. Bos, D. Pal, and D. Sappington, "On the Performance of Linear Contracts," *Journal of Economics and Management Strategy*, 20(1), Spring 2011, pp. 159-193.

L. Chu and D. Sappington, "Simple Cost-Sharing Contracts," *American Economic Review*, 97(1), March 2007 419-428.

J. Escobar and C. Pulgar, "Motivating with Simple Contracts," *International Journal of Industrial Organization*, Volume 54, September 2017, 192-214.

W. Rogerson, "Simple Menus of Contracts in Cost-Based Procurement and Regulation," *American Economic Review*, 93(3), June 2003, 919-926.

### **Informed Principals**

Laffont and Martimort, Section 9.1.

E. Maskin and J. Tirole, "The Principal-Agent Relationship with an Informed Principal: The Case of Private

Values,” *Econometrica*, 58(2), March 1990, 379-410.

E. Maskin and J. Tirole, “The Principal-Agent Relationship with an Informed Principal, II: Common Values,” *Econometrica*, 60(1), January 1992, 1-42.

S. Severinov, “An Efficient Solution to the Informed Principal Problem,” *Journal of Economic Theory*, 141(1), July 2008, 114-133.

C. Wagner, T. Mylovanov, and T. Tröger, “Informed-Principal Problem with Moral Hazard, Risk Neutrality, and No Limited Liability,” *Journal of Economic Theory*, 159A, September 2015, 280-289.

### **Multiple Principals**

D. Martimort and L. Stole, “The Revelation and Delegation Principles in Common Agency Games,” *Econometrica*, 70(4), July 2002, 1659-1674.

D. Martimort and L. Stole, “Market Participation in Delegated and Intrinsic Common-Agency Games,” *Rand Journal of Economics*, 40(1), Spring 2009, 78-102.

### **Dynamic Agency Models**

Laffont and Martimort, Chapters 8, 9.3.

M. Arve and D. Martimort, “Dynamic Procurement under Uncertainty: Optimal Design and Implications for Incomplete Contracts,” *American Economic Review*, 106(11), November 2016, 3238-3274.

J. Benkert and I. Letina, “Designing Dynamic Research Contests,” *American Economic Journal: Microeconomics*, 12(4), November 2020, 270-289.

D. Bergemann, F. Castro, and G. Weintraub, “The Scope of Sequential Screening with Ex Post Participation Constraints,” *Journal of Economic Theory*, 188, July 2020, Article 105055.

D. Bergemann and J. Välimäki, “Dynamic Mechanism Design: An Introduction,” *Journal of Economic Literature*, 57(2), June 2019, 235-274.

J. Ely and M. Szydlowski, “Moving the Goalposts,” *Journal of Political Economy*, 128(2), February 2020, 468-506.

D. Fudenberg and L. Rayo, “Training and Effort Dynamics in Apprenticeship,” *American Economic Review*, 109(11), November 2019, 3780-3812.

D. Shin and R. Strausz, “Delegation and Dynamic Incentives,” *Rand Journal of Economics*, 45(3), Fall 2014, 495-520.

J. Zhu, “Myopic Agency,” *Review of Economic Studies*, 85(2), April 2018, 1352-1388.

### **Renegotiation and Incomplete Contracts**

P. Aghion and R. Holden, “Incomplete Contracts and the Theory of the Firm: What Have We Learned over the Past 25 Years?” *Journal of Economic Literature*, 25(2), Spring 2011, 181-197.

- B. D. Bernheim and M. Whinston, "Incomplete Contracts and Strategic Ambiguity," *American Economic Review*, 88(4), September 1998, 902-932.
- P. Bolton and A. Faure-Grimaud, "Satisficing Contracts," *Review of Economic Studies*, 77(3), July 2010, 937-971.
- J. Laffont and J. Tirole, *A Theory of Incentives in Procurement and Regulation*. MIT Press, 1993, Chapter 10.
- Z. Neeman and G. Pavlov, "Ex post Renegotiation-Proof Mechanism Design," *Journal of Economic Theory*, 148(2), March 2013, 473-501.
- J. Tirole, "Cognition and Incomplete Contracts," *American Economic Review*, 99(1), March 2009, 265-294.

### **Relational Contracts**

- J. Malcomson, "Relational Incentive Contracts," in R. Gibbons and J. Roberts (eds.), *The Handbook of Organizational Economics*. Princeton: Princeton University Press, 2013, pp. 1014-65.
- W. B. MacLeod, "Reputations, Relationships, and Contract Enforcement," *Journal of Economic Literature*, 45(3), September 2007, 595-628.
- A. Nguyen and T. Y. Tan, "Information Control in the Hold-Up Problem," *Rand Journal of Economics*, 50(4), Winter 2019, 768-786.
- J. Watson, D. Miller, and T. Olsen, "Relational Contracting, Negotiation, and External Enforcement," *American Economic Review*, 110(7), July 2020, 2153-2197.

### **Asymmetric Information and Competition**

- A. Bisin and P. Gottardi, "Efficient Competitive Equilibria with Adverse Selection," *Journal of Political Economy*, 114(3), June 2006, 485-516.
- H. Fang and Z. Wu, "Multidimensional Private Information, Market Structure, and Insurance Markets," *Rand Journal of Economics*, 49(3), Fall 2018, 751-787.
- B. Lester, A. Shourideh, V. Venkateswaran, and A. Zetlin-Jones, "Screening and Adverse Selection in Frictional Markets," *Journal of Political Economy*, 127(1), February 2019, 338-377.
- M. Rothschild and J. Stiglitz, "Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information," *Quarterly Journal of Economics*, 90(4), November 1976, 629-650.

### **Organizational Structure and Design**

- P. Aghion and J. Tirole, "Formal and Real Authority in Organizations," *Journal of Political Economy*, 105(1), February 1997, 1-29.
- H. Bester and D. Krahmer, "The Optimal Allocation of Decision and Exit Rights in Organizations," *Rand Journal of Economics*, 48(2), Summer 2017, 309-34.
- S. Chassang and G. Miquel, "Crime, Intimidation, and Whistleblowing: A Theory of Inference from Unverifiable Reports," *Review of Economic Studies*, 86(6), November 2019, 2530-2553.

- S. Grossman and O. Hart, "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration," *Journal of Political Economy*, 94(4), August 1986, 691-719.
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