Yu Awaya

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Curriculum Vitae

CITIZENSHIP:
- Japan

EDUCATION:
- Ph.D. in Economics, Pennsylvania State University, July 2015 (expected)
- M.A. in Economics, Kyoto University, 2008
- B.A. in Engineering, Kyoto University, 2005

Ph.D. THESIS:
- Essays on repeated games
  Thesis Advisor: Vijay Krishna

FIELDS:
- **Primary:** Economic theory

PUBLICATIONS:
- "Community Enforcement with Observation Costs", *Journal of Economic Theory*, 154 (2014), 173-186.

WORKING PAPERS:
- "A Note on Money is not Memory: An Example", joint with Hiroki Fukai, revision required by *Macroeconomic Dynamics*
- "On Tacit versus Explicit Collusion", job market paper, joint with Vijay Krishna, submitted
- "Private Monitoring and Communication in Repeated Prisoner's Dilemma", submitted
- "Repeated Games with Myopic Players: An Example with Discontinuous Payoff Correspondence"
- "Reputation and Search"
- "Cooperation without Monitoring"

GRANTS & FELLOWSHIPS:
- Bates White Fellowship, Spring 2013

TEACHING EXPERIENCE:
- TA of Intermediate Micro, 2009-2014

RESEARCH
- RA for Vijay Krishna, Fall 2014

THESIS ABSTRACT

Essay 1: "On Tacit versus Explicit Collusion" (job market paper, joint with Vijay Krishna)

Antitrust law makes a sharp distinction between tacit and explicit collusion. In the former, there is no communication between firms, whereas in the latter there is. Tacit collusion is legal whereas explicit collusion is illegal, even criminal. The theory of repeated games---the standard framework for studying collusion---does not, however, provide a justification for this distinction. In most models, communication does not enlarge the set of equilibria. Precisely, in repeated games with perfect monitoring---past actions are perfectly observable---for any *fixed* discount rate, the set of perfect equilibrium payoffs with and without communication is the same. In repeated games with noisy public monitoring---an aggregate of past actions is commonly observed---the set of public perfect equilibrium payoffs in the two settings is also the same.

   In this paper, we study this issue in Stigler's (1964) model of secret price cutting, which is a repeated game with noisy *private* monitoring. Firms cannot observe each other's prices nor can they observe each other's sales. Each firm only observes its own sales and these are noisy signals of the other firms' actions. For a fixed discount factor, we identify conditions on the monitoring structure---the stochastic relationship between prices and sales---under which there are equilibria under explicit collusion that result in near-monopoly profits whereas all equilibria under tacit collusion are bounded away from this outcome. In our model, explicit collusion takes place via the exchange of sales reports. These reports, even though unverifiable, lead to better monitoring and so result in higher prices and profits. The conditions we identify are that the monitoring structure be noisy but correlated. Moreover, how correlated firms' sales are depends on how close their prices are.

   In order to establish this result, the paper develops a general method of bounding the set of equilibrium payoffs in repeated games with private monitoring without communication. We emphasize that our results are for a fixed discount factor, in contrast to the so-called "folk theorems" (as in Sugaya, 2012).

Essay 2: "Private Monitoring and Communication in Repeated Prisoner's Dilemma"

This paper provides a model of a repeated prisoner's dilemma in which cheap-talk communication is *necessary* in order to achieve cooperative outcomes in a long-term relationship. Monitoring is private and players communicate regarding their private signals. Through communication players can aggregate private signals, and this helps them detect defections. It is shown that under certain conditions, there exists an equilibrium with communication that strictly Pareto-dominates all equilibria without communication.

Essay 3: "Cooperation without Monitoring"

By means of an example, this note shows that monitoring is not necessary to achieve cooperation. More precisely, I consider an environment in which *no* player gets *any* information about past behavior of the other players. Despite this, there is an equilibrium in which players take myopically suboptimal actions. This is in sharp contrast to the body of repeated game literature, where observability of others' past behavior is crucial to sustain cooperation.

Essay 4: "Reputation and Search"

This paper considers a market where the reputation of a seller affects her probability of being matched with a buyer and hence, sellers compete for buyers using their reputations. There are two types of sellers. Good sellers can produce high-quality goods costlessly. A normal seller can mimic a good seller and produce high-quality goods, but a normal seller incurs a cost to mimic. I show that reputation building may result in an over-provision of quality. Such over-provision does not occur in a market where reputation does not affect matching.