

Wharton Undergraduate Research Scholars
Faculty Research Projects: 2009-2010 Academic Year

Iwan Barankay, Management Department

Research Question: The Economics of Monetary and Non-Monetary Incentives in the Workplace: Theory and Field Experiments

Project Description: Incentives in the Workplace (the area is also referred to as Personnel Economics) has received new attention in Economics in the past decade. This has been for two reasons. First, a surge in the development of new models extent that take seriously the behavioral aspects of decision making and also take into account that agents take decisions in a social environment. Second, there is a growing availability of detailed data that makes it possible to study these models in details. The student will be encouraged to review these new models and to shape a question of research based on them. The student will then be guided to design the logistics of conducting an empirical project. The student will particularly be coached to set up a field experiments. Field experiments use the methodology of a laboratory experiment but instead implement it in the field either in collaboration with a company or with any other organization that the student can strike up a collaboration with. This will give the student first hand exposure of the management of such a field experiment. The intellectual appeal of incorporating behavioral aspects is that it extends the set of contracts that might be optimal for a company for instance and help explain the presence of some practices encountered in many companies that run counter the empirical predictions of economic models. For instance it has long been argued that relative performance evaluations – where compensation of an employee is a function of her performance to the average performance in a reference group – is advantageous when employees are subject to productivity shocks that are outside their control. Think of the changing market conditions due to the financial crisis the timing of which were arguably not driven by the actions of a single agent. In reality however, these contracts may fail when workers either care about their colleagues or can set up schemes where they collude against their employers. The intuition is this: if my pay depends on my performance compared to others then if I work harder is will make the others look worse. If I care about others I will take this externality into account and actually may reduce my effort. The other explanation is that workers understand that only their relative position matters. Thus is everyone reduces their effort by 50%their pay will remain the same but they have to exert less effort to get it. Examples of this kind of research can be found on my webpage: <http://www.management.wharton.upenn.edu/barankay/> .The student will be guided to develop her skills to think rigorously in terms of theoretical models and to develop statistical skills using a software package (STATA) to implement that model empirically. Finally, I will guide the student in the development of a field experiment based on 10 years of experience with this research methodology.

Required Skills/Course Prerequisites: N/A

Background reading: N/A

Matthew Bidwell, Management Department

Research Question: How do people build careers within organizations?

Project Description: For most people, a large part of raising their pay and developing their skills comes from moving between jobs within a single organization. We are interested in understanding what kinds of moves are more likely. When is it easy for people to move between different kinds of jobs and departments? What kinds of jobs are likely to prove dead ends, or only allow for limited mobility to the next stage?

Understanding these questions can help us understand how organizational practices shape who gets ahead. They can also shed insight into how easy it is for individuals to reinvent themselves and redirect their careers from within a firm; and when they must follow more rigid, traditional career paths.

We expect to have a large dataset on careers within 1-2 large organizations by the beginning of the summer. The project will involve mapping the moves within those organizations to understand patterns and determinants of mobility.

Required Skills/Course Prerequisites: Some understanding of statistics and/or econometrics is necessary. Knowledge of / experience with the STATA statistical package would be a definite advantage. Other database experience could also be useful

Background reading: “Talent on Demand” – Peter Cappelli (HBS Press). “The internal economics of the firm: Evidence from personnel data” – Baker, Gibbs and Holmstrom, 1994, Quarterly Journal of Economics.

Required Skills/Course Prerequisites: N/A

Background reading: N/A

Eric Clemons, OPIM Department

Research Questions:

1. What is the role of sponsored search in Google's current and future business model? How good is organic search and how good is sponsored search for various types of problems? What is the potential future interaction of gmail, gphone, google drive, and

google latitude? What is the future of these systems interacting to yield mobile advertising? What is the role of Google Voice / Grand Central?

2. How do information systems applications add value to individual companies? How should they be valued? How have they been valued in intellectual property rights disputes and other forms of litigation?

3. How have modern communications technologies, like twitter, SMS, Facebook, IM, and of course email changed the nature of interpersonal communications? Have they changed the nature of friendship? Have they changed the nature of dating or the initiation of dating relationships? Have they changed the nature of corporate loyalty? Have they altered emotional responses or the nature of analysis? How would you know? What are the differences among age groups and among different national groups?

4. How will future internet applications be funded? What is the future balance between advertising revenues and other revenue sources on the net?

Required Skills/Course Prerequisites: N/A

Background reading: N/A

Peter Fader, Marketing Department

Research Question: I build probability models of many different kinds of customer behavior, e.g., online shopping behavior, subscription/contract renewals, repeat purchasing, and many other domains. I don't have a particular project in mind – it all depends on the student's interests and technical skills. There are many possibilities to choose from.

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Required Skills/Course Prerequisites: An absolute requirement is my elective course MKTG 476. I only want students who have taken it or seriously intend to do so. I would rather not participate in the program if no such students are available.

Background reading: Nothing, except perhaps my research papers (which are pretty hard for students to fathom).

Gerald Faulhaber, BPUB

Research Question: My research area is telecommunications, media, wireless, and Internet policy and strategy.

Project Description: I am willing to entertain students who have an interest and some knowledge of these areas who have a specific project in mind. I would look for research projects that can be completed in one semester or less. I would also reserve the right to turn down students that I do not believe would be good candidates to work with me.

I retired from the faculty 1/1/2008, so I hold emeritus status. I have an office in the BPUB area, and so I can meet with students (see address above).

Required Skills/Course Prerequisites: Economics through BPUB 250, analytical skills. Should be able to recognize a mathematical economic model and work with it, including enough statistics to estimate models.

Background Reading: N/A

Marshall Meyer, Management Department

Prof. Meyer is offering to mentor students interested in business in China.

Required Skills/Course Prerequisites: N/A

Background Reading: N/A

Greg Nini, Insurance and Risk Management

Research Question: What is fallout of loose covenants in corporate credit agreements during 2005 – 2007?

Project Description: Economic recessions undoubtedly lead to financial distress for corporations and generally lead to an increase in bankruptcies and corporate defaults. The current recession appears no different, as defaults have already begun to increase. What may be unique about the current recession is that many firms refinanced into very forgiving loans during the hot market period of 2005 through 2007. As a result, corporate creditors may be powerless to limit underperforming firms, and so-called ‘zombie’ companies may be more of a concern than companies that actually default.

Corporate creditors, particularly banks, typically become aware of financial distress long before their borrowers are bankrupt or even unable to make interest or principal payments. Through covenants written into the credit agreement, creditors gain the ability to force efficient restructuring, alter business plans, and shut-down unprofitable firms, if

need be. Existing research has shown that firms undergo significant changes following covenant violations, many of which create or preserve value. My own research shows that creditors can play an important corporate governance role, with covenant violations actually leading to higher stock prices.

During 2005 through 2007, not only was credit cheap in terms of low interest-rates, but many covenant packages became quite weak, which effectively removed many of the tripwires that creditors use to monitor their borrowers. This research project will seek to understand the implications of this easy credit period by examining corporate performance (e.g. stock prices, credit rating changes, profitability) during the recent recession. Obviously, 2010 will be the ideal time to study this issue, since we will have roughly 2 years of data following the onset of the recession.

The project will introduce you to the world of private credit, which is a significant part of the capital structure of most public firms. You will also learn about the importance of non-price terms in credit agreements, which are at least as important as the interest rate. Agency and information problems are at the heart of issue, so you will also learn how incentives and information asymmetries play out in the real world. And in addition to being introduced to the world of research, you will be able to comment on an important issue that is of current interest in the business community.

Required Skills/Course Prerequisites: This project is ideal for someone concentrating in finance, accounting, or insurance. Knowledge of WRDS, excel, basic accounting, and a statistical programming program (SAS, JMP, etc.) would be a plus.

Background Reading: The following article in Euromoney will help motivate the topic: <http://www.euromoney.com/Print.aspx?ArticleID=2038349>

Georgette Chapman Phillips, Real Estate Department

Prof. Phillips is offering to mentor students interested in researching real estate law, mortgage securitization (both commercial and residential), land use and local government law.

Required Skills/Course Prerequisites: N/A

Background Reading: N/A

Valery Yakubovich, Management Department

Research Question: The Interplay Between Organizational Structures and Individual Careers and Relationships in a Large Firm?

Project Description: The organization and management literatures generally assume that organizational hierarchies shape employees' careers within organizations. Although studies of idiosyncratic jobs, which are created for specific people, challenge this assumption, we know very little about the aggregate impact of such jobs on an organization's formal structure.

This project uses a unique longitudinal dataset from a large Russian company which contains information about employees' career trajectories, work ties among employees, and the changes in the company's organizational chart over a five years period. Applying advanced statistical methods, we will disentangle the effect of the organizational hierarchy on individual careers from the opposite effect of individual careers on the organizational hierarchy. In addition, we will assess the effect of "idiosyncratic relationships" on the hierarchy whereby a work tie emerges informally first and is only later incorporated into the organizational chart.

Required Skills/Course Prerequisites: Management 101, Statistics

Background reading: N/A