PLENARY SESSIONS

All plenary sessions will be held at Amphi A - Michel Despax

Thursday, September 4th, 2008 - 13:30 - 15:00

Mark ARMSTRONG, University College London, UK

Friday, September 5th, 2008 - 14:00 - 15:30

Patrick BAJARI, University of Minnesota, USA

Saturday, September 6th, 2008 - 16:30 - 18:00

Massimo MOTTA, European University Institute and University of Bologna, Italy

Scientific Committee

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Pierre DUBOIS, Toulouse School of Economics (INRA)

Carole HARITCHABALET, Université de Limoges and Toulouse School of Economics (GREMAQ)

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Margaret SLADE, University of Warwick

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Giancarlo SPAGNOLO, Università di Tor Vergata and Stockholm School of Economics

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Bertrand VILLENEUVE, University of Tours and CREST

Michael WATERSON, University of Warwick

Xavier WAUTHY, FUSL & CORE

Christian WEY, DIW Berlin
The New Pricing in North American Air Travel Markets: Implications for Competition and Antitrust

Tim Hazledine (University of Auckland)
David Gillen (University of British Columbia)

The passenger air travel industry has recently been impacted by two major innovations: the rise of low-cost carriers (LCCs) offering cheap, no-frills, one-way fares, and the widespread adoption of Internet-based direct Business-to-Consumer ticket sale systems. This paper explores the implications of these innovations using price data for over 1700 flights on thirty nine Canadian and trans-border US routes observed in May 2006.

We find (a) that there continues to be extensive price discrimination based on date of purchase of ticket and other factors; (b) that average prices paid are nevertheless still significantly determined by the number and size distribution of airlines supplying a route; (c) that established “legacy” carriers can still charge a substantial price premium over LCCs; and (d) that the internet fare systems may have made it easier for legacy carriers to coordinate the typically substantial increases in their fares over the last two weeks before flight date. We note the implications for antitrust policy in these markets.

On the Efficiency of European Airports: Do the Importance in the EU Network and the Intensity of Competition Matter?

Paolo Malighetti (University of Bergamo)
Gianmaria Martini (University of Bergamo)
Stefano Paleari (University of Bergamo)
Renato Redondi (University of Brescia)

In this paper we study the efficiency of Italian airports applying a DEA model to 34 airports. We find that large airports are more efficient than domestic and regional ones, i.e. small airports have spare capacity since they are more distant from the frontier than large airports. The Tobit regression on the estimated DEA scores shows that efficiency is positively related with the hub premium and with privatization. Hence we suggest that privatization, incentives to invest in large airports (close to saturation) and development plans to improve the small airports may form the benchmarks of Italian short run air transportation policy.
Single Till or Dual Till at Airports: a Two-Sided Market Analysis

Estelle Malavolti-Grimal (ENAC TSE)

Big airports profits are more and more often coming from commercial activities such as retailing. However, commercial services are relatively far from the original mission of the airport: providing airlines with aviation services such as ground handling, terminal management or airside operations, and being regulated for that because of an obvious dominant position with respect to airlines. For this reason, one can advocate for the separation of the two activities, i.e. for a dual till approach, in which only the aeronautical activity is regulated. We, instead, suggest that a single till regulation, in which the total profit of the airport is examined, is relevant because it allows to take into account the externalities existing between retailing and aeronautical services. Using a two-sided market approach (Armstrong 2006, Rochet-Tirole 2003, 2006), we show that the airport is a platform which makes the shops and the passengers meet. The retailing activity depends on how many passengers are circulating and connecting at the airport, as well as the time they spent in the airport, while passengers value the least connecting time as possible. We show that the aeronautical tax can be either higher or lower under single till depending on whether the impact of the passengers demand or of the waiting time is the more important for the shops.

ANTITRUST

Chair: Lapo Filistrucchi

Room J5

Thursday 4 Sep 2008, 15:30 – 17:00

Relevant Market Delineation and Horizontal Merger Simulation: a Unified Approach

Eduardo Fiuza (IPEA)

While the hypothetical monopolist test (HMT) used to delineate relevant markets is often implemented with linear price increases throughout all the goods in the candidate market, since 1984 the versions of the U.S. Merger Guidelines have emphasized that small but significant and non-transitory increases in prices (SSNIP) should be profit-maximizing, which would result in linear increases only under very particular conditions. Such increases can then be analyzed -- provided sufficient data exist -- in the same manner as simulations of the unilateral effects of mergers, introduced in the 1980s and further developed in the 1990s. In this article, building on structural models of demand and supply and on recent contributions to the literature, we propose a unified framework for merger simulations and for the HMT in its several versions implemented in various countries over the years, and we better detail their differences.

To illustrate those differences, we report the results of a Monte Carlo experiment using three demand specifications: isoelastic, linear and linearized AIDS, all of them in a two-stage budget setting. We conclude that the choice of the test version and demand specification can significantly affect the size of the relevant market found, depending on the distribution and magnitude of cross- and own-price elasticities in the potential market.
A SSNIP-Test for the Relevant Geographic Market.

Christian von Weizsaecker (Max Planck Institute Bonn)

I develop a method how to apply the general idea of the SSNIP-test to the definition of the relevant geographic market. The test applies to markets with heterogeneous goods. To find the correct relevant geographic market we only have to know three parameters which are not difficult to measure: 1. the maximum profitable transport distance, 2. the hypothetical switch ratio of demand from a more expensive to a cheaper good at a 10% price difference, 3. the margin of the competitive price above marginal costs. For almost all manufactured products the relevant geographic market in Europe is substantially larger than even the largest national market.

A SSNIP Test for Two-Sided Markets: Some Theoretical Considerations

Lapo Filistrucchi (Tilburg University & University of Siena)

I discuss the design and implementation of a SSNIP test in order to identify the relevant market in a two-sided market. I argue that in such a market the traditional SSNIP test cannot be applied as it is usually conceived but rather should be modified in order to take into account indirect network externalities. I discuss the issues of which price the hypothetical monopolist should be thought of as raising, of whether we should look at profits changes on only one side or on both sides of the market and of which feedback among the two sides of the market we should take into account. In doing so I suggest a distinction between two types of two-sided markets: a) the “payment card type” (where there is a transaction between the two end-consumers of the payment card service, e.g. a cardholder buys a good from a shop) and b) the “media type” (where the transaction is not present or unobservable, e.g. a reader reads an ad). The paper fills a gap in the economic literature, so much more as market definition in two-sided markets is at the centre of many recent competition policy and regulation cases around the world.
The Effects of Collusion in a Model of Comparative Advertising and Price Competition

Joanna Pousset (Universitat Autonoma de Barcelona, CREST-LEI)

In this paper we perform a theoretical analysis of advertising wars, where firms engage in deceptive comparative advertising against each other. In a symmetric duopoly set-up with fixed market size it does not matter whether a firm mentions the rival in an advertisement or not, since in both cases the ad reduces the relative valuation of the competing brand. In contrast, if there are three firms in the market, comparative advertising exhibits a directionality, i.e. a firm can choose to target just one of its rivals. In symmetric scenarios, where none or all firms collude, advertising becomes irrelevant in the price equilibrium irrespectively of whether it is comparative or not. This means Prisoner's Dilemma. In contrast, if we introduce asymmetry by assuming that two of the three firms collude, then the fact that advertising is comparative becomes crucial: prices change with the derogatory power of advertising. Moreover, we demonstrate how the fact that advertising be comparative rather than regular affects advertising volume itself: (i) colluding firms reduce their mutual comparative advertising, (ii) colluding firms increase the advertising against their rival, (iii) the rival intensifies advertising efforts against colluding firms, and (iv) the first effect is stronger than the other two so that the total amount of advertising in the market decreases.

Tacit Collusion on Advertising in a Differentiated-Products Duopoly

Levent Celik (CERGE-EI)

This paper analyzes informative advertising in a differentiated-products duopoly when search is costless and consumers are naive in the sense that they ignore the existence of another firm when the only advertisement they receive quotes the monopoly price. I find that both firms may tacitly collude on advertising the monopoly price and the market produces too much advertising compared to the social optimum when the products are sufficiently similar. An alternative specification with rational consumers and costly search that produces similar results is provided in the conclusion.
Managers' Effort Incentives and Market Collusion
Cécile Aubert (Bordeaux and Toulouse)

This paper investigates the interactions between antitrust intervention and the incentives of managers to collude, but also to exert productive effort. Managers choose both the competitive strategy of the firm, and their own effort to maximize profits. As both collusion and effort increase profits, a manager may substitute collusion to effort. This creates a potentially strong conflict of interest between the manager and shareholders: Incentives to induce competition may conflict with incentives to undertake a high effort level.

We show how leniency and whistleblowing programs affect the trade-off between effort and competition. Individual leniency programs may have undesirable effects, not on market conduct but on productive efficiency: Efficient competition may no longer be feasible, which may make collusion more attractive to shareholders. These effects remain when whistleblowing programs are introduced, but are not intensified. Whistleblowing programs thus offer benefits in terms of cartel deterrence, while not solving the conflicting incentives issue.

**CONTRACTS I**

Chair: Pedro Barros

Thursday 4 Sep 2008, 15:30 – 17:00

Bilateral Moral Hazard and Profit-Sharing Vertical Restraints:
Magali Chaudey (CREUSET-Université Jean Monnet St Etienne (France))
Muriel Fadairo (CREUSET-Université Jean Monnet St Etienne (France))

This paper investigates the choice of the two profit-sharing vertical restraints within franchising networks: the royalty rate and the up-front fee. It is based on the theoretical and empirical literature concerning share contracts in the framework of a double-sided moral hazard. We use a three countries European dataset, regarding a wide range of sectors, in order to test several assumptions concerning the choice of the profit-sharing provisions within franchise contracts. The estimations are partly consistent with the analytical context.
On the Performance of Linear Contracts
Arup Bose (Indian Statistical Institute)
Debashis Pal (University of Cincinnati)
David Sappington (University of Florida)

Linear contracts are common in practice, even though they are seldom optimal. This observation suggests that linear contracts may closely approximate the performance of fully optimal contracts in many settings of economic importance. Our investigation of the canonical moral hazard setting provides support for this possibility. In the broad class of environments we consider, the optimal linear contract always secures for the principal at least 90% of the expected profit she secures with a fully optimal contract, as long as the productivity of the agent’s effort is not too small.

The Simple Economics of Risk-Sharing Agreements between the NHS and the Pharmaceutical Industry
Pedro Barros (Universidade Nova de Lisboa)

The Janssen-Cilag proposal for a risk-sharing agreement regarding bortezomib received a welcome signal from NICE. The Office of Fair Trading report included risk-sharing agreements as an available tool for the National Health Service. Nonetheless, recent discussions have somewhat neglected the economic fundamentals underlying risk-sharing agreements. We argue here that risk-sharing agreements, although attractive due to the principle of paying by results, also entail risks. Too many patients may be put under treatment even with a low success probability. Prices are likely to be adjusted upward, in anticipation of future risk-sharing agreements between the pharmaceutical company and the third-party payer. An available instrument is a verification cost per patient treated, which allows obtaining the first-best allocation of patients to the new treatment, under the risk sharing agreement. Overall, the welfare effects of risk-sharing agreements are ambiguous, and care must be taken with their use.
Mergers and Business Model Assimilation: Evidence from Low-Cost Airlines Takeovers
Claudio Piga (Loughborough University (UK))
Paul Dobson (Loughborough University (UK))

This paper examines mergers that lead to an almost immediate replacement of the target firm’s business model in favour of that of the acquiring firm. We examine the post-merger behaviour of the two leading European dedicated low-cost airlines, EasyJet and Ryanair, each acquiring another low-cost airline, respectively Go Fly and Buzz. We find that both takeovers had an immediate and sustained impact on both the pricing structures and the extent of inter-temporal price discrimination used on the acquired routes, with early booking fares noticeably reduced and only very late booking fares increased. Overall, the analysis points to a pro-competitive effect of both takeovers as a consequence of the introduction of the acquiring firms’ business models and associated yield management pricing systems.

Corporate Diversification and the Product Market Effects of Financial Synergies
Johannes Bruder (University of Hamburg)

The paper examines whether consumers suffer from the purely financial synergy caused by a diversifying merger of the focused monopolists in symmetric but completely unrelated product markets. Investigating a model with normally distributed market-specific shocks to operating profit and costs of financial distress in case of negative firm performance, the paper finds that owners have strong incentives to merge their firms since corporate diversification reduces the probability of financial distress. Yet, surprisingly, even without market power effects of a merger, this financial synergy can harm consumers: while in a low-risk product market environment the diversified firm increases its output after the merger, the opposite is true in a high-risk environment, where output is lower with corporate diversification. Findings suggest that competition authorities should scrutinize corporate diversification by means of unrelated mergers and acquisitions more carefully.
The Information Content of Deal Initiation in Mergers and Acquisitions

Serif Simsir (Cornell University)

From the SEC filings of the merging firms in our sample, we find out which side initiated the deal. We then examine the role of deal initiation in explaining buyer and target firm abnormal returns, bid premiums and synergistic gains between the merging firms around the public announcement of the deal. We find that target firms’ abnormal returns are 7.5% higher in buyer initiated deals. Bid premiums also show similar differences: buyer initiation causes premiums to go up by 16%. Despite the fact that buyer firms pay considerably more when they initiate the deal, synergy gains in such deals are significantly positive. In seller initiated deals synergy gains are not statistically different from zero. Initiation does not affect buyer firm abnormal returns, ruling out any possibility of overpayment by the buyer firm to the target firm shareholders in buyer initiated deals. In the light of these findings, we argue that (i) the information asymmetry between the buyer and the target firm about the potential synergies could cause such an effect, and (ii) the motivations in initiating the deal could be quite different for the buyer and the target firms.

ENVIRONMENTAL PERFORMANCE

Chair: Clémence Christin

Room AR318

Thursday 4 Sep 2008, 15:30 – 17:00

Banking Tradable Emission Permits under Upstream-Downstream Strategic Interaction

Joana Resende (CORE, Université catholique de Louvain)

Maria Eugenia Sanin (CORE, Université catholique de Louvain)

In this paper, we investigate how two strategic firms' under environmental regulation based on tradable emission permits interact, both in the permits and in the output market, and both in a static and in a dynamic context so as to study strategic banking behavior. Our main findings are (i) that the outcome in the permits market is determined by the strategic interaction in the output market (and vice versa); (ii) that a price-taking firm in the permits market can exploit the strategic linkages between the upstream and the downstream market to counterbalance the fact that she has no direct influence on the permits' price; and (iii) that the possibility of banking reinforces the possibility of the price-taking firm to counterbalance the price-setting firm's market power. Accordingly, we derive some policy implications regarding the maximization of welfare in a context of strategic interaction.
Environmental Taxes and Industry Monopolisation
Lambert Schoonbeek (Department of Economics and Econometrics, University of Groningen, The Netherlands)
Frans P. de Vries (Department of Economics, University of Stirling, Scotland UK)

This paper considers a market with an incumbent monopolistic firm and a potential entrant. Production by both firms causes environmental pollution. The government selects a tax per unit pollution by maximizing social welfare. The size of the tax rate affects whether or not the potential entrant enters the market. We identify the conditions that create a market structure where the preferences of the government and the incumbent firm coincide. Interestingly, there are cases where both the government and incumbent firm prefer a monopoly. Hence, the government might induce profitable monopolisation by using a socially optimal tax policy instrument.

CO2 Markets and Industry Performance
Clémence Christin (Laboratoire d'Econométrie)
Jean-Philippe Nicolai (Laboratoire d'Econométrie)
Jerome Pouyet (Ecole Polytechnique)

The opening of a European market for emission permits answers an essential issue: reducing greenhouse gas emissions. However, it is crucial to analyze the effect of implementing such a regulation on industrial competitiveness. We look at various standard oligopoly models in which firms produce a final product using a polluting technology and then sell it. So as to be allowed to emit pollution, firms must however buy permits on a market in which the amount of permits offered is fixed by governments. We find conditions under which the industry benefits from the CO2 market: in particular, it is true when the demand is highly inelastic and when the effort to curb CO2 emissions does not affect the environmental efficiency of the production technology. We deduce from this the long-term impact of the environmental regulation on the industry's concentration, depending on the characteristics of the concerned industry. Finally, we determine the optimal regulation and its possible implementation only through environmental tools.
Venture Capital Syndication and Termination of Viable Projects

Nisvan Erkal (University of Melbourne)
Simona Fabrizi (Massey University Auckland)
Steffen Lippert (Massey University Auckland)

Projects financed by venture capital are often syndicated. Syndication has been advocated to be driven by either a selection hypothesis, or a value-added hypothesis. However, these hypotheses have neglected the possibility for syndication to be driven by the need of reducing competitiveness between otherwise potentially rival projects. To explore this alternative hypothesis, this paper constructs a model where venture capitalists financing projects that are competing to varying degrees decide whether to syndicate and, thus, terminate one of the projects. Venture capitalists take the decision whether to syndicate after a signal about the quality of the projects is observed. We show that if these signals are public, syndication occurs out of competition concerns and viable projects with a good signal will be terminated. This leads to a possible reduction in expected social welfare. We then proceed to show that if signals are private, venture capitalists do not always have incentives to truthfully reveal their signals and, as a result, may syndicate less often. This is likely to lead to welfare improvements over the situation with public signals.

Over-signaling vs Underpricing: The Role of Financial Intermediaries in Initial Public Offerings

Fabrizio Adriani (SOAS - University of London)
Luca Deidda (Università di Sassari)
Silvia Sonderegger (University of Bristol)

We consider a model of Initial Public Offerings (IPOs) where issuing firms of better quality are more reluctant to go public. IPOs either generate or destroy value depending on the type of the issuing firm, which is only observed by the issuer. We show that, when the issuer directly offers the shares to the investors, market breakdown occurs. This is caused by the issuer’s attempts to signal his type through the offering price. Things change if we introduce a financial intermediary which: 1) acts as an underwriter, 2) influences the offering price. Underwriting creates a wedge between the interests of the intermediary and those of the issuer. This allows trade with outside investors to be restored. A by-product of the conflict of interest between issuer and intermediary is that trade is characterized by underpricing. In the benchmark case where her profits are zero, the intermediary acts as a screening device: she underwrites the shares only upon receiving positive information about the issuer.
This paper analyzes some determinants of competition in the venture capital industry. We consider a model where an entrepreneur who needs to raise funds has less information than venture capitalists about his project’s quality. We explore how the entrepreneur can optimally choose his fund raising strategy to maximize his expected utility. Importantly, we assume that the entrepreneur derives a private benefit of control, so that he cares not only about expected monetary profits, but also about the probability to obtain financing. We show that if the entrepreneur enforces upfront competition by sending his project to all venture capitalists, he obtains high expected monetary profits, but has a low probability to obtain financing. If he initiates negotiation with one venture capitalist, before enforcing competition, he can increase the probability to obtain financing, although the deal terms are less favorable. For low levels of private benefits, the model predicts that the venture capitalists’ deal flow is high, but that only experienced venture capitalists make profits. For high levels of private benefits, expected profits increase for the less experienced venture capitalists, and the deal flow and expected profits decrease for more experienced venture capital firms.

Foreign Direct Investment and Productivity Spillovers: Identifying Linkages through Product-based Measures
Erol Taymaz (Middle East technical University, Ankara Turkey)
Kamil Yilmaz (Koc University, Istanbul)

This article analyzes direct and indirect effects of foreign ownership on productivity in the Turkish manufacturing plants between 1990 and 1996. First, based on Olley-Pakes production function estimates, foreign affiliates are shown to be more productive than local plants. Using sectoral output shares of foreign affiliates and 1990 input-output matrix to identify linkages across plants, regression results show that productivity spillovers from foreign affiliates to local plants took place through horizontal and vertical linkages. However, these results mostly lose their economic and statistical significance once plant-level data on the value of output and inputs are used to obtain product-based measures of linkages across plants. The magnitude of spillover effects are much smaller than the ones obtained with industry-based measures. Statistically meaningful positive spillovers are found to be generated through backward linkages only.
Expatriation, Knowledge Transfer and Foreign Subsidiary Performance

Bas Karreman (Erasmus University Rotterdam)
Enrico Pennings (Erasmus University Rotterdam)

This study examines the effects of knowledge transfer through expatriation on foreign subsidiary performance. Based on a panel data analysis of 54 subsidiaries of multinational banks located in Central and Eastern Europe in the period 1998 - 2006, the study suggest that a relatively high degree of expatriate managers in the management board of foreign subsidiaries is associated with a higher performance of the foreign subsidiary in terms of labor productivity. Furthermore the closer the expatriate manager is to the source of knowledge creation, the higher the impact on foreign subsidiary performance.

The Impact of the Entry of Foreign MNEs in Service Sectors on the Productivity of Manufacturing Firms. Evidence on Vertical Spillovers in Italy

Alessandro Albanese (DIG - Politecnico di Milano)
Marcella Nicolini (DIG - Politecnico di Milano)
Lucia Piscitello (DIG - Politecnico di Milano)

The issue of horizontal and vertical spillovers by foreign MNEs on domestic manufacturing firm has been largely investigated in recent years. While the literature has mainly focused on horizontal (i.e. intra-industry) spillovers or vertical (inter-industry) spillovers between manufacturing firms, the role of vertical spillovers stemming from MNEs in service sectors has been so far mainly neglected. Nonetheless, foreign direct investments in service sectors are acquiring growing relevance. This paper is one of the first attempts to size the relevance of this phenomenon. Using a database on 77964 manufacturing firms located in Italy, we estimate their Total Factor Productivity, and show that the entry of foreign firms in five different service sectors positively affect the productivity of manufacturing firms. We observe that the latter differently benefit from MNEs’ spillovers depending on the technological level of the industry. Finally, we find that spillovers are highly localized, but that results depend on the type of services considered.
A Linear Generalization of Stackelberg’s model

Thierry Lafay (Ecole Polytechnique)

We study an extension of Stackelberg model where many firms can produce at many different possible times. Demand is affine while cost is linear. In such a setting, we investigate whether Stackelberg’s results in a two firms game are robust when the number of firms increases. We show that: - firms may not need to anticipate further entries, - leaders might earn less than in the simultaneous game and - whatever her costs and her time of entry a firm always improves the welfare.

So Test therefore, who Commits to Strategy

Clemens Löffler (Austrian Regulatory Authority)

In this paper we study the question for reasons and effects of different commitment strategies. Although there exists a large body of literature that analyzes commitment strategies, comparisons of the repercussion of strategies with and without direct effects are widely neglected. In this paper we point out that it is very important for decision makers to consider carefully about how to commit. We show under which circumstances in Bertrand and Bertrand-Stackelberg games the commitment strategies of strategic delegation or investments in R&D are profitable.
Multi-Product Firms and Product Variety
Ramon Caminal (Institut d’Anàlisi Econòmica, CSIC, and CEPR)
Lluís Granero (Universitat de València)

The goal of this paper is to study the role of multi-product firms in the market provision of product variety. The analysis is conducted using the spokes model of non-localized competition proposed by Chen and Riordan (2007). Firstly, we show that multi-product firms are at a competitive disadvantage vis-à-vis single-product firms and can only emerge if economies of scope are sufficiently strong. Secondly, under duopoly product variety may be higher or lower with respect to both the first best and the monopolistically competitive equilibrium. However, within a relevant range of parameter values duopolists drastically restrict their product range in order to relax price competition, and as a result product variety is far below the efficient level.

INNOVATION I Room J3
Chair: Sabien Dobbelkaere Thursday 4 Sep 2008, 15:30 – 17:00

Profit Sharing and Innovation
Kris Aerts (K.U. Leuven)
Kornelius Kraft (Technical University of Dortmund)

We investigate the effect of profit sharing on product and process innovation. Profit sharing is a credible commitment of the companies to let the employees participate in any efficiency advantage. Resistance against technical progress is then implausible and the workers have an incentive to share their specific information on possibilities to optimize the production process and products with the management. Using survey data on German companies with and without profit sharing in a matching framework, we test our hypothesis by comparing innovativeness. Firms with a share system are more successful with respect to product and process innovation.
Patent Protection, Market Uncertainty, and R&D Investment
Dirk Czarnitzki (K.U.Leuven)
Andrew A. Toole (Rutgers University, NJ)

Real options investment theory predicts current investment falls as uncertainty about market returns increases. In the case of R&D investment, which is usually considered an irreversible form of investment, this effect should be quite pronounced. This paper tests the real options prediction about the R&D investment uncertainty relationship and further considers how patent protection influences this relationship. Patent protection, by limiting the threat of market rivalry, should mitigate firm-specific uncertainty and stimulate current R&D investment. Our empirical results support both the prediction of real options theory and the mitigating effect of patent protection.

Starting an R&D Project under Uncertainty
Sabien Dobbelare (Ghent University)
Roland Iwan Luttens (Ghent University)
Bettina Peters (Centre for European Economic Research (ZEW))

We model a two-stage R&D project with an abandonment option. Two types of uncertainty influence the decision to start R&D. Demand uncertainty is modelled as a lottery between a proportional increase and decrease in demand. Technical uncertainty is modelled as a lottery between a decrease and increase in the cost to continue R&D. A potential entrant is endowed with a superior technology and threatens to drive the incumbent out of the market upon entry. The incumbent has a time lead over the entrant and can obtain the same superior technology by completing the R&D project before the entrant can enter the market. Strategic interaction takes the form of preemptive behavior, where the investment of the incumbent discourages the entrant to enter the market. We derive under which circumstances a change in demand or a change in the cost to continue R&D positively or negatively affects the probability of starting R&D. We test the derived hypotheses using a unique dataset containing proxies for demand and technical uncertainty as well as perceived entry threat for about 4000 German firms in manufacturing and services (CIS IV). Our model predictions are by and large confirmed by the econometric analysis.
Mergers and Capital Flight in Unionised Oligopolies: Is there Scope for a 'National Champion' Policy?
Kjell Erik Lommerud (University of Bergen)
Frode Meland (University of Bergen)
Odd Rune Straume (University of Minho)

Many policy makers seem to prefer domestic alternatives to cross-border mergers. Can such sentiments make sense? We contruct a model where cross-border mergers drive down union-set wages, where domestic merger have larger non-labour cost synergies than international ones, and where policy evaluators care more about workers than capital owners. Apparently, the stage is set for national champion policies to be sensible. However, we also introduce the possibility of capital flight in the sense that a domestic firm can physically move its production out of the country. Restrictive cross-border merger policies can then seriously backfire, since they do not necessarily bring about a domestic merger -- but capital flight instead.

The Determinants of Merger Waves: An International Perspective
Klaus Gugler (University of Vienna)
Dennis C. Mueller (University of Vienna)
Michael Weichselbaumer (University of Vienna)

One of the most conspicuous features of mergers is that they come in waves, and that these waves are correlated with increases in share prices and price/earnings ratios. Four hypotheses have been advanced to explain merger waves: the industry shocks, q-, overvaluation and managerial discretion hypotheses. The first two are neoclassical in that they assume that managers maximize profits, mergers create wealth, and the capital market is efficient. The last two, behavioral, hypotheses relax these assumptions in different ways. We use a natural way to discriminate between pure stock market influences on firm decisions, namely whether the firm is listed or not. If "real" changes in the economy are the driving forces behind merger waves, we would expect waves for listed and unlisted firms. We do not find this, however, thus we concentrate on the two behaviourlal hypotheses. Moreover, an unlisted firm cannot be overvalued by the market, accordingly its shareholders cannot profit by exchanging overvalued shares for not so overvalued shares, as posited by the overvaluation theory. By estimating models of the amounts of assets acquired by firms, most of the evidence favors the managerial discretion hypothesis.
Cross-Border Acquisitions and Human Capital Intensity

Natália Barbosa (University of Minho)

This paper contributes to the scarce empirical literature on the impact of cross-border acquisitions on human capital intensity at firm-level. Based on data from Portuguese firms over the period 1991-2000, we assess whether foreign control transactions shape firms’ workforce composition (based on skills and high school education). There are two findings of particular importance. First, foreign control transactions might help to stimulate beneficial effects on workforce skills composition. However, the location of targeted firms appears to contaminate that finding, weakening the influence of foreign control transactions on human capital intensity. Second, our results show that, if any, the impact of control transactions on workforce skills composition is a gradual process.

MERGERS I

Chair: Christian Wey

Thursday 4 Sep 2008, 15:30 – 17:00

Mergers in Consumer Search Markets

Maarten Janssen (Erasmus University Rotterdam)

Jose Luis Moraga Gonzalez (University of Groningen)

This paper presents a study of mergers in a consumer search market where firms sell homogeneous products. Our first result is that mergers have redistributive effects with consumers searching little getting better off at the expense of consumers who search a lot. Our second result is that the magnitude of search costs is crucial in determining the incentives of firms to merge and the welfare implications of mergers. When search costs are relatively small, mergers turn out not to be profitable for the merging firms. If search costs are relatively high instead, a merger causes a fall in average price and this triggers search. As a result, non-shoppers who didn’t find it worthwhile to search in the pre-merger situation, start searching post-merger. We show that this change in the search composition of demand may make mergers incentive-compatible for the firms and, in some cases, socially desirable.
Screening and Merger Activity
Albert Banal-estanol (City University London)
Paul Heidhues (University of Bonn)
Rainer Nitsche (ESMT)
Jo Seldeslachts (WZB)

In our paper targets, by setting a reserve price, screen acquirers on their (expected) ability to generate merger specific synergies. Both empirical evidence and many common merger models suggest that the difference between high- and low-synergy mergers becomes smaller during booms. This implies that the target’s opportunity cost for sorting out relatively less fitting acquirers increases and hence targets screen less tightly during booms, which leads to a hike in merger activity. Our screening mechanism not only predicts that merger activity is intense during economic booms and subdued during recessions but is also consistent with other stylized facts about takeovers and generates novel testable predictions.

One-stop Shopping Behavior and Upstream Merger Incentives
Vanessa von Schlippenbach (DIW Berlin)
Christian Wey (DIW Berlin)

We examine merger incentives of two suppliers selling goods to a common retailer. Wholesale prices are negotiated bilaterally and a share of consumers prefers one-stop shopping. We show that an upstream merger becomes more likely if the share of one-stop shoppers increases and retailer’s bargaining power is sufficiently low. Our findings provide a new mechanism through which increasing buyer power may have adverse effects on social welfare, as buyer power makes desirable supplier mergers less likely. We also show that a retailer has incentives to take actions in favor of one-stop-shoppers in order to trigger an upstream merger.
Compatibility Choice in Vertically Differentiated

Filomena Garcia (ISEG/UTL)
Cecilia Vergari (Università di Bologna)

We analyse firms’ incentives to provide two-way compatibility between two network goods with different intrinsic qualities. We study how the relative importance of vertical differentiation with respect to the network effect influences the price competition as well as the compatibility choice. The final degree of compatibility allows firms to manipulate the overall differentiation. Under weak network effect, full compatibility may arise: the low quality firm has higher incentives to offer it in order to prevent the rival from dominating the market. Under strong network effect we observe multiple equilibria for consumers’ demands. However, in any equilibrium of the full game, coordination takes place on the high quality good which, we assume, always maintains its overall quality dominance. Compatibility is always underprovided from the social point of view.

Competition against Peer-to-peer Networks

Jean-Jacques Herings (Maastricht University)
Ronald Peeters (Maastricht University)
Michael Yang (Maastricht University)

In this paper, we model the competition between information content providers and P2P networks using a two stage game, where the firm sets the price in the store in the first stage, and the consumers, having observed the price, make buying decisions in the second stage. The firm maximizes profits, whereas the consumers maximize their utilities. Some important ingredients of the model are: heterogenous consumers horizontally differentiated in taste regarding the physical form of the product and illegally downloaded files; and positive network externalities on downloading costs.

The main results are as follows. The market may exhibit three different structures: the firm acting as a monopoly (partially- or fully-served market) and the P2P networks do not form; the firm may dominate the market (again, partially- or fully-serving the market), but with limit pricing due to the threat of entry of the P2P networks; and finally a fully-served multi-platform market with the coexistence of the store and the P2P networks. In the latter market, the firm, in equilibrium, sets its price in the store higher when the generic downloading cost factor is lower. This counter-intuitive firm behavior corresponds to a very subtle form of platform competition between the firm and the networks. Furthermore, in the partially-served limit pricing market as well as the multi-platform market, the equilibrium total welfare is higher when the generic downloading cost factor is lower. This implies that it is welfare enhancing if the government relaxes the legal enforcements of intellectual property rights (IPR).
Self-Protection Against Epidemic Risks: a Local Mean Field Analysis of Network Externalities.
Jean Bolot (SPRINT)
Marc Lelarge (INRIA-ENS)

Getting agents in the Internet, and in networks in general, to invest in and deploy security features and protocols is a challenge, in particular because of economic reasons arising from the presence of network externalities.

We study a network of interconnected agents, which are subject to epidemic risks such as those caused by propagating viruses and worms, and which can decide whether or not to invest some amount to self-protect and deploy security solutions.

We introduce a general model which combines an epidemic propagation model with an economic model for agents which captures network effects and externalities. Borrowing ideas and techniques used in statistical physics, we introduce a Local Mean Field (LMF) model, which extends the standard mean-field approximation to take into account the correlation structure on local neighborhoods. We solve the LMF model in a network with externalities, and we identify the impact of network externalities on the decision to invest in and deploy security features.

Price Discrimination with Private and Imperfect Information
Rosa Branca Esteves (NIPE and Universidade do Minho)

This paper investigates the competitive and welfare effects of information quality improvements in markets where firms can price discriminate after observing a private and noisy signal about a consumer's brand preference. I show that firms charge more to customers they believe have a brand preference for them, and that this price has an inverted-U shaped relationship with the signal's accuracy. In contrast, the price charged after a disloyal signal has been observed falls as the signal's accuracy rises. While industry profit and welfare fall as price discrimination is based on increasingly more accurate information, the reverse happens to consumer surplus. The model is also extended to a public information setting. For any level of the signal's accuracy, moving from public to private information, will boost industry profit and welfare and reduce consumer surplus.
Oligopolistic Non-Linear Pricing and Size Economies

Carlo Reggiani (University of York)

The effects of non-linear pricing are determined by the relationship between the demand and the technological structure of the market. This paper focuses on a model in which firms supply a homogeneous product in two different sizes. Information about consumers’ reservation prices is incomplete and the production technology is characterized by size economies. Four equilibrium regions are identified depending on the relative intensity of size economies with respect to consumers' evaluation of a second unit of the good. The desirability of non-linear pricing depends on both the relevant demand and supply characteristics.

Profitability of Pricing Menu with Flat Fee Option

Sergey Kokovin (Novosibirsk State University, Russia)

Babu Nahata (University of Louisville, USA)

Evgeny Zhelobodko (Novosibirsk State University, Russia)

We show that supplementing any usage-based pricing with a flat-fee option is profit improving when the savings from transactions costs and/or from deadweight loss by using flat fee exceed the additional production costs. We use a most general model, without many traditionally used assumptions in the screening literature, including single-crossing condition, zero production costs and specific forms of the existing usage-based scheme. Our convenient reformulation of the problem enables one to classify markets, suitable for usage-based pricing only, or only for flat-fee, or for a combination of both. Some interesting solution properties such as Pareto improvement, opening up of new markets, and possible need for some "critical mass" of adopters of flat fee are shown. Some conclusions hold not only for a flat-fee supplement, but also for any new tariff plan supplementing the existing pricing menu.
R&D-Induced Industry Polarization and Shakeouts

Rabah Amir (Department of Economics, University of Arizona, Tucson, AZ)
Christine Halmenschlager (ERMES - Université Panthéon-Assas (Paris2))

We consider the standard two-stage game of R&D and Cournot competition with ex ante identical firms but depart from the literature in assuming that R&D is characterized by mildly, instead of strongly, decreasing returns to scale. We establish that only extreme R&D levels are possible at equilibrium, and that for a broad range of parameters, equilibria are asymmetric in R&D levels, possibly leading one firm to endogenously exit. This provides a simple link between returns to scale in R&D and industry polarization, including shake-outs. A novelty is that exit may be triggered by positive opportunities in a strategic setting. Given the original nature of our R&D equilibrium, a complete welfare analysis is conducted, including a possible role for R&D subsidies.

Dynamic Efficiency of Cournot and Bertrand Competition under Cooperative R&D

Jeroen Hinlooopen (University of Amsterdam)
Jan Vandekerckhove (Katholieke Universiteit Leuven)

We consider the efficiency of Cournot and Bertrand competition in a duopoly with substitutable goods. Production costs are endogenous in the sense that before firms compete in the product market they conduct cost-reducing R&D cooperatively. We show that prices can be lower under Cournot competition than under Bertrand competition. This occurs when the R&D process is efficient, when spillovers are substantial, and when products are not too differentiated. A key feature of our analysis is that we assume the positive externality of R&D, the technological spillover, to be an input of the R&D process rather than an output.
Competition, Innovation and the Effect of Knowledge Accumulation

Alexander Steinmetz (University of Wuerzburg)

The question this paper addresses is how the market structure evolves due to innovative activities when firms' level of technological competence is valuable for more than one project. The focus of the work is the analysis of the effect of learning-by-doing and organizational forgetting in R&D on firms' incentives to innovate. I develop a dynamic step by step innovation model with history dependency. Firms can accumulate knowledge by investing in R&D. As a benchmark I show that without knowledge accumulation the leader's R&D effort increases with the gap as she is trying to avoid competition in the future. When firms gain experience by performing R&D the resulting effect of knowledge induces technological leaders to rest on their laurels which allows followers to catch up. Contrary to the benchmark case, the leader's innovation effort declines with the lead. This causes an equilibrium where the incentives to innovate are highest when competition is most intense.

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R&D AND PRODUCTIVITY

Room J201

Chair: Irene Bertschek

Thursday 4 Sep 2008, 15:30 – 17:00

Technology Flows between Sectors and its Impact on Large-Scale Firms

Jürgen Antony (University of Augsburg)

Thomas Grebel (Friedrich-Schiller University of Jena)

In this paper we highlight the importance of technology flows between sectors and their impact on the labor productivity of large-scale corporations. Based on theoretical considerations, we explore technological spillovers between the sectors of an economy. Large-scale corporations usually focus on certain sectors but make use of a wide range of technological knowledge from other sectors. Thereby, technological knowledge built up in sectors by continuous R&D activities does not spill over without bounds but is directed by firms' absorptive capacities. We use firms' patent portfolio to empirically calculate the sector affiliation and therewith the firms' absorptive capacities in order to estimate the impact of technology diffusion on labor productivity. Fortune 500 firms serve as data base.
Internationalization and Innovation: Firm-level Evidence for Belgium
Ilke Van Beveren (Lessius - Department of Business Studies)

This paper presents empirical evidence on the relationship between firm-level innovation and internationalization. Using data from the fourth EU Community Innovation Survey for Belgium, combined with ownership data from a commercial source, the impact of internationalization on innovative effort and output is analyzed. Unconditionally, exporters, foreign firms and domestic multinationals are more innovative than national firms, both in terms of R&D effort and innovation output. However, these results are not always robust to the inclusion of additional control variables. Results suggest that the innovation premium of foreign firms is related to their size and sector distribution. For domestic multinationals and exporters, this premium is related to these firms’ superior use of internal and external knowledge sources. However, exporting at the firm level is shown to be positively related to firm-level research effort, a finding that is robust to the inclusion of all control variables. Finally, all three internationalization modes are positively associated with patent protection, both conditionally and unconditionally.

Do Older Workers obstruct IT-enabled Productivity? Firm-level Evidence from Germany
Irene Bertschek (ZEW)
Jenny Meyer (ZEW)

The paper analyses whether IT-based labour productivity at the firmlevel is obstructed by the presence of older workers. Using firm-level data from German manufacturing and services industries, we find that workers older than 49 are not significantly less productive than prime age workers, whereas workers younger than 30 are significantly less productive than prime age workers. The relationship between labour productivity and IT intensity is not affected by the proportion of older workers. Moreover, older workers using a computer are more productive than older non-computer users.
Entry Regulation and Collusion under Asymmetric Information about Demand

António Brandão (CETE and Faculty of Economics of University of Porto)
Paula Sarmento (CETE and Faculty of Economics of University of Porto)

In this paper we investigate how incumbent firms can use the regulatory policy about entry and the informational advantage to protect their market position. This question is studied through the construction of a signalling game where we assume that the regulator has less information about demand than the firms. We conclude that there is an equilibrium in which entry is deterred and, if demand is high, there will be insufficient entry. The final effect on welfare depends on the trade-off between short-run benefits (lower price) and long-run losses (weaker competition). In addition to this, we show that, at the equilibrium, collusion to prevent entry is an attractive strategy for incumbent firms.

Assessing Excess Profits from Different Entry Regulations

Joan-Ramon Borrell (Universitat de Barcelona)
Laura Fernandez-Villadangos (Universitat de Barcelona)

Entry regulations affecting professional services such as pharmacies are common practice in many European countries. Most entry restrictions are coupled with price or retail margins regulations. From time to time, discussion on whether such regulated professionals obtain fair profits or excess profits are common. We propose a way to assess the impact of entry regulations on profits using the information provided by differences in entry restrictions. We use the case of different regional policies governing the opening of new pharmacies in Spain to show that policy experiments are useful to assess the impact of entry regulations.
Competition and Quality in Regulated Markets: a Differential-Game Approach

Kurt R. Brekke (Norwegian School of Economics and Business Administration)
Roberto Cellini (University of Catania)
Luigi Siciliani (University of York)
Odd Rune Straume (University of Minho)

We investigate the effect of competition on quality in regulated markets (e.g., health care, higher education, public utilities) taking a differential game approach, in which quality is a stock variable. Using a Hotelling framework, we derive the open-loop solution (providers commit to an optimal investment plan at the initial period) and the closed-loop solution (providers move investments in response to the dynamics of the states). If the marginal provision cost is constant, the open-loop and closed-loop solutions coincide, implying that static models are robust to a dynamic specification. If the marginal provision cost is increasing, investment and quality are lower in the closed-loop solution: in fact, quality drops to the minimum level in steady state, implying that quality competition is effectively eliminated. In this case, static models tend to exaggerate the positive effect of competition on quality. Our results can explain the mixed empirical evidence on competition and quality for regulated markets.
Spectrum Rights, Downstream Access and Capacity Investment in Mobile Telecommunications

Michiel Bijlsma (CPB, Netherlands Bureau for Economic Policy Analysis)
Gijsbert Zwart (TILEC, Tilburg University and CPB, Netherlands Bureau for Economic Policy Analysis)

We study the characteristics of downstream entry, and incentives for capacity investment, in a mobile telecommunications market where spectrum licenses are owned by vertically integrated oligopolists. If spectrum is not tradable, access for entrants may be service-based, where the entrant buys capacity on the incumbents’ networks. If spectrum is tradable, entrants can alternatively buy spectrum and infrastructure-based access is also possible.

We investigate how the spectrum governance regime interacts with incentives to invest in and grant access to spectrum by analyzing a simple set-up in which the two incumbents first offer (non-linear) contracts for downstream access, and subsequently all firms decide on network capacity.

We find, firstly, that although generically access will be granted to the entrant, and capacity may exceed duopoly quantities, if goods are homogeneous, non-observability of contracts to outsiders may lead to effective foreclosure of the entrant in the service-based regime. Infrastructure-based access that may be realised if spectrum is made tradable could be suboptimal as a consequence of loss of economies of scale. However, spectrum sales allow firms to commit to a particular capacity choice by delegating investment to the entrant. This strategic effect may outweigh the negative scale effects and spectrum sale may be a dominant strategy for the firms, while leading to higher aggregate capacity.

Regulation and Competition in Fixed-Line Telephony

Wolfgang Briglauer (RTR Austria)
Georg Goetz (JLU Giessen)
Anton Schwarz (RTR Austria)

This paper looks at the effects of regulation and deregulation on retail competition and welfare in fixed network telephony markets. Alternative operators have to buy a necessary input from the vertically integrated incumbent. We explicitly model vertical and horizontal asymmetry between the incumbent operator and the entrant which are due to cost and pricing differences. Our preliminary findings are that a horizontally differentiated entrant is never foreclosed by the incumbent operator since he creates additional consumer surplus. In a situation without regulation or with only the wholesale price regulated at the (positive) average costs, the entrant is subject to a price squeeze where the incumbent’s retail price is lower than the wholesale access price. As extensions of our model show, double marginalization is the reason for the margin squeeze.
Strategic investment and market structure under access price regulation
Keizo Mizuno (Kwansei Gakuin University)
Ichiro Yoshino (Nagoya University of Commerce and Business Administration)

This paper examines a relationship between infrastructure investment and market structure in an open access environment. In our model, an entrant is allowed to have three strategies for entry (i.e., access, bypass, and vertical merger), and the (horizontal and vertical) market structures are endogenously determined by an incumbent's investment in infrastructure. Then, we show that in equilibrium, the incumbent strategically gives birth to the three types of excess entry from a welfare viewpoint; "excess entry with access", "excess entry with bypass", and "excess entry with vertical merger". We also show the prevalence of underinvestment in infrastructure with the equilibrium market structures, irrespective of the incumbent's technology for infrastructure investment.

FRIDAY 5TH SEPTEMBER 2008

8:30 - 10:30 CONTRIBUTED SESSIONS II

BARRIERS TO COMPETITION
Chair: Pio Baake

Past Performance Evaluation in Repeated Procurement: A Simple Model of Handicapping
Gian Luigi Albano (Head of Research, Italian Public Procurement Agency (Consip S.p.A.))
Berardino Cesi (berardino.cesi@uniroma2.it)

When procurement contracts are awarded through competitive tendering participating firms commit ex ante to fulfill a set of contractual duties. However, selected contractors may find profitable to renege ex post on their promises by opportunistically delivering lower quality standards. In order to deter ex post moral hazard, buyers may use different strategies depending on the extent to which quality dimensions are contractible, that is, verifiable by contracting parties and by courts. We consider a stylized repeated procurement framework in which a buyer awards a contract over time to two firms with different efficiency levels. If the contractor does not deliver the agreed level of performance the buyer may handicap the same firm in future competitive tendering. We prove that under complete information extremely severe handicapping is never a credible strategy for the buyer, rather the latter finds it optimal to punish the opportunistic firm so as to make the pool of competitors more alike. In other words, when opportunistic behavior arises, the buyer should use handicapping to "level the playing field".
Does Product Market Competition Increase Debt Capacity?
Vittoria Cerasi (Milano-Bicocca University)
Alessandro Fedele (Universidad Pablo de Olavide)

When there is asymmetric information between investors and entrepreneurs debt capacity depends on the value of productive assets of the firm. If liquidation occurs, creditors recover a greater value from the sale of productive assets of the borrower the higher the probability to find a buyer and the higher his willingness to pay to use those assets for production. We extend the idea of complementarities among the firms in the same industry (as in Shleifer and Vishny, 1992) to analyze how debt capacity is affected by competition in the product market of the borrower.

Award Mechanism, Relational Contracting and Ex-Post Renegotiation:
Evidence from French Defense Procurement and Spanish Movie Exhibition
Ricard Gil (University of California Santa Cruz)
Jean-Michel Oudot (University Paris I Panthéon Sorbonne)

In this paper, we empirically examine the role and patterns of ex-post contractual adjustments in two very different settings, the French defense procurement sector and the Spanish movie exhibition industry. For this purpose, we depart from the framework provided by Goldberg (1977) and later modeled in Bajari and Tadelis (2001) and Bajari, McMillan and Tadelis (2003). We derive testable implications on the relation between contract award mechanism (bilateral negotiation versus competitive bidding), project complexity and the frequency of ex-post renegotiation that we take to the data. Our empirical findings suggest that there is a negative relation between the use of competitive bidding and the frequency of ex-post renegotiation. We also find evidence that more complex projects are also more likely to be renegotiated. Finally, we provide some evidence that regulation and legal constraints may decrease the frequency of ex-post renegotiation in our two empirical settings.
Accidents, Liability Obligations and Monopolized Markets for Spare Parts: Profits and Social Welfare

Pio Baake (DIW Berlin)

We analyze the effects of accidents and liability obligations on the incentives of car manufacturers to monopolize their markets for spare parts. We show that monopolized markets for spare parts lead to higher overall expenditures for consumers. Furthermore, while the manufacturers choose higher qualities, monopolization tends to reduce social welfare. Key for these results is the observation that high prices for spare parts entail a negative external effect inasmuch as liability obligations imply that consumers of competing products have to pay the high prices as well.

COMPETITION IN THE RETAIL INDUSTRY

Chair: Paul Dobson

Friday 5 Sep 2008, 8:30 – 10:30

The Dynamic Use of Loyalty Rebates

Liliane Karlinger (University of Vienna)

This paper studies the vertical relations between a manufacturer and a retailer over two periods in the presence of a competitive recycling sector. I show that contracts without intertemporal quantity targets lead to inefficient outcomes: the manufacturer distorts first-period output downwards, in order to reduce the retailer’s payoff under the outside option (i.e. only selling the recycled good) in period 2. I then show that including second-period quantity targets in the first-period contract restores the efficient outcome, without foreclosing the recycling sector. Such contracts can be implemented through loyalty rebates, which are shown to be efficiency-enhancing and non-exclusionary.
Is Producing a Private Label Counterproductive for a Branded Manufacturer?

Fabian Berges (TSE (Gremaq-Inra, Idei))
Zohra Bouamra (TSE (Gremaq-Inra))

Private labels (or store brands) have clearly changed the relationships between manufacturers and retailers since the latter have gained bargaining power because of this new product competing with branded goods. However, looking into details show that some branded manufacturers also produce retailers' brands. These manufacturers mainly argue that it is for using excess production capacities.

In a framework composed by a branded manufacturer and a retailer, we study the distributor's private label strategy for production. We first show that the retailer entrusts his store brand to an independent firm when the quality of the national brand is intermediate. For high values of the branded good product, the retailer asks the branded manufacturer (possessing a cost-advantage) to produce his private label for efficiency reasons.

We then extend our model to capacity constraint for the branded manufacturer. We show that if the capacity constraint affects both products, then the retailer prefers to choose an independent firm whereas he was electing the branded manufacturer when unconstrained. If capacity constraint applies only to store brand production, there is a zone where the retailer may change his strategy for store brand production by turning to an independent firm instead of remaining with the branded manufacturer.

The conclusions of our article partially confirm branded manufacturers' statement: they may produce store brand when they are not capacity constrained. Otherwise, it depends on the production technology features.

Complementarities, Below-Cost Pricing, and Welfare Losses

Vanessa von Schlippenbach (DIW Berlin)

We analyze the use of below-cost pricing in retail markets and examine its impact on social welfare as well as on suppliers' incentives to invest in quality. Considering negotiations about a linear wholesale price between the retailer and her supplier, we find that sales at a loss in downstream markets improve supplier's bargaining position vis-à-vis the retailer. Therefore below-cost pricing strengthens the double marginalization and causes welfare losses. Furthermore, suppliers have higher incentives to invest in high quality products if a ban of below-cost pricing is enforced.
Chain-Store Competition: Customized vs. Uniform Pricing

Paul Dobson (Loughborough University)
Michael Waterson (University of Warwick)

Retail chains essentially practice one of two broad strategies in setting prices across their stores. The more straightforward is to set a chain- or country- wide price. Alternatively, managers of retail chains may be attracted to the idea of customizing prices to the store level according to local demand and competitive conditions. For example, a chain may price lower in a location with lower demand and/or more competition. However, despite having the ability to customize prices according to local market conditions, some choose to eschew this in favor of a commitment to uniform pricing with a “one price policy” across their entire store network. As an illustration, we focus on UK supermarket chains. Yet, uniform pricing is observed in other retail sectors as well. Is there an advantage to be gained from deliberately choosing not to price discriminate across locations? We show generally and illustrate through means of a specific model that there exists a strategic incentive to soften competition in competitive markets by committing not to customize prices at the store level and instead adopt uniform pricing across the store network, and to raise overall profits thereby. Furthermore, we characterize quite precisely the circumstances under which uniform pricing is, and is not, profitable and illustrate that under a range of circumstances uniform pricing may be the preferable strategy.

Dynamic Limit Pricing

Flavio Toxvaerd (University of Cambridge)

This paper studies a simple multi-period model of limit pricing under one-sided incomplete information. I characterize pooling and separating equilibria, determine conditions under which the latter exist and study under which conditions on the primitives the equilibria involve limit pricing. The results are compared to a static benchmark. I identify two regimes that depend on the primitives of the model, namely a monopoly price regime and a limit price regime. In the former, the unique reasonable equilibrium is separating and both types of incumbent set their respective monopoly prices. In the latter, both reasonable pooling and separating equilibria exist and both involve limit pricing. In the monopoly price regime, the set of limit price equilibria expands as the horizon recedes, but the reasonable equilibrium remains unchanged. In the limit price regime, equilibrium existence becomes easier to obtain but these equilibria may, if the players are sufficiently patient, involve prices that confer infinitely large losses in order for separation to be incentive compatible. Last, I consider a perturbed version of the model and find that the equilibria of this game, separating as well as pooling, correspond in a natural way to the equilibria of the static benchmark game.
Inefficient Durable-Goods Monopolies

Joao Montez (Columbia University)

We study the efficiency of durable-goods monopolies in the standard infinite-horizon model with a finite number of buyers and we find previously unstudied inefficient (stationary) mixed-strategy equilibria. Inefficiency occurs because high valuation buyers randomize their purchase decision, deciding whether to buy at the current price or wait for a lower price which is offered only once a critical mass has purchased. This behavior, which we call buyer-attrition, results in real-time delay and provides a new rationale for stochastic sales and inefficiency in monopolized durable-goods markets.

Does the Absence of Competition in the Market Foster Competition for the market? A dynamic approach to aftermarkets

Didier Laussel (GREQAM, Université de la Méditerranée)
Joana Resende (University of Porto and CORE)

In this paper, we investigate dynamic price competition when firms strategically interact in two distinct but interrelated markets: a primary market and an aftermarket, where indirect network effects arise. We set up a differential game of two-dimensional price competition and we conclude that the absence of price competition in the aftermarket (competition in the market) fosters dynamic price competition in the primary market (competition for the market). We also investigate the impact of network sizes on firms' prices in the primary market concluding that, in equilibrium, larger firms have incentives to compete more fiercely for new "uncolonized" consumers.
Dynamic Pricing of Differentiated Products
Rossitsa Kotseva (Athens University of Econ and Business)
Nikolaos Vettas (Athens University of Econ and Business)

We examine the dynamic pricing decision of a firm facing random demand while selling a fixed stock of two differentiated products over an infinite horizon. Prices in each period depend on the available stock of both products (varieties). In addition to the standard trade-off between a higher revenue and the probability of selling the product, a higher price for one product also affects the probability of sale for the other product. We characterize the optimal price paths of the two varieties and find that the market may be optimally 'covered' or 'not covered'. With a positive stock of only one variety, the price path is nondecreasing. The same holds for the price paths with two varieties, with respect to the own stock level and as long as the probability of no sale is positive. When this probability equals one, the price of a given variety is decreasing in its own stock and increasing in the stock of the other variety.

ECONOMETRIC METHODS FOR IO MODELS
Room J5
Chair: Erwann Sbai
Friday 5 Sep 2008, 8:30 – 10:30

Identification and Estimation of Principal-Agent Models: Adverse Selection
Philippe Février (Crest-Lei)
Xavier D'Haultfoeuille (Crest-Lei)

The adverse selection model is a principal-agent model defined by the objective function of the principal, the agents’ utility function and the distribution of agents’ types. We prove that the nonparametric identification of this model requires the knowledge of at least one of the three functions. We also show that some exogenous changes in the objective function of the principal are sufficient to obtain partial or full nonparametric identification of the model. A nonparametric estimation procedure based on these results is proposed. We apply this method to test if firms provide the right incentives to their workers. Using contract data between the French National Institute of Statistics and its interviewers, we test and reject the contracts’ optimality. We estimate, however, the loss of using linear contracts instead of optimal ones to be less than 10%, which may explain why these simple contracts are so popular.
Constrained Optimization Approaches to Estimation of Structural Models
Kenneth Judd (Hoover Institution, Stanford)
Che-Lin Su (Chicago GSB)

Maximum likelihood estimation of structural models is often viewed as computationally difficult. This impression is due to a focus on the Nested Fixed-Point approach. We present a direct optimization approach to the general problem and show that it is significantly faster than the NFXP approach when applied to the canonical Zurcher bus repair model. The NFXP approach is inappropriate for estimating games since it requires finding all Nash equilibria of a game for each parameter vector considered, a generally intractable computational problem. We formulate the problem of maximum likelihood estimation of games as a constrained optimization problem that is qualitatively no more difficult to solve than standard maximum likelihood problems. The direct optimization approach is also applicable to other structural estimation methods such as methods of moments, and also allows one to use computationally intensive bootstrap methods to calculate inference. The MPEC approach is also easily implemented on software with high-level interfaces. Furthermore, all the examples in this paper were computed using only free resources available on the web.

On Asymptotic Properties of the Parameters of Differentiated Product Demand and Supply Systems When Demographically-Categorized Purchasing Pattern Data are Available
Yuichiro Kanazawa (University of Tsukuba)
Satoshi Myojo (National Institute of Science and Technology Policy)

In this paper, we first extend asymptotic theorems proposed by Berry, Linton, and Pakes (2004) by incorporating supply side to estimate and test both demand and supply side parameters for the framework proposed by Berry, Levinsohn, and Pakes (1995, henceforth BLP (1995)). We then give the asymptotic theorem for the framework proposed by Petrin (2002), which extends BLP (1995) framework when publicly-available and demographically-categorized purchasing pattern data are available. Then, we discuss the conditions under which these asymptotic theorems hold for the random coefficient logit model. Finally we run extensive Monte Carlo experiments to evaluate these asymptotic theorems and show that the additional purchasing pattern information on the consumer's choice can contribute the precision of the estimate under certain circumstances.
Estimation and Comparison Procedure for Electricity Spot Market
Erwann Sbai (The University of Auckland Business School)

Spot market for electricity is treated as an auction of shares, where generators submit their supply function and consider demand as uncertain. This paper proposes a procedure to estimate the structural parameters of this model, accounting for asymmetry across bidders, and compare auction outcomes under pas-as-bid or uniform-price format.

ENTRY AND EXIT
Room J201
Chair: Serio De Souza
Friday 5 Sep 2008, 8:30 – 10:30

Expected Sunk Cost and Entry
Gorm Grønnevet (Norwegian School of Business Administration)

This is one of the first papers to bring the sunk cost estimator of Pakes, Ostrovsky, and Berry (2005) to real data. We estimate the expected sunk costs that correspond to the entry rate in seven large panels of observations from the manufacturing industries. We find reasonable estimates for profits and sell-off values, though the profit varies across firms and over time for each firm. Given these profit estimates, we can infer the sell-off value and the entry value of the firms in the industry. Using the entry rates, we can infer the expected sunk costs of the industry. Our entry rates are low and the estimates of sunk costs are very high. This suggests that there is more to entry than sunk costs. Further research into what determines entry is therefore warranted.
The Impact of Innovation and Entry Costs on Market Structure
Ralph Siebert (Purdue University)
Christine Zulehner (University of Vienna)

The dynamic random access memory industry, which is one part of the semiconductor industry, is characterized by fewer firms being active over different generations. We are interested in explaining why the number of firms rapidly declined over different generations. A fully dynamic oligopoly model is estimated accounting for entry, exit, learning by doing and spillovers. We account for observed as well as serially correlated unobserved state variables and apply the recent two-step estimator by Bajari, Benkard and Levin (2007) using quarterly firm-level data from 1974 to 2004. We find that rapidly increasing entry and exit costs between different generations are the main source of having fewer firms in the markets. A higher pace of innovation, as well as higher competitive pressure accelerate the process of lower entry and higher exit rates. We can confirm that correcting for serially correlated unobservables is a crucial aspect to correct for in our application.

Startup Financial Conditions and Survival of New Firms
Kim Huynh (Indiana University)
Robert Petrunia (Lakehead University)
Marcel Voia (Carleton University)

This paper investigates the role of initial financial conditions (debt-to-asset ratio) on the duration of entrant firms. Previous literature has stressed productivity, size, and age effects on firm survival. Financial considerations, such as a firm’s financing mix or its ability to raise capital, have largely been ignored by this literature. A unique administrative firm-level database of manufacturing firms called T2LEAP allows for the inclusion of financial balance sheet information into hazard rate models. The effect of the debt-to-asset ratio on the firm’s hazard is economically and statistically significant while controlling for usual covariates and unobserved heterogeneity. Further, there is evidence of nonlinear effects in leverage’s impact on hazard. Firms in the highest quintile of leverage see a negative impact of leverage on duration, while in the other quintiles the effect of leverage is positive.
Combining Prior Information and Data to Uncover the Parameters from the Random Coefficient Discrete-Choice Demand Model

Sergio DeSouza (Federal University of Ceara)

Demand estimation in product-differentiated industries has been the central object in many studies in the industrial organization field. Indeed, after pinning down the preference parameters it is possible to analyze issues related to innovation, antitrust (mergers and divestitures), calculation of quality adjusted price-indices and prediction of the competitive effect of entry and exit of products. However uncovering consumers’ preferences using aggregate data on product-differentiated markets imposes a serious challenge: find instruments do deal with price endogeneity. Berry, Levinsohn, and Pakes (1995) propose a GMM method based on instruments that are functions of the regressors (except price) to estimate general Random Coefficients Discrete-Choice models. However, these instruments may prove to be in many instances weakly correlated with the endogenous variable (price), leading to inference problems regarding the estimation of the coefficient on price. The key contribution of this paper is to show how to incorporate more prior information into the empirical strategy in order to avoid the need for such instruments. What I propose in this work is to augment the researchers’ set of prior information. I use prior information on the aggregate price elasticity to propose a two-stage methodology that is able to determine the parameters of a particular class of Random Coefficients Discrete-Choice models. I show that, provided that the prior information is valid, we can determine the demand parameters using only the exogenous regressors (characteristics other than prices) as instruments, avoiding then the need to use potentially weak instruments. Finally, for illustrative purposes, I apply this methodology to the ready-to-eat cereal industry and simulate the entry of new products.
Public and Private Provision in the Presence of Potential Intrinsic Motivation

Sonja Gronblom (Abo Akademi University)
Johan Willner (Abo Akademi University)

We compare a public welfare-maximising monopoly with an oligopoly with profit-maximising firms when agents have multiple selves. One side of their personality derives benefits from efforts as such (intrinsic motivation), but another side is like the conventional economic man. This conflict is resolved through a cooperative game. Performance-related pay crowds out the intrinsic motivation if the participation constraint is binding or perceived as such. Oligopolist choose performance-related pay when a fixed wage yields higher welfare, and vice-versa. While inappropriate pay schedules cause bureaucratic inefficiency, a public monopoly can also outperform the oligopoly. Oligopolists become less cost efficient as competition increases. But the results on ownership and competition are reversed under some circumstances if intrinsic motivation is reinterpreted as valuing output instead of effort.

Letting Employees Work on Open Source Software/Academic Research Projects during Work Hours

Marc Blatter (University of Bern)
Andras Niedermayer (Northwestern University)

We consider software developers who can either work on an unpaid open source project or on a commercial project. The former provides a publicly available signal about their talent, whereas the latter provides a signal only observed by their employer. We show that a developer may initially prefer open source development to commercial projects, because a publicly available signal gives him a better bargaining position when renegotiating wages with his employer after the signal has been revealed. At a further step, we show that firms can be interested in letting employees work on open source projects during work hours to be able to attract more talented workers. Results carry over to scientists doing academic research while being employed by a governmental or private institution.
Does Academic Entrepreneurs Learn Fast?
Pedro Ortín-Ángel (Universitat Autònoma de Barcelona)
Ferran Vendrell-Herrero (Universitat Autònoma de Barcelona)

Among several positive specificities of university spin-offs, some voices of alarm have mentioned the difficulties of academic entrepreneurs to accommodate their skills to the market. Besides, the previous evidence support the idea that academic entrepreneurs have less managerial skills and industry experience than their counterparts. The present paper analyzes in depth whether the academic entrepreneurs can reduce such limitations. Indeed, we propose a methodology based on a time series research design and the concept of Total Factor Productivity in a Spanish sample of 177 new technological firms. In short, we define learning as the growth of the output that is generated maintaining the inputs constant. The results give strong support to the fact that the academic entrepreneurs learn the characteristics of the market fast, concretely our estimation situate that 7% of the annual output growth of university spin-offs is explained by learning.

Social Capital and the Viability of Nonprofit Firms: Evidence from Norwegian Savings Banks
Charlotte Ostergaard (Norwegian School of management)
Ibolya Schindele (Norwegian School of management)
Bent Vale(Norges Bank (central bank of Norway))

Hansmann (1996) points out that a surprisingly large number of nonprofit firms operate in developed economies, often in sectors where they compete with for-profit firms. In this paper, we shed new light on the viability of nonprofit firms by study-ing the survival of nonprofit savings banks in the Norwegian banking industry after branching deregulations in the mid-1980s. We propose that banks’ survival is related to the level of social capital in the local communities in which they operate. Using newspaper readership and charity donations to proxy for the amount of social capital,we estimate that an increase in social capital from the minimum to the maximum level observed in the sample increases the probability of survival for the average bank by approximately 10 percentage points at the time of deregulation. The result is robust to controls for, among others, bank equity, bank competition, population age and education. Our findings suggest that social capital may facilitate collective decision-making and the alignment of stakeholders’ preferences.
Innovation Policy Reform

Tuomas Takalo (BoF)
Tanja Tanayama (HECER, University of Helsinki)
Otto Toivanen (HECER, University of Helsinki)

Innovation policy is regarded important by both policy makers and academics. This paper analyzes optimal R&D tax credits and R&D subsidies. We base our counterfactual analysis on a structural treatment effect model of an R&D subsidies-only regime, and estimate its parameters by taking the model to Finnish R&D project data. We derive the optimal level of an R&D tax credit which turns out to be 0.72. We find that laissez-faire, optimal R&D tax credits and R&D subsidies generate much lower R&D investments and spillovers than what is socially optimal, but generate private profits and welfare that is very close to the social optimum. Active innovation policy makes only a marginal improvement over laissez-faire in terms of welfare while there is substantial room for improvement as laissez-faire generates 71% of first best welfare.

Complementarities of Innovation Activities: An Empirical Analysis of the German Manufacturing Sector

Claudia Schmiedeberg (University of Hamburg)

Innovation strategies in manufacturing often involve internal R&D activities as well as external partnerships. Thereby it is not clear if internal and external activities are complements or substitutes. This paper tests for complementarity of different innovation activities, i.e. internal R&D, R&D contracting, and R&D cooperation. The empirical analysis of cross-sectional firm level data of the German manufacturing sector comprises both indirect and direct complementarity tests, using data from the German part of the Community Innovation Survey (CIS 3). The results provide evidence for significant complementarities between internal R&D and R&D cooperation, but cast doubt on the complementarity of internal and contracted R&D, since a productivity effect on firms’ patenting probability or sales with new products cannot be found.
Additionality Effects of R&D Subsidies. Foreign Versus Domestic Firms: who Reaps Most Fruits?
Kris Aerts (K.U.Leuven, Belgium)

The large presence of foreign-owned companies in Flanders, especially in R&D intensive industries, combined with a limited number of foreign affiliates receiving the lion share of Flemish R&D subsidies, raises questions about the impact of foreign ownership on the effectiveness of public R&D funding. Semi-parametric matching confirms positive input additionality effects, irrespective of the ownership structure. Next, the counterfactual, privately financed R&D expenditure was disentangled from the publicly induced, additional R&D expenditure. The results show that in general, both R&D expenditure components are translated into more R&D output, but foreign-owned companies are more efficient and capture economic value as well.

Mixed R&D Incentives: the Effect of R&D Subsidies on Patented Inventions
Cédric Schneider (KU Leuven & Copenhagen Business School)

This paper analyzes the effects of mixed public-private R&D incentives. In a simple model, I show in which cases it is optimal for the legislator to allow publicly funded inventions to be patented. In addition, I conduct an empirical test as to whether patents that were publicly sponsored are more "important" than non-subsidized ones.

The main results of the paper are: (i) blending patents and public subsidies will allow the funding agency to subsidize inventions that would otherwise not elicit investment because the private incentive will not fully cover the cost of the invention, (ii) the policy maker will only subsidize inventions that have a high social value and (iii) the empirical analysis shows that subsidized inventions result in more "important" patents, as measured by the number of forward citations.
Strategic Delegation in Experimental Duopolies with Endogenous Incentive Contracts
Nikolaos Georgantzis (LEE-LINEEX, Universitat Jaume I, and Economics Dept. University of Cyprus)
Constantine Manasakis (Department of Economics, University of Crete)
Evangelos Mitrokostas (Department of Economics, University of Crete)
Emmanuel Petrakis (Department of Economics, University of Crete)

We study the endogenous emergence of incentive contracts used by firm owners to delegate the strategic decisions of the firm. These contracts are linear combinations either of own firm's profits and revenues, or own and rival firms' profits. According to the theoretical prediction, each type of contract is the owner's best response to the other owner's choice, while focal point analysis reveals that each owner will finally compensate his manager with a contract combining own and rival profits. A two- and three-stage versions are studied depending on whether owners commit or not to a certain contract type before setting the managerial incentives and the level of output to produce in the market. We report experimental results which confirm some of the predictions of the model, especially those concerning the choice of relative performance incentives. Neglected behavioral aspects are proposed as possible explanation of some divergence between the theory and the experimental evidence.

Codes of Best Practice in Competitive Markets for Managers
Eduard Alonso-Pauli (Universidad Pablo de Olavide)
David Perez-Castrillo (Universitat Autònoma de Barcelona)

We study firms' corporate governance in environments where possibly heterogeneous shareholders compete for possibly heterogeneous managers. A firm, formed by a shareholder and a manager, can sign either an incentive contract or a contract including a Code of Best Practice. A Code allows for a better manager's control but makes manager's decisions hard to react when market conditions change. It tends to be adopted in markets with low volatility and in low-competitive environments. The firms with the best projects tend to adopt the Code when managers are not too heterogeneous while the best managers tend to be hired through incentive contracts when the projects are similar. Although the matching between shareholders and managers is often positively assortative, the shareholders with the best projects might be willing to renounce to hire the best managers, signing contracts including Codes with lower-ability managers.
Product Market Competition, Incentives and Fraudulent Behavior
Rainer Andergassen (University of Bologna)

The present paper investigates the role of product market competition in shaping incentive contracts and its effect on fraudulent behavior. We consider a framework where a manager, having private information about the company's market share, can influence the company's short-run market value exerting effort or through costly (fraudulent) signalling. We derive the optimal stock-based compensation contract which maximizes the expected long-run firm value in the presence of an imperfect monitoring technology and describe the shareholders trade-off between effort and fraud as the degree of product market competition varies.

Interviews and Adverse Selection
Jens Josephson (Universitat Pompeu Fabra)
Joel Shapiro (Universitat Pompeu Fabra)

Poor placement of good candidates in professional labor markets can have a persistent negative impact on workers' careers and market efficiency. In a simple dynamic model where firms interview applicants who have private information about their own ability, potentially large inefficiencies arise from information-based unemployment, where able workers are rejected by firms because of their lack of offers in previous interviews. This effect is robust to generalizations of the interview process - multiple periods, open or exploding offers, and changes in the information structure - and can make the market less efficient than random matching. Using a market design approach, we show that first best can be achieved with two mechanisms with transfers and that we can get arbitrarily close to first best in a mechanism without transfers.
University Spin-Off’s Transfer Speed - Analyzing the Time from Leaving University to Venture

Kathrin Mueller (ZEW Mannheim)

This paper investigates the time that elapses between when the founder of an academic spin-off company has left his academic institution and the establishment of his firm. Technology transfer can take place even years after leaving the mother institution. A duration analysis could reveal that a longer time-lag is, besides other factors, caused by the existence of complementarities in skills. On the other hand firm establishment is accelerated if the intensity of technology transfer is high.

On The Stability of Research Joint Ventures: Implication for Collusion

Tomaso Duso (Humboldt University Berlin and WZB)
Enrico Pennings(Erasmus University Rotterdam)
Jo Seldeslachts (WZB)

Though there is a body of theoretical literature on research joint venture (RJV) participation facilitating collusion, empirical tests are rare. Even more so, there are few empirical tests on the general theme of collusion. This note tries to fill this gap by assuming a correspondence between the stability of research joint ventures and collusion. By using data from the US National Cooperation Research Act, we show that large RJVs in concentrated industries are more stable and hence more suspect to collusion.
The Empirical Study of R&D Collaboration and Enterprises Innovation

Ching-Chun Hsu (National I-Lan University, Taiwan)
Kuang-Hsien Wang (Ming Chuan University, Taiwan)

The innovative capacity of a country is the basic driving force behind its economic performance. The strategy of R&D collaborations is a critical element of enterprises and national competitive advantage. Unlike the case of many of the collaborative arrangement between established firms in the US or Europe, where mutual risk reduction is frequently the driving influence, in the case of public sector research institutes such as Taiwan’s industrial Technology Research Institute it is technological learning, upgrading and catch-up industry creation that is the object of the R&D collaborative exercises. However, what are the determining factors in the success of cooperation between firms and research institutes? One interesting and important issue arise that whether the different sizes in R&D collaborations arise from the different motivations of cooperation reflects the innovative feedbacks of the establishers? This paper finds a significant and positive relationship between the size of R&D collaboration and number of patents produced as a result of the collaboration based on Taiwan’s micro-data. Furthermore, the largest size of R&D collaboration also produces the largest returns on total patents and innovation patents. On the contrary, the small-sized R&D collaboration generate the most process patents.

Competing Technologies in the Database Management Systems Market

Tobias Kretschmer (LMU Munich)

In this paper, we study the dynamics of the market for Database Management Systems (DBMS), a market with network effects and vigorous competition in our study period, 2000 - 2004. We use a unique and detailed dataset on several thousand UK firms to study individual organizations’ incentives to adopt a particular technology. We find that there are significant internal complement effects between operating systems and DBMS from the same vendor, and enterprise resource planning systems (ERP) and DBMS in general. Further, we find that as ERP are frequently specific and customized, DBMS are unlikely to be changed once they have been customized to an ERP. The data also highlights that organizations have an increasing tendency to use multiple DBMS on one site, which contradicts the intuition that different DBMS are near-perfect substitutes.
INTERNET AUCTIONS
Room J3
Chair: Sander Onderstal
Friday 5 Sep 2008, 8:30 – 10:30

Asymmetric Information, Adverse Selection and Seller Disclosure: The Case of eBay Motors
Gregory Lewis (Harvard University)

Since the pioneering work of Akerlof, economists have been aware of the adverse selection problem that information asymmetries can create in used goods markets. The remarkable growth in online auctions of used goods, where buyers generally purchase sight unseen, therefore poses a puzzle. I argue that given a means for credible information disclosure, sellers will voluntarily disclose their private information to buyers through online media. This limits information asymmetries and adverse selection. To test this theory, I examine the role of information in a large online used car market, eBay Motors. I find that sellers selectively disclose information; that information asymmetries are reduced by these disclosures; and that online media such as photos, text and graphics provide a rich environment for information disclosure.

The Actual Structure of eBay’s Feedback Mechanism and Early Evidence on the Effects of Recent Changes
Tobias Klein (Tilburg University)
Christian Lambertz (University of Mannheim)
Giancarlo Spagnolo (University of Rome)
Konrad Stahl (University of Mannheim)

EBay’s feedback mechanism is considered crucial to establishing and maintaining trust on the world’s largest trading platform. The effects of a user’s reputation on the probability of sale and on prices are at the center of a large number of studies. More recent theoretical work considers aspects of the mechanism itself. Yet, there is confusion amongst users about its exact institutional details, which also changed substantially in the last few months. An understanding of these details, and how the mechanism is perceived by users, is crucial for any assessment of the system. We provide a thorough description of the institutional setup of eBay’s feedback mechanism, including recent changes to it. Most importantly, buyers now have the possibility to leave additional, anonymous ratings on sellers on four different criteria. We discuss the implications of these changes and provide first descriptive evidence on their impact on rating behavior.
Reputation, Trust, and Rebates: How Online Auction Markets Can Improve Their Feedback Mechanisms

Lingfang Li (University of Louisville)

Reputation systems constitute an important institution to help sustain trust in on-line auction markets. However, only half of buyers leave feedback after transactions, and nearly all of it is positive. In this paper, I propose a mechanism whereby sellers can provide rebates (not necessarily in monetary form) to buyers contingent upon buyers' provision of reports. Using a game theoretical model, I show how the mechanism can increase unbiased reporting. There exists a pooling equilibrium where both good and bad sellers choose the rebate option, even though their true types are revealed through feedback. The mechanism also induces bad sellers to improve the quality of the contract.

Fighting Collusion in Auctions: An Experimental Investigation

Audrey Hu (University of Amsterdam)
Theo Offerman (University of Amsterdam)

Sander Onderstal (University of Amsterdam)

The danger of collusion presents a serious challenge for auctioneers. In this paper, we compare the collusive properties of two standard auctions, the English auction and the first-price sealed-bid auction, and a lesser-known format, the Amsterdam (second-price) auction. In the Amsterdam auction, the highest losing bidder earns a premium for stirring up the price. We study two settings: in one, all bidders can collude, and in another, only a subset is eligible. The experiments show that the Amsterdam auction triggers less collusion than the standard auctions. We compare experimental results to theoretical predictions, and provide an explanation where they differ.
Firm Growth in Multinational Corporate Groups

Harald Oberhofer (Department of Economics and Statistics, University of Innsbruck)
Michael Pfaffermayr (Department of Economics and Statistics, University of Innsbruck)

This paper formulates an econometric firm growth model that explicitly accounts for the interdependence of firm performance within corporate networks and is in line with several economic theories on firm growth. We test the model for national and multinational corporate groups using a recently introduced instrumental variable estimation procedure for peer group effects developed by Lee(2007). In our data for corporate groups the observation of fast growing young firms and slow growing old firms disappears if interdependence of firm performance within corporation networks is introduced.

Geographical and Multi-Product Linkages of Markets: Impact on Firm Equilibrium Interactions (Some Evidence from the European Car Market)

Nina Leheyda (Center for European Economic Research (ZEW))

This paper aims to study geographical and multi-product linkages of markets (multiple market presence) and firm behaviour interdependence as a result of such linkages existence. In particular, it attempts to answer whether the multimarket linkages lead to more cooperative behaviour among the firms, which results in higher prices and profits, and whether the degree of collusive/cooperative behaviour varies across markets. These issues are investigated within a structural oligopoly model for differentiated products for the European automobile market on the basis of the aggregate product-level data for 1970-1999. The results of the study reveal weak (quantitative) effect of multimarket contact on market conduct/pricing in the European car market as well as provide some evidence on the redistribution of the market power from the more collusive to the more competitive markets due to multimarket contact.
The Impact of Competition on Macroeconomic Performance
Karl Aiginger (Austrian Institute of Economic Research)

This paper investigates the impact of the toughness of competition on the macroeconomic performance of countries. The relation between competition and innovation has been investigated intensely in industrial economics. It started with Schumpeter’s hypotheses that monopoly profits were necessary for innovation, leading then to u-curve relationships where innovation was the highest for medium-range of competition, but lower for very tough competition as well as for a very lax competitive regime. Empirical studies on the growth differences between countries increasingly stress apart from the usual suspects like investment, R&D, human capital the role of institutions. They include indicators on regulation, government size, corruption and rule of law, but usually not the degree of competition. Conventional growth theory did not model the impact of competition, but assumed perfect competition. In New Growth Theory, economic growth depends on purposeful and maximizing innovation activities, where market structure plays an important role. But this did not result in the inclusion of competition variables into empirical growth equations.

We have attempted to bridge this gap a bit by relating thirteen indicators on the toughness of competition to macroeconomic performance. We then have added these competition indicators to an equation relating macro-performance to the standard explanatory variables for economic growth (like investment and R&D). The results indicate that competition plus innovation is a good recipe at the macro level too, probably with similar tensions and non-linearity as at the company level.

Transfer Pricing Rules and Business Relocations by Multinational Enterprises
Joachim Klein (Munich Graduate School of Economics)
Richard Schmidtke (Deloitte & Touche GmbH)

In this paper, we investigate the optimal choice of transfer pricing regulations from a normative point of view. In this context we put special emphasis on the treatment of business relocations. Two inefficiencies may arise: First, firms may structure a transaction as multinational enterprise (MNE) for tax reasons even though it would be welfare enhancing to carry out the transaction between unrelated parties due to the differences in transaction costs. Second, firms may not undertake a transaction, because under given regulations, it may not pay off even though such a transaction would be welfare enhancing. We show that the simple rule "related parties have to use the market price of unrelated parties as the intercompany transfer price as long as no party is worse off" implements the first best solution. Surprisingly, this shows that one does not have to account for efficiency differences of a MNE compared to unrelated parties.
RPM and Restrictions on Dominant Firm and Industry-Wide Adoption

Øystein Foros (Norwegian School of Economics and Business Administration)
Hans J. Kind (Norwegian School of Economics and Business Administration)
Greg Shaffer (University of Rochester)

This paper looks at the use of market-hare thresholds in evaluating whether a given vertical practice should be challenged. Although such thresholds can be found in the European Commission’s 2000 Vertical Restraints Guidelines and the now rescinded 1985 Vertical Restraints Guidelines of the U.S. Department of Justice, they have received little academic scrutiny. We take a first step in this direction by considering how well these guidelines might work in the context of a model in which firms employ resale price maintenance (RPM) to dampen downstream price competition. We find that restrictions on the use of RPM by a large dominant firm can be welfare improving relative to a laissez-faire policy, whereas restrictions on the extent of the relevant market that can be covered by RPM may reduce welfare.

Exclusive Dealing: the Interaction between Foreclosure and Investment Promotion

Chiara Fumagalli (Università Bocconi)
Massimo Motta (EUI and Università di Bologna)
Thomas Ronde (University of Copenhagen)

This paper studies a model where exclusive dealing (ED) can both promote investment and foreclose a more efficient supplier. While investment promotion is usually regarded as a pro-competitive effect of ED, our paper shows that it may be the reason why a contract that forecloses a more efficient supplier is signed. Absent the effect on investment, the contract would not be signed and foreclosure would not be a concern. For this reason, considering potential foreclosure and investment promotion in isolation and then summing them up may not be a suitable approach to assess the net effect of ED. The paper shows that taking into account their interaction may lead to very different conclusions.
The Control of Porting in Two-Sided Markets

Rufus Pollock (Cambridge University)

A sizable literature has grown up in recent years focusing on two-sided markets in which economies of scale combined with complementarities between a platform and its associated ‘software’ or ‘services’ can generate indirect network effects (that is positive feedback between the number of consumers using that platform and the utility of an individual consumer). In this paper we introduce a model of ‘porting’ in such markets where porting denotes the conversion of ‘software’ or ‘services’ developed for one platform to run on another. Focusing on the case where a dominant platform exists we investigate the impact on equilibrium and the consequences for welfare of the ability to control porting. Specifically, we show that the welfare costs associated with the ‘control of porting’ may be more significant than those arising from pricing alone. This model and its associated results are of particular relevance because of the light they shed on debates about the motivations and effects of actions by a dominant platform owner. Recent examples of such debates include those about Microsoft’s behaviour both in relation to its operating system and its media player, Apple’s behaviour in relation to its DRM and iTunes platform, and Ebay’s use of the cyber-trespass doctrine to prevent access to its site.

Bundling and Competition for Slots

Doh-Shin Jeon (Universitat Pompeu Fabra)
Domenico Menicucci (Università degli Studi di Firenze)

We study competition among upstream firms when each of them sells a portfolio of distinct products and the downstream firm has limited slots (or shelf space). In this situation, we study how bundling affects competition for slots. When the downstream has k number of slots, social efficiency requires that it purchases the best k products among all upstream firms’ products. We find that under bundling, the outcome is always socially efficient but under individual sale, the outcome is not necessarily efficient. Under individual sale, each upstream firm faces a trade-off between quantity and rent extraction due to the coexistence of the internal competition (i.e. competition among its own products) and the external competition (i.e. competition from other firms’ products), which can create inefficiency. On the contrary, bundling removes the internal competition and the external competition among bundles makes it optimal for each upstream firm to sell only the products belonging to the best k. This unambiguous welfare-enhancing effect of bundling is novel and robust.
The Deterrence Effect of Excluding Ringleaders from Leniency Programs
Jesko Herre (University of Cologne)
Alexander Rasch (University of Cologne)

This paper looks at the effects of excluding ringleaders from leniency programs on the sustainability of collusion and on the ability of the antitrust authorities to convict cartels. We find that excluding ringleaders decreases the sustainability of collusion by forgoing the information an additional whistleblower means for the antitrust authority. On the other hand, a ringleader will ask for a compensation for not being able to apply for leniency. Such a compensation, however, results in an asymmetry between the ringleader and the other cartel members which may destabilize collusion. We show that if an antitrust authority commits to a low probability of reviewing industries, excluding ringleaders from leniency programs increases the sustainability of collusion. If the probability of review is high, such an exclusion may decrease the sustainability.

Leniency Programs for Multimarket Firms: The Effect of Amnesty Plus on Cartel Formation
Yassine Lefouili (Paris School of Economics and Université Paris-I Panthéon Sorbonne)
Catherine Roux (Département d’Econométrie et d’Economie Politique, Ecole des HEC, University of Lausanne)

We examine the effect of the Amnesty Plus policy on firms’ incentives to engage in cartel activities. Amnesty Plus is a proactive antitrust enforcement strategy aimed at attracting amnesty applications by encouraging firms already convicted in one market to report collusive agreements in other markets. On the one hand, Amnesty Plus may encourage firms to form - in addition to a first - a second, less profitable, cartel which solely serves as a protection against the detection of the more profitable cartel by the Antitrust Authority. Firms denounce this second cartel as soon as the Authority discovers the other infringement in the hope of a discount in the fine imposed. On the other hand, Amnesty Plus may also have a pro-competitive effect by reducing firms’ incentives to form this second cartel which without Amnesty Plus would have been created. This is the case if firms anticipate that the costs which they incur when the second cartel is reported as soon as the more profitable cartel is discovered are too high.
Leniency and Commitments
Arnold Vialfont (CREST-LEI)

We analyze the impact of the introduction of a commitments procedure in collusion cases, when the competition authority also employs leniency programs. Both of these procedures provide the insurance effect of plea-bargaining: they avoid trial errors when the defendant is actually guilty. Under the assumption that collusion is not deterred ex ante, we show that leniency programs, that imply competition during proceedings, may be complemented by the introduction of the commitments procedure when the CA maximizes the consumers' surplus. In a dynamic framework with symmetric sectors, we find that the CA can be tougher in negotiations as much as it has already accepted commitments from formerly audited sectors, given that it enhances mechanically the audit probability. However, when firm anticipates this effect, the authority must also commit in negotiations, not to overuse this procedure.
Fines, Leniency, Rewards and Organized Crime: Evidence from Antitrust Experiments
Maria Bigoni (IMT Lucca)
Sven-Olof Fridolfsson (IfN Stockholm)
Chloé Le Coq (Stockholm Institute of Transition Economics (SITE)
Giancarlo Spagnolo (Tor Vergata university Rome)

Leniency policies and rewards for whistleblowers are being introduced in ever more fields of law enforcement, though their deterrence effects are often hard to observe, and the likely effect of changes in the specific features of these schemes can only be observed experimentally. This paper reports results from an experiment designed to examine the effects of fines, leniency programs, and reward schemes for whistleblowers on firms' decision to form cartels (cartel deterrence) and on their price choices. Our subjects play a repeated Bertrand price game with differentiated goods and uncertain duration, and we run several treatments different in the probability of cartels being caught, the level of fine, the possibility of self-reporting (and not paying a fine), the existence of a reward for reporting, the option to communicate, and cartel leaders access to leniency. We find that fines following successful investigations but without leniency have a deterrent effect (reduce the number of cartels formed) but also a pro-collusive effect (increase collusive prices in surviving cartels). Leniency programs might not be more efficient than standard antitrust enforcement, since in our experiment they do deter a significantly higher fraction of cartels from forming, but they also induce even higher prices in those cartels that are not reported, pushing average market price significantly up relative to treatments without antitrust enforcement. With rewards for whistle blowing, instead, cartels are systematically reported, which completely disrupts subjects' ability to form cartels and sustain high prices, and almost complete deterrence is achieved. If the ringleader is excluded from the leniency program the deterrence effect of leniency falls and prices are higher than otherwise. As for tacit collusion, under standard anti-trust enforcement or leniency programs subjects who do not communicate (do not go for explicit cartels) tend to choose weakly higher prices than where there is no anti-trust enforcement. We also analyze post-conviction behavior, finding that after convictions caused by a report under the leniency program much fewer cartels form and prices are much lower than when conviction is due to an independent antitrust investigation. Finally, we find a strong cultural effect comparing treatments in Stockholm with those in Rome, suggesting that optimal law enforcement institutions differ with culture.
Political Price Cycles in Regulated Industries: Theory and Evidence
Rodrigo Moita (Ibmec Sao Paulo)
Claudio Paiva (IMF)

The relationship between politics and economic policy has a long tradition in economic analysis. The early work of Stigler (1971) which was further developed by Peltzman (1976) treats the regulatory process as the arbitration of conflicting social, economic, and political interests rather than a pure welfare-maximizing effort. In this model, the regulated price is chosen so as to maximize political support for the incumbent government-regulator. However, the static nature of this theory limits its ability to explain the political cycle. This paper combines the main ideas of Peltzman (1976) with the ones from the political business cycle literature, Rogoff and Sibert (1988) and Rogof (1990), to model the regulator’s problem as a signaling game where politicians set the regulated price trying to maximize electoral support by signaling to voters a pro-consumer behavior. Political incentives and welfare constraints interact in the model yielding an equilibrium in which the real price in a regulated industry falls in periods immediately preceding an election. Besides presenting a new model of political price cycles in regulated industries, this paper also provides empirical support for this theory. Using quarterly data from 32 industrial and developing countries over the period 1978-2004, we find strong statistical and econometric evidence pointing towards the existence of electoral price cycles in gasoline markets.

Entry and Exit of Firms in a Global Economy: a Cross-Country and Industry Analysis
Italo Colantone (Katholieke Universiteit Leuven)
Leo Sleuwaegen (Katholieke Universiteit Leuven and Vlerick Leuven Gent Management School)

This paper examines the impact of international trade on firm entry and exit in Europe. The results point to strong displacement exit and less creative replacement entry in industries characterized by increasing import competition Moreover, the evidence suggests strong selection and higher entry barriers in industries characterized by higher openness through the export channel. The negative effects of trade openness lose importance if the increasing trade exposure concerns intra-industry trade, mainly coupled with international sourcing within the industry.
Export Premia and Sub-Contracting Discount. Passive Strategies and Performance in Domestic and Foreign Markets

Tiziano Razzolini (University of Turin)
Davide Vannoni (University of Turin)

This paper contributes to the literature on firms’ productivity and exporting decisions by analysing the role played by organizational choice aspects. Rather than setting up a vertically integrated structure, manufacturers may act as sub-contractors in both domestic and foreign markets, and produce to satisfy the requirements of other firms. A very simple model is presented where the most productive firms self-select into exporting, while the least productive ones work as sub-contractors serving the domestic market only. These predictions are tested using a sample of Italian firms observed in the 1998-2003 period. The results of our estimates highlight a ranking of firms consistent with a priori expectations, and provide a clear indication that passive exporters (i.e. using sub-contracting in foreign markets) display lower TFP values as compared to direct exporters. Moreover, only the latter category exhibits higher pre-entry productivity levels and growth rates as well as higher post-entry TFP growth rates. Such findings are consistent with both the self-selection hypothesis and the learning by exporting explanation.

Do Financial Constraints Matter for Foreign Market Entry? A Firm-Level Examination

Joel Stiebale (RWI Essen)

Recent theoretical and empirical contributions stress the importance of financial development for international trade. This paper investigates whether financial constraints matter for foreign market entry at the firm level using dynamic panel data techniques. The empirical framework is applied to a panel of French manufacturing firms over the years 1998-2005. Although financial indicators are significantly correlated with export status and export share, there is no evidence that financial constraints have a direct impact on foreign market participation or sales in foreign markets, once observed and unobserved firm heterogeneity is controlled for. This result also holds for subgroups of firms that are more likely to face financial constraints and industries in which financial factors are more important.
Efficiency Gains and Mergers

Giuseppe De Feo (University of Strathclyde, Glasgow)

In the theoretical literature, strong arguments have been provided in support of the efficiency defense in antitrust merger policy. One of the most often cited results is due to Williamson (1968) that shows how relatively small reduction in cost could offset the deadweight loss of a large price increase. Furthermore, Salant et al. (1983) demonstrate that (not for monopoly) mergers are unprofitable absent efficiency gains. The general result, drawn in a Cournot framework by Farrell and Shapiro (1990), is that (not too large) mergers that are profitable are always welfare improving.

In the present work we challenge the conclusions of this literature in two aspects. First, we show that Williamson's results underestimate the welfare loss due to a price-increasing merger and overestimate the effect of efficiency gains. Using the simple linear Cournot model, we show that efficiency gains needed to compensate for the deadweight loss are much larger than Williamson's. Then, we prove that the conditions for welfare improving mergers defined by Farrell and Shapiro (1990) hold true only when consumers are adversely affected. This seems an argument to disregard their policy prescriptions when antitrust authorities are more "consumers-oriented". In this respect, we provide a necessary and sufficient condition for a consumer surplus improving merger: in a two firm merger, efficiency gains must be larger than the pre-merger average markup.

Vertical Mergers in Markets with Network Effects

Gerhard Clemenz (University of Vienna)

This paper investigates the impact of vertical mergers between producers and retailers on social welfare and consumer surplus if the goods under consideration display network effects and are not compatible with each other. It is shown that vertical integration is indeed harmful for consumers because the integrated firm is able to exploit the network effect in such a way that the other producer is effectively kept out of the market and consumers have to pay higher retail prices.
**Spatial Competition and Merging Incentives when Firms Produce complements**  
*Stefania Borla (University of York)*

In a model of spatial competition, we show that complementarities and market size can benefit the parties to a merger more than any outsiders thus leading to higher concentration. The driving force behind these results is the negative demand externality imposed by the merging firms on the non-merged units in the same locations, which tends to counteract the increase in the composite price (or overall cost of shopping) in the locations with a merger. Since however some of the outsiders are harmed, we also consider how the possibility of subsequent mergers by the initially harmed outsiders may change the incentives for the first integration. Our results show that if the market size is sufficiently large, then the initial merger will still be carried through. It follows then that there would be a real need for regulation: market power and market interactions may provide firms with incentives to merge, just like efficiency gains do.

**Vertical Integration in Sequential Negotiations**  
*Sergei Koulayev (Columbia University)*

We study vertical integration in the form of financial ownership as a way to improve bargaining position of a firm in sequential negotiations. In our model an upstream monopolist bargains sequentially with two downstream firmsover productive agreements. We consider two cases. First, if the bargaining sequence is pre-determined, then integrating with one of the downstream firms helps the monopolist to extract more rents from the other firm, by raising his outside option in negotiations. Second, if we make bargaining sequence endogenous by allowing the monopolist to choose his bargaining partner, then integration produces an additional effect: it serves as a commitment device of no return to the non-integrated firm after a breakdown of negotiations. This makes her more willing to settle today, and at higher price. These favorable effects, however, only realize if downstream firms are strategic substitutes, and are reversed if firms are complements. In other words, the desirability of a vertical merger is determined by the curvature of the joint production function.

We also study the case when the principal is located downstream, and with some surprise we find that his expected profits are unaffected by vertical integration.
Explaining the Persistence of Profits: A Time-Varying Approach

Jesus Crespo-Cuaresma (University of Innsbruck)
Adelina Gschwandtner (University of Vienna)

The present paper analyzes the determinants of profit persistence using a newly developed methodology that allows for the persistence parameter to vary with time. It therefore addresses a significant limitation of previous persistence models, which have assumed unrealistically that persistence is fixed over relatively long period of 20 years upwards. The concentration and the size of the industry are found to have a significant positive impact on profit persistence. However, at firm level, market share and risk have surprisingly a negative impact on profit persistence.

Panel Data Estimates of the Production Function and Product and Labor Market Imperfections

Sabien Dobbelbaere (Ghent University, K.U.Leuven, IZA Bonn)
Jacques Mairese (CREST-INSEE, MERIT-Maastricht University, NBER)

Embedding the efficient bargaining model into the R. Hall (1988) approach for estimating price-cost margins shows that both imperfections in the product and labor markets generate a wedge between factor elasticities in the production function and their corresponding shares in revenue. This article investigates these two sources of discrepancies both at the industry level and the firm level using an unbalanced panel of 10646 French firms in 38 manufacturing industries over the period 1978-2001. By estimating standard production functions and comparing the estimated factor elasticities for labor and materials and their shares in revenue, we are able to derive estimates of average price-cost mark-up and extent of rent sharing parameters. For manufacturing as a whole, our estimates of these parameters are of an order of magnitude of 1.17 and 0.44 respectively. Our industry-level results indicate that industry differences in these parameters and in the underlying estimated factor elasticities and shares are quite sizeable. Since firm production function, behavior and market environment are very likely to vary even within industries, we also investigate firm-level heterogeneity in estimated mark-up and rent-sharing parameters. To determine the degree of true heterogeneity in these parameters, we adopt the P.A. Swamy (1970) methodology allowing to correct the observed variance in the firm-level estimates from their sampling variance. The median of the firm estimates of the price-cost mark-up ignoring labor market imperfections is of 1.10, while as expected it is higher of 1.20 when taking them into account and the median of the corresponding firm estimates of the extent of rent sharing is of 0.62. The Swamy corresponding robust estimates of true dispersion are of about 0.18, 0.37 and 0.35, showing indeed very sizeable within-industry firm heterogeneity. We find that firm size, capital intensity, distance to the industry technology frontier and investing in R&D seem to account for a significant part of this heterogeneity.
Corporate Growth and Size across Portuguese Regions

Natàlia Barbosa (University of Minho)
Vasco Eiriz (University of Minho)

This paper analyses the patterns of corporate growth of manufacturing firms across Portuguese regions. In particular, we compare corporate size and growth rates in order to investigate (i) whether regional differences in terms of mix of economic activities, interpreted as generating localization economies, exert any influence on corporate growth and size and (ii) whether there is evidence of persistence in corporate growth across regions. Using an extensive dataset of Portuguese manufacturing firms and applying parametric and semi-parametric approaches, we found that corporate size, measured by total assets, follows approximately a log-normal distribution in seven of the eighteen analyzed regions. This result suggests that in those seven regions, corporate growth rates are unrelated to corporate size and therefore firms have equal probabilities of attaining a particular growth rate within any given period. However, by estimating corporate growth as a function of lagged values of corporate size we uncovered that Portuguese manufacturing firms experience serial correlation in their growth patterns in all regions. This offers evidence on the persistence of corporate growth at regional level, indicating that corporate growth depends on firm’s previous success.

Pursuing a Basic Principle of Performance Measurement: the Case of a Firm Level Innovation Scoreboard

Giuliana Battisti (Aston University)
Amid Mourani (Warwick University)
Paul Stoneman (Warwick University)

A principle that is basic to the validity of any measure of firm performance is that the indicator must be endogenous to, i.e. the caused output of, the performance generating process. In this paper this principle, plus the requirement that any measure must also be conceptually acceptable, is applied to the development of a firm level innovation scoreboard both as an example and because of inherent interest in such a scoreboard. A balanced panel of data on 552 UK firms over the period 1994 to 2005 is used to test for causality using GMM and other techniques. With innovation defined as the successful exploitation of new ideas, it is proposed that: exploitation be measured by total factor productivity; success be measured by the return on capital employed; and their multiple be taken as the indicator of innovation. Results for the sample firms are presented and discussed.
Crossing the Alps: The Economic Value of Road Tunnels

Daniel Cerquera (ZEW)
Hannes Ullrich (ZEW)

In this paper we structurally estimate the economic value of crossing the Alps for the European road freight sector. Using a detailed survey on Trans-Alpine road freight traffic, we show a considerable level of cost-elasticities of substitution between the different tunnels and passages. Ultimately, our results permit the economic evaluation of security and environmental policies affecting Trans-Alpine traffic. In particular, we estimate the yearly cost of closing the Mont-Blanc road tunnel, as was the case after the accident in 1999, at about 15 million Euros. The suggested framework should further allow to analyze the potential privatization and deregulation of some passageways.

Modelling the Incidence of Taxation as an Outcome of Imperfect Competition in the Irish Automobile Industry

Franco Mariuzzo (University of Groningen)
Patrick Paul Walsh (UCD)

Vehicle Registration Tax (VRT) is an ad-valorem tax charged on the registration of all new cars in Ireland and is differentiated by the engine size of a car. We embed such delineation in taxation into an oligopolistic industry made up of products differentiated by indirect utility (quality) and cost. Our paper writes down a simple theoretical model to show how taxation interacts with the primitives of products in a third best world to determine the incidence of taxation on producers and consumers. We test our predictions using a cross-section of data on new cars in Ireland. We utilize a structural model of equilibrium, inclusive of the effect of taxation, to jointly estimate the primitives of demand and cost. We evaluate numerically the incidence of differentiated ad-valorem taxation and show that the incidence on the consumer is higher when product quality and cost efficiency is low (ex-ante market power is low). The incidence of taxation, and possibility of tax overshifting, are clearly driven by the estimated indices of product quality and cost impact on imperfectly competitive price competition (cross-price effects) in a third best world where tax distortions interact with endogenous divergences from perfectly competitive pricing.
Evaluating Project Deadweight Measures: Evidence from Finnish Business Subsidies
Mika Haapanen (University of Jyvaskyla, School of Business and Economics)  
Anu Tokila (University of Jyvaskyla, School of Business and Economics)

An important problem in the measurement of the impacts of business subsidies is their separation from deadweight, which is referred to changes that would have occurred even in the absence of intervention. Public and private benefits are likely to be divergent in terms of deadweight, but so far little is known how they diverge. To address this issue, we conduct a joint evaluation of the private and public assessments of deadweight for Finnish business projects. A unique data set is utilized to combine large register data with both public and private information on projects financed in 2000â€“2003. First, our results suggest that the different measures for deadweight are greatly uncorrelated, and thus they cannot be used as substitutes. Second, characteristics affecting the public and private measures of deadweight are identified using ordered probit models. We find that the public and private sectors emphasize different factors in their assessment of deadweight. Third, the level of deadweight spending is estimated 73.8% at maximum.

Viability of a New Road Infrastructure with Heterogeneous Users in Madrid Access
Pedro Cantos (University of Valencia)  
Rafael Moner-Colonques (University of Valencia)  
Jose J. Sempere-Monerris(University of Valencia)  
Oscar Alvarez(University of Valencia)  

This paper explores the importance of heterogeneity in value of time when assessing the viability of a new road infrastructure to alleviate congestion problems. The Spanish government has developed a congestion pricing demonstration entering Madrid city centre, where road users have to choose between a free but highly congested road and a priced free-flowing road. We consider a continuum of users who differ in their value of time. Users dislike congestion and this is more so the more a user values his travel time. A logit estimation is undertaken with information from a questionnaire among road users in the Eastern Madrid area to obtain users' value of time. The impact and viability of artery road R3 under several competitive regimes is examined. The tolls obtained generate a traffic reallocation towards the new roadway such that revenues suffice to render the infrastructure socio-economically viable. This is so for all the competitive regimes analyzed even for modest traffic growth rates. Regarding economic viability, the artery road infrastructure is always economically viable under the private regime and for the other two regimes, a sufficiently high traffic growth rate is required.
Intra-Household Effects on Demand for Telephone Service: Empirical Evidence

*Ching-I Huang (National Taiwan University)*

I present a game-theoretical model to estimate consumption demand, accounting for intra-household interaction among household members. Although multiple Nash equilibria of consumption decisions may exist in a household, model parameters are pointwise identified from household-level data for households with only two members. I propose a semiparametric maximum likelihood estimator and apply it to empirically analyze the subscription decision for cellular phone service in Taiwan. On average, a consumer’s probability of subscribing to cellular service rises 35 percentage points when the other household member chooses to subscribe. This result suggests the existence of intra-household network effects on cellular phone consumption. The intra-household effect increases in household income, but decreases in the number of kids and the age difference in a household.

Internet districts in Italy: is Proximity an Antidote against Weak Competition?

*Alessio D'Ignazio (University of Cambridge)*

*Emanuele Giovannetti (University of Verona)*

In this paper we study the effects played by geographical distance in the interconnection decisions between Internet providers participating at the three main Internet Exchange Points (IXPs) in Italy. We present two main findings. Although Internet usage in Italy follows a clear geographical differentiation, with the northern and western regions having the largest share, the Italian IXP-based Internet industry shows no agglomeration in the pattern of interconnection agreements between providers. Interestingly, however, we find that geographical proximity plays a role in driving Internet Providers’ interconnection strategies, positively affecting the likelihood of reaching an agreement. This suggests the existence of localized positive externalities expressed in the form of mutual knowledge and reputation effects, one of the most cited drivers underlying the formation of districts also in non high-tech industries. We interpret these results as counterbalancing the weak competitiveness of the Italian broadband access market.
When Things Get Tough do the Tough Get Going? Founders’ Pre-Entry Work Experience and Young High-Tech Firm Survival in Turbulent Markets

Luca Grilli (Politecnico di Milano)

This article adds new insights into the relationship between founders’ human capital and the survival prospects of start-up businesses. The impact of founders’ human capital on firm survival is controversial. On one hand, more experienced and skilled individuals are likely to create start-up businesses with a high chance of survival; on the other hand, their opportunity cost to run the firm may be high given the potential returns for investing their efforts in alternative employment opportunities. The relationship may also be influenced by several factors: the specific characteristics of the human capital considered, the type of exit, the specific time period, the firm age range, and the industry under study. This empirical study is based on a sample of Italian start-up companies operating in ICT services markets that were created during the telecom boom period from 1995 to early 2000. Econometric analysis of the determinants of exits during the telecom bust from early 2000 to 2003 confirms that the relationship between founder human capital and firm survival is multifaceted. The study provides evidence that in an intense industry crisis, highly experienced entrepreneurs may pursue an exit strategy and highlights the importance of distinguishing between two possible exit routes: closure, and merger and acquisition (M&A). In particular, founding teams with highly specific work experience (i.e. gained in the same sector as the start-up company) show higher probability of following the M&A route, while a higher level of generic work experience (i.e. gained in other sectors) is more conducive to the closure option.

Cellular demand in South Africa: Urban vs rural patterns of consumption

Farid Gasmi (GREMAQ, IDEI, ARQADE)
Marc Ivaldi (GREMAQ, IDEI, EHESS)
Laura Recuero Virto ( Télécom ParisTech (ENST-SES))

We analyze demand for prepaid cellular voice and short message service (SMS) in South Africa by means of a demand-and-supply structural model based on a multinomial specification fitted to a cross-sectional data set on Vodacom customers collected in 2005. We find that consumers are very sensitive to changes in prices, with higher price elasticities than those typically found in developed countries. Consumers attach a higher value to communications during peak hours but since these are priced highly, they are as much as twice more elastic than off-peak communications. In relative terms, demand for communications during peak hours is more elastic for urban than for rural consumers, while the reverse can be said about demand for off-peak hours. The highest valuations are those placed by rural consumers on working hour communications. A policy implication of our analysis is that while in terms of access cellular deployment in South Africa has gone a long way into bridging the gap between the “first” and “second” economies, in terms of usage if market organizations or regulatory institutions were to encourage further investment in network availability in rural areas this could be rewarding both for the firm and its rural customers.
**TWO SIDED MARKETS EMPIRICAL**

*Room AR140*

Chair: Ryanne van Dalen

Friday 5 Sep 2008, 8:30 – 10:30

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**Competition and Price Discrimination in Two-Sided Markets: Evidence from the Spanish Local TV Industry**

*Ricard Gil (University of California, Santa Cruz)*  
Daniel Riera-Crichton (Bates College)

Despite the large literature on competition in two-sided markets, only a few papers have delivered implications of market competition on price discrimination strategies. Similarly, there is an extensive empirical literature examining the link between product market competition and the use of price discrimination in one-sided markets, but very few papers provide evidence of price discrimination in two-sided markets. This paper aims to contribute to both literatures by empirically documenting the relationship between competition and price discrimination in two-sided markets. For this purpose we use a data set of Spanish local TV industry that provides information on subscription and advertising prices at the station level for the years 1996, 1999 and 2002. During the period of time under study, this sector undertook a deep process of liberalization that had a strong impact on the level of market competition faced by local TV stations. In the paper, we use differences in market structure across markets and across years to study the relation of competition and price discrimination in this industry. Our findings suggest that stations in more competitive markets are less likely to use price discrimination, but also that new entrants are more likely to use price discrimination than incumbents. We also find evidence that in the presence of (direct or indirect) network effects offering a menu of prices in one side of the market raises the probability of observing price discrimination on the other side of the market.

**Open Versus Closed Platforms**

*Joacim Tåg (HANKEN, FDPE, HECER and IFN)*

This paper studies an industry in which firms can choose to provide open or closed platforms. Open platforms, as opposed to closed, are extendable so third-party producers can develop extensions for them. Building on a two-sided market model, I show that firms might prefer to commit to keeping their platforms closed despite the fact that opening the platform is costless and open platforms are more valuable to consumers. The reason is that an open platform leads to intensified competition for consumers.

Masayoshi Maruyama (Graduate School of Business Administration, Kobe University)
Kenichi Ohkita (Faculty of Business Administration, Kyoto Gakuen University)

This paper analyzes a model of platform competition in markets of system products composed of hardware and complementary software, with a specific focus on exclusive contracting. When hardware products are strongly differentiated, and/or when consumers highly evaluate the marginal benefit of additional software variety, we find that in equilibrium, hardware firms will engage in exclusive contracting of software development. This finding is strongly supported by our empirical results in the Japanese home video game industry dominated by Nintendo from 1984 to 1994.

The Dutch Radio Broadcasting Industry: Market Expansion or Business Stealing

Ryanne van Dalen (University of Groningen)

This paper empirically examines the demand side of the Dutch radio broadcasting industry. A nested logit specification is used to estimate a two-sided model of demand. This paper follows a novel approach by incorporating detailed firm-level information on advertising prices and advertising quantities from a unique dataset. The results show that the radio broadcasting market in The Netherlands can be characterized by business-stealing. Radio stations are found to be close substitutes and an increase in the number of radio stations is not expected to result in an increase in the total number of listeners.
Bankruptcy and Product-Market Competition: Evidence from the Airline Industry

Federico Ciliberto (University of Virginia)
Carola Schenone (University of Virginia)

Classical models of product market competition maintain that firms maximize their profits regardless of their financial condition. Yet over the last two decades a growing theoretical literature has examined whether a firm’s capital structure impacts competition in the market for the firm’s products. In this paper we ask whether a firm operating under bankruptcy protection significantly reshapes competition for the firm’s product in markets where the bankrupt and the non-bankrupt firms are in direct competition, using evidence from the US airline industry. The first part of the paper shows that (1) the median price in markets where a bankrupt carrier operates significantly drops; (2) competitors of a bankrupt firm differ in the way they react to the bankruptcy. In the second part of the paper, we estimate a structural model of demand for air travel and a model of airline pricing behavior. The results show that (1) shifts in the pricing equations of the bankrupt firm and of its competitors explain the observed price changes; (2) there is no evidence that consumers substitute away from a bankrupt airline to its competitors. Finally, we present a counter-factual experiment, to study how prices and consumer welfare would have changed if bankrupt firms had to liquidate their assets and exit the industry, without the possibility of operating under Chapter11 protection. We show that consumers did not benefit significantly from the availability of Chapter 11 to United or USAir; but that consumers benefited substantially from the availability of Chapter 11 to ATA.
Boeing’s behavior in the Very Large Aircraft Segment: a Case of Failed Preemption or a Strategic Choice?
Luigi Cuccia (Università degli Studi di Catania)
Giovanni Perrone (University of Basilicata)

This paper deals with one of the most controversial dispute in strategic behavior that is the deal between Airbus and Boeing in the Very Large Aircraft (VLA) segment. The issue concerns the introduction of the Airbus 380 (A380) and the reason why Boeing did not preempt Airbus in this matter, having for several times announced the intention to do it. We will critically review the most interesting literature about the issue by commenting the principal results. Afterwards we will focus on two particular issues influencing the case: the subsidy Airbus receives and the possibility of collusion agreements, an aspect, this last one, never considered in literature. By analyzing the case under this two points of view, we will conclude that do not enter was a Boeing’ strategic decision.

The Welfare Effects of the Allocation of Airlines to Different Terminals
Ofelia Betancor (Universidad de Las Palmas de Gran Canaria)
M. Pilar Socorro (Universidad de Las Palmas de Gran Canaria)

Many airports around the world have recently or are in the process of constructing or rebuilding new terminals. Airlines operating in those airports must be reallocated between the new and old facilities. In this paper we construct a theoretical model to show that, in general, if airlines are allocated to separate terminals, the competition between airlines is reduced, the ticket prices are higher and the consumer surplus and the social welfare are lower. Only in some routes, and under some conditions on the market size, the ticket prices are lower.
Consumer Switching Costs and Firm Pricing: Evidence from Bank Pricing of Deposit Accounts

Timothy Hannan (Federal Reserve Board)

This paper employs extensive information on bank deposit rates and county migration patterns to test for pricing relationships implied by the existence of switching costs. While these relationships are derived formerly, the intuition for them can be readily stated. Because some areas experience more in-migration than others, banks, in addressing the trade-off between attracting new customers and exploiting old ones, offer higher deposit rates in areas with more in-migration. Further, because out-migration implies that on average a locked-in customer will not be with the bank as many periods, greater out-migration should change the bank’s assessment of this trade-off such that the bank will offer lower deposit rates in areas exhibiting greater out-migration, all else equal. Also, because this effect of out-migration logically depends on the existence and extent of in-migration, an interaction effect is implied. Evidence strongly supporting these implied relationships is reported. Other tests of the implications of switching costs in the banking industry are also conducted.

"Market Power and Merger Simulation in Retail Banking"

Jozsef Molnar (Ente Einaudi)

This paper tests market power in the banking industry. First, I calculate price-cost margins predicted by different oligopoly models using discrete-choice demand estimates of own and cross-price elasticities. Second, I compare these predicted price-cost margins to price-cost margins computed with the observed interest rates and estimates of marginal costs. This paper is among the firsts to apply this methodology on a detailed, bank-level dataset from the retail banking sector. I extend the previous papers and illustrate the advantages of structural modelling by simulating a counterfactual merger experiment among pairs of the biggest banks and studying the unilateral effect of the mergers on the interest rates. I provide another evidence that concentration measures (such as Herfindahl index) could be very misleading indicators of market power.
**Competition and Efficiency of Finnish Local banks: does Market Structure Explain the Efficiency Differences?**

_Aki Koponen (Turku School of Economics, Institute for Competition Policy Studies)_

In the literature of competition analysis it is argued for a long time that lack of competition leads to inefficiency. Furthermore, market concentration is often seen as a competitive problem leading to collusion. In banking sector markets are often local, markets are concentrated, and single banks can have strong market position. This paper analyzes the interplay between efficiency of a bank and structure of the bank’s main markets in Finland during 2002-2006. Analysis utilizes data envelop analysis (DEA) at the first stage. At the second stage we estimate the effects of environmental variable on relative efficiency of local banks generated by DEA. Environmental variables describe both the market structure and rivalry. In addition to more traditional views we also include group variables describing the sustainable competitive advantage of a bank group. Analysis shows that technical efficiency has improved during the period. Analysis also shows that there are rather sustainable efficiency differences between the bank groups. That is, a network of banks seems to have sustainable competitive advantage. Increased market concentration seems to have adverse effect on the efficiency. Also the presence of rival banks in the main market improves efficiency.

**CARTELS**

Chair: Giancarlo Spagnolo  
Room J4  
Friday 5 Sep 2008, 11:00 – 12:30

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**Cartel Organization and Antitrust Enforcement**

_Zhijun Chen (The ESRC Centre for Competition Policy, University of East Anglia,)_

This paper incorporates the economic theory of organizations into the framework of public law enforcement, and characterizes the dual-coalition structure of cartel organizations that allows to highlight the strategic interactions between cartel participants under different antitrust policies. We show that delegation of authorities over collusive decisions from top executives to subordinates can mitigate the temptation of renege on collusive relationships and thus contributes to facilitate collusion. This result parallels the insights in Baker, Gibbons and Murphy (2002, 2006) which find that the optimal allocation of decision rights is to minimize the maximum temptation to renege on relational contracts. Moreover, the efficiency gains of delegation in facilitating collusion can be mitigated when the corporate leniency program is introduced, in particular whenever it is unlikely to detect cartels absent leniency and the corporate liability is much significant than individual liability.
Cartels: The Probability of Getting Caught in the European Union
Emmanuel Combe (Université de Paris 1 PRISM-Sorbonne)
Renaud Legal (Université de Paris Dauphine LEGOS)
Constance Monnier (Université de Paris 1 PRISM-Sorbonne)

In 1991, Bryant and Eckard estimated the annual probability that a cartel would be detected by the US Federal authorities, conditional on being detected, to be at most between 13% and 17%. 15 years later, we estimated the same probability over a European sample and we found an annual probability that falls between 12.9% and 13.3%. We also develop a detection stochastic model to clarify this probability. Our estimate is based on detection durations, calculated from data reported for all the cartels convicted by the European Commission from 1969 to the present date, and a statistical birth and death process model describing the onset and detection of cartels.

Risk Aversion, Prospect Theory, and Strategic Risk in Law Enforcement:
Evidence From an Antitrust Experiment
Maria Bigoni (IMT-Lucca)
Sven-Olof Fridolfsson (Research Institute of Industrial Organization, Stockholm)
Chloe Le Coq (Stockholm School of Economics-SITE)
Giancarlo Spagnolo (Tor Vergata university, SITE-Stockholm School of Economics, CEPR)

We investigate experimentally how attitudes towards risk affect optimal antitrust enforcement policies. Risk aversion is negatively correlated with players' proclivity to form a cartel, and an increased fine combined with a reduced probability of detection enhances deterrence. Moreover, players' propensity towards communication drops after detection and declines as the sum of the fines increases, suggesting a cognitive bias whereby peoples' risk perceptions are based on emotional impacts rather than on actual probabilities. Finally, risk considerations are crucial for leniency programs; the effectiveness of leniency programs is mostly due to the increased risk of a cartel member being cheated upon.
Before Death Do Us Part: On Premature Contract Breakup and Partial Property Rights
Bernhard Ganglmair (University of Zurich and IZA, Bonn)

Parties to a finite repeat transaction contract are assigned a property rights bundle with the ex-post decision right (1) on modifications of the contract terms of trade, and (2) on the durability of the trade relationship. I show that if parties cannot unilaterally change the terms of trade, but after observing the state of nature renegotiate the contract and share the respective renegotiation surplus, then granting the buyer the right to prematurely terminate allows for opportunistic rent-seeking. Such holdup of the seller yields additional “breakup rents” that increase the buyer’s returns on investment and possibly induce efficient ex-ante incentives where she would otherwise underinvest (due to holdup by the seller). This effect comes at the cost of excessive ex-post effort by the seller who can avoid the buyer’s opportunism by delivering above a prespecified quality threshold. If the timing of renegotiation is restricted, a second-best exit option balances the effects on ex-ante investment incentives and ex-post effort. A well-tailored exit option provides a contractual solution to the investment holdup problem if renegotiation is frictionless and the buyer’s ex-post bargaining power sufficiently high. Moreover, a strict compliance standard with a high quality threshold may be necessary to induce efficient investment for sufficiently low bargaining power, or does not exist if even lower. This implication competes with the legal literature on compliance standards in U.S. and international contract law that promotes a restriction of buyer’s exit options.

Tournaments with Prize-Setting Agents
Kristoffer Eriksen (University of Stavanger)
Ola Kvaløy (University of Stavanger)
Trond E. Olsen (Norwegian School of Economics and Business Administration)

In many tournaments it is the contestants themselves who determine reward allocation. Labor-union members bargain over wage distribution, and many firms allow self-managed teams to freely determine internal resource allocation, incentive structure, and division of labour. We analyze, and test experimentally, a rank-order tournament where heterogenous agents determine the spread between winner prize and looser prize. We investigate the relationship between prize spread, uncertainty (i.e. noise between effort and performance), heterogeneity and effort. The paper challenges well-known results from tournament theory. We find that a large prize spread is associated with low degree of uncertainty and high degree of heterogeneity, and that heterogeneity triggers effort. By large, our real-effort experiment supports the theoretical predictions.
Bankruptcy Law and the Time Horizon of Corporate Investment Decisions
Emanuele Tarantino (European University Institute)

This paper investigates the relationship between bankruptcy law and the time horizon of firms’ real investment decisions. We analyze a financing game between investors and a cash constrained entrepreneur that can start either a short term or a long term project. The legal environment is exogenous, and modeled using two types of bankruptcy: the creditor-friendly one, in which the entrepreneur is dismissed when insolvent; and the debtor-friendly one, in which the insolvent entrepreneur is given a chance to lead a process of financial restructuring. Our main assumption is that investors cannot commit to enforce the initial optimal contract, and let bankruptcy play the role of commitment device. The main results delivered are two: firstly, debtor-friendly bankruptcy procedures are subject to a problem of limited commitment; secondly, this limited commitment problem can cause short-termism in investment decisions.

COST STRUCTURE IN NETWORK INDUSTRIES
Room AR236
Chair: Maria Nieswand
Friday 5 Sep 2008, 11:00 – 12:30

Industry Productivity, Infrastructure and Road Transport Liberalization in Europe
Anna Bottasso (University of Genova)
Maurizio Conti (University of Genova)

In this paper we assess the impact of both the highways network and the degree of regulation in the road freight sector on industry productivity by estimating a Cobb-Douglas production function on a panel of twenty one manufacturing and service sectors of eleven EU countries observed over the period 1980-2003. The production function estimates suggest that the highways network elasticity is positive, although we find that there are differences across sectors and countries. Furthermore, we find that the degree of liberalization in the road freight sector might play an equally important role in driving industry productivity: in particular, we find a non-linear effect of deregulation, which seems to be more effective when the process starts from an already more deregulated environment. Our results suggest that policymakers should consider deregulating the road transport sector as the gains in industry production might be as important as those stemming from further extensions in the infrastructure network.
Water Losses and Hydrographical Regions Influence in the Cost Structure of the Portuguese Water Industry

Fernando Coelho (Pâaos de Ferreira Enterprise Association - Portugal)
Adelino Fortunato (Faculty of Economics - University of Coimbra and GEMF - Portugal)
Rita Martins (Faculty of Economics - University of Coimbra - Portugal)

There is a consensus that the emphasis on the management of water resources should be shifted from the supply side to demand side policies. However, on the supply side some essential questions remain to be solved, which are frequently absent from the empirical literature based on the estimation of water cost functions. This paper aims to fill to some extent this gap in the literature by focusing on two specific issues: the consequences of the reduction of the volume of water losses, and the management of the water resources based on their availability at an integrated river basin level. Major findings indicate the occurrence of economies of scope from the joint production of water supply and water losses, meaning that it could be preferable in terms of costs to maintain some level of water losses than to repair the leaks. The industry average production scale does not exhaust the allowed returns to scale, suggesting advantages from more concentration in the Portuguese water industry. Besides, the fact that, in general, the costs of the water utilities do not seem to be systematically influenced by the hydrographical regions to which water utilities belong to, it does not mean that they are not important to the industry costs. In our view, the point is that the water operators are not yet appropriately accounting resource and environmental costs.

Cost Efficiency and Market Structure in German Public Bus Transport

Borge Hess (Dresden University of Technology)
Maria Nieswand (Dresden University of Technology)
Christian von Hirschhausen (Dresden University of Technology)

In this paper, we apply a parametric stochastic frontier efficiency analysis (SFA) to a sample of 157 German public transport bus companies for eleven years. We are interested in the dynamics of the cost structure and the industry structure of the sector. We therefore apply different model specifications within the panel data models of Battese and Coelli (1992) and the “true” random effects model proposed by Greene (2004, 2005). The data accounts for three cost components: labor, capital, and energy. All models show increasing returns to scale and to density on an industry as well as individual company basis.
Regional Opportunities and Policy Initiatives

Martin Carree (Maastricht University)
Enrico Santarelli (University of Bologna)
Ingrid Verheul (Erasmus University Rotterdam)

This paper investigates the determinants of new venture creation across industries and locations for 103 Italian provinces between 1997 and 2003. Allowing for differences in regional opportunities across industries, we investigate the impact of a range of factors, including policy initiatives, on new firm formation in manufacturing, retailing and wholesaling, hotels and restaurants. Our results show that regions with industrial districts are characterized by higher start-up rates in manufacturing and that wage costs deter entry in this industry. Firm entry in commercial sectors appears to be higher in large cities and areas with strong economic progress. For hotels and restaurants we find that tourism positively influences new firm formation. We do not find a significant effect of recently introduced regional laws promoting new firm formation in Italy.

Size of RJVs and Degree of Cooperation in Product Development

Marc Bourreau (ENST, Paris and CREST-LEI)
Pinar Dogan (Harvard University, Harvard Kennedy School)
Matthieu Manant (ENST, Paris)

This paper provides a model of cooperation, in which a number of firms in an oligopolistic market form an RJV and decide on how much to cooperate in product development. The jointly developed product components determine the degree of product differentiation among those firms involved in the RJV. In the benchmark case, where the RJV includes all firms in the industry, the degree of cooperation (i.e., jointly developed product components) is decreasing with the size of the industry if the profits are very sensitive to differentiation. We also analyze the case in which a subset of the firms in the industry forms an RJV. We show that when cooperation has an insignificant effect on the degree of cooperation, both the size of the RJV and the degree of cooperation tend to increase with the total number firms in the industry. However, when cooperation has a significant effect on the degree of product differentiation the relationship between the size of the industry and the size of the RJV is non-monotonic.
Technology Portfolio, Relatedness and Market Value
Jens Schmidt-Ehmcke (German Institute for Economic Research (DIW))
Petra Zloczysti (Freie Universität Berlin)

This paper discusses the impact of a firm’s technology portfolio on its market value. Two concepts are used to characterize a firm’s portfolio: the number of technological fields measured by the degree of technological diversification and the relatedness of the technologies within the portfolio. Based on a theoretical framework using an expanded Tobin’s q approach, it presents evidence for the hypothesis of a negative relationship between portfolio size and the market value combined with a counterbalancing effect of relatedness caused by the mutual impacts of economies of scale and scope in research and development.

Imperfect Certification
Yiquan Gu (Ruhr Graduate School in Economics / Technische Universität Dortmund)

This paper proposes a model for certification market with imperfect testing technology. Such a technology only assures that whenever two products get tested the product of higher quality is more likely than the lower one to pass. In single certifier case, it is found the monopoly certifier with imperfect technology can be completely ignored, contrasting to the prediction of a model with perfect testing technology. Separating equilibrium is also supported in which only relatively high quality seller types (products) choose to pay for the certification service. It is true that in such an equilibrium having a certificate is better than not. The exact value of a certificate, however, depends both on the type distribution and the nature of testing technology. Welfare accounting shows that neither monopoly market outcome nor free certification is socially optimal. An optimal certification fee is always positive and such that it makes all and only positive types choose to test. When there are two certifiers with identical testing technologies in the market, the intuition of Bertrand competition does not necessarily hold. Segmentation equilibrium in which higher seller types choose the more expensive certification service and not so high types choose the less expensive service can also be supported. Neither the lower fee certifier nor the higher one takes the entire demand for test. Moreover lowering certification fee does not necessarily generate a higher profit either. The existence of such equilibrium suggests that the possibility of positive profits for both certifiers. As an application, we show that to explain the fee differentiation between major and non-major auditing firms we do not have to assume differences in auditing processes. These auditing firms can differentiate simply by the auditing fees they charge.
Third-degree Price Discrimination, Entry and Welfare
Silvia Jorge (DEGEI, Universidade de Aveiro, Portugal)
Cesaltina Pacheco Pires (CEFAGE-UE, Departamento de Gestão, Universidade de Evora, Portugal)

This paper investigates the impact of firms’ pricing policies upon entry and welfare under price competition and product differentiation. We consider a model where an incumbent serves two distinct and independent geographical markets and an entrant may enter in one of the markets. Our results show that discriminatory pricing may either be more, less or equally favorable to entry than uniform pricing. The welfare effect of banning price discrimination is also ambiguous. However, the case for banning price discrimination is much weaker than under monopoly. Interestingly, discriminatory pricing may yield higher welfare even when entry occurs only under uniform pricing.

Spurious Complexity and Common Standards in Markets for Consumer Goods
Alexia Gaudeul (University of East Anglia and ESRC Centre for Competition Policy)
Robert Sugden (University of East Anglia)

Behavioural and industrial economists have argued that, because of cognitive limitations, consumers are liable to make sub-optimal choices in complex decision problems. Firms can exploit these limitations by introducing spurious complexity into tariff structures, weakening price competition. This paper models a countervailing force. Consumers’ choice problems are simplified if competing firms follow common conventions about tariff structures. Because such a ‘common standard’ promotes price competition, a firm’s use of it signals that its products offer value for money. If consumers recognize this effect, there can be a stable equilibrium in which firms use common standards and set competitive prices.
Market and Technology Access in European Firm Acquisitions: Beyond a 'one size fits all'
Christoph Grimpe (Centre for European Economic Research (ZEW))
Katrin Hussinger (University of Maastricht)

Firm acquisitions have been shown to serve as a way to gain access to international markets, technological assets, products or other valuable resources of the target firm. Given this heterogeneity of take-over motivations and the skewness of the distribution of the deal value we show whether and how the importance of different take-over motivations changes along the deal value distribution. Based on a comprehensive dataset of 652 European mergers and acquisition in the period from 1997 to 2003, we use quantile regressions to decompose the deal value at different points of its distribution. Our results indicate that the importance of technological assets is indeed higher for target firms with a lower deal value. The findings support the view on small acquisition targets to complement the acquirer’s technology portfolio while larger acquisition targets tend to be used to gain access to international markets.

An Econometric Test of Bargaining Theory: Early Agreement of Remedies in EC Merger Regulation
Luke Garrod (CCP, UEA)
Bruce Lyons (CCP, UEA)
Andrei Medvedev (CCP, UEA)

This paper uses the tightly specified bargaining structure required for agreeing remedies in European merger regulation to provide an econometric test of the role of uncertainty in delaying agreement. We provide a model of optimal offers by merging firms to the competition agency and the consequent probability of failure to reach early agreement (i.e. in Phase I). The model also predicts a straightforward relationship between type 1 versus type 2 errors in early agreements and the factors determining the probability of delay. We construct a database of all mergers in which remedies were agreed in either Phase I or Phase II of merger control in the last 10 years, including information on all relevant markets under appraisal. Our findings strongly support the importance of uncertainty over simple market power variables in explaining delays in agreement.
Have Parking Prices Risen in Paris? A Retrospective Merger Study

Philippe Choné (CREST-LEI)
Laurent Linnemer (CREST-LEI)

At the end of 2000, two of the three leading parking companies in Paris merged. We investigate the economic effect of the transaction, using a “differences in differences” approach. We carefully examine the geographic distribution of parking facilities to construct various control and treatment groups. We explain how the choice of a control group affects the estimation. Overall, we find a moderate increase in parking hourly prices after the merger, and no evidence that the merger significantly raised monthly and annual subscription fees.

EMPIRICAL INNOVATION I

Room AR140
Chair: Stefan Wagner
Friday 5 Sep 2008, 11:00 – 12:30

Relationship Lending and Firm Innovativeness: New empirical evidence

Caterina Giannetti (IMTLUCCA)

The aim of this study is to investigate the effects of relationship lending on firm innovativeness, disentangling the impact of bank ties on the discovery phase from that in the introduction phase of new technologies. Results suggest that for small and low-tech firms, banks do not carry out a sophisticated intervention at the stage of development of new technologies and, rather, they play their traditional role in financing investments of otherwise financially constrained firms. On the contrary, relationship banks do play an important role even in the discovery phase for high-tech firms.

Cherlotta Grönnqvist (Hanken)

I use patent renewal rates together with non-parametric test to infer what affects the private value of patents. Specifically, I test if patents differ in private value with respect to the type of applicant, technology, patent breadth, and decade. I also test how changes in the patent laws have changed the appropriability of innovations. The data consists of granted Finnish patents between 1971 and 2003. I find that firm patents are more valuable than private patents. I also find that there is a positive correlation between the private value of patents and the number of granted patents: the private value of Finnish patents is also larger in technologies where the propensity to patent is found to be high and the value of patents and the number of granted patent was also larger during the 1990s and 1980s than during the 1970s. Furthermore, I find that extending the statutory limit from 17 years to 20 years in 1980s did not affect the appropriability of investments in innovation and therefore the optimal patent length is shorter than 17 years. The changes in renewal fees in 1990 however changed the renewal behavior. Thus, I conclude that renewal rates can be used to e.g. increase the incentives to private innovators.

How Cost, Complexity and Technological Opportunity Affect the Rate of Patenting

Dietmar Harhoff (INNO-tec, University of Munich)
Georg von Graevenitz (INNO-tec, University of Munich)
Stefan Wagner (INNO-tec, University of Munich)

We investigate determinants of patenting, focusing on effects of costs, complexity of technology and technological opportunity. In a theoretical model of patenting it is shown that in complex technologies greater technological opportunity reduces firms’ incentives to patent while greater complexity of technology increases patenting incentives. In contrast firms’ patenting incentives rise in discrete technologies as technological opportunity increases. We test these predictions using European patent data. A new measure of technological complexity is derived from patent citations. It is shown that patenting conforms to our theoretical model. The theoretical predictions are tested in a panel capturing the patenting behaviour of 2074 firms in 30 technology areas over 15 years. Results from GMM estimation indicate that patent thickets exist in 9 of these areas and have important effects on patenting behaviour.
Irreversibility, Systemic Endogenous Sunk Costs, "News" and Evolutionary Economic Methodology

Robert Owen (University of Nantes)

“Systemic endogenous sunk costs” determine market entry and exit, while defining the anatomy of strategic interdependence and systemic adjustment processes. A focus on unforeseen contingencies highlights how “news” impacts the microeconomic and macroeconomic option values of irreversibilities. Economic shocks can generate multiple steady-state equilibria, since there may not be a unique root to endogenously generated cooperative or non-cooperative games. Dynamic optimization approaches, which do not allow for a critical asset reoptimization problem, are, consequently, subject to inherent methodological weaknesses. An essential distinction, between fixed costs and endogenous sunk costs, accounts for a central identification problem.

On the Stability of Equilibria in Replicator Dynamics Modelling: an Application in Industrial Dynamics Considering Resource Constrain

Torben Klarl (University of Augsburg)

Replicator dynamic modelling (rdm) is used to discuss industrial evolution problems with heterogeneous agents. However, some of the models tend to be very complex and, therefore, analytical solutions cannot be obtained. Hence, the paper proposes to start with a relatively simple model and check its stability of the equilibria before expanding the model. This strategy is more effective than relying on simulation based studies where instability cannot be ruled out ex ante. Thus, the aim of this paper is to introduce a stability check for rdm, especially, if one ore more real Eigenvalues with value zero occur. Besides the (Strogatz, 1994) and (Hilborn, 1994) local stability theorem, this method provides an alternative and more flexible procedure for stability analysis for rdm. To apply this approach, an industrial replicator dynamic model containing three differential equations is set up.
**Cumulative Leadership and Entry Dynamics**  
*Bruno Versaevel (EM LYON)*

In Boyer, Lasserre, and Moreaux (2007), two firms face market development uncertainty and may invest in multiple lumpy capacity units over time. When no initial capacities are installed, a first entrant is a monopolist before the other firm invests also, then both play à la Cournot in a duopoly subgame. A unique Markov perfect preemption equilibrium always obtains, in which firms invest at different market development thresholds. There is rent equalization, and partial dissipation. In this paper we introduce a natural variation on the original setting by assuming that the leading investor plays as a Stackelberg leader when the other firm enters, a case of cumulative leadership. This results in a new preemption equilibrium, in which the leader invests earlier, and the follower later, than in the benchmark Cournot scenario. The two firms' equal equilibrium values, as well as social welfare, are lower. We connect unambiguously the ranking of investment triggers, across the two versions of the game, to all possible profit levels a firm may earn either as a monopolist, or a Cournot player, or a Stackelberg leader/follower in the market subgame.

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**FINANCING INNOVATION II**  
Room J101  
Chair: Rohan Pitchford  
Friday 5 Sep 2008, 11:00 – 12:30

**Spurious Biases in Capital Market Investment Decisions**  
*Evangelos Rouskas (Athens University of Economics and Business, Dept. of Economics)*

Incomplete information is established as an impediment to the market mechanism in the presence of high search costs. Here, I focus on the role of information in international financial markets. It is argued that the observed home equity bias by individual investors can be soundly defended in terms of underinvestment. In contrast to the underdiversification approach, this interpretation highlights the importance of information in the determination of market participation. In a wider sense, this is a real options setup that addresses the foreign-, local- and employer-stock biases as well. The framework to be developed posits that any equity investment behavior can be explained under a unified theory that controls for individuality.
Financial Constraints: Routine Versus Cutting Edge R&D Investment

Hanna Binz (KU Leuven)
Dirk Czarnitzki (KU Leuven)

We analyze financial constraints for R&D, where we account for heterogeneity among investments which has been neglected in previous literature. According to economic theory, investments should be distinguished by their degree of uncertainty, e.g. routine R&D versus cutting-edge R&D. Financial constraints should be more binding for cutting-edge R&D than for routine R&D. Using panel data we find that R&D spending of firms devoting a significant fraction of R&D to cutting-edge projects is curtailed by credit constraints while routine R&D investments are not. This has important policy implications with respect to the distribution of R&D subsidies in the economy.

Holdout Creditors in Sovereign Debt Restructuring: A Theoretical Analysis

Rohan Pitchford (University of Sydney)
Mark Wright (UCLA)

Substantial delay in negotiation has been a feature of sovereign debt re-structurings for more than a century. Recently, with the growth of second-hand bond markets, the number of participating creditors has risen, and credit ‘vultures’ have appeared. Collective action policies have been suggested as a way of containing delay. We model negotiation between numerous creditors and a sovereign as a dynamic coordination problem and use it in a positive economic analysis of the impact on expected delay of different negotiation environments. Delay is generated because each creditor has a ‘strategic holdup incentive’. Delay is generally increased when there are more creditors. We show that collective action clauses mitigates the strategic holdup effect, but introduces a free-rider problem which can result in a rise or fall in expected delay, even though total transaction costs fall. Second hand bond markets may result in debt consolidation or dispersion, and therefore may reduce or increase expected delay, depending on creditor bargaining power. Stubborn credit vultures help reduce delay, but vultures who are legal entrepreneurs reduce delay.
Does Firm Productivity Shape the Optimal Product Mix

Lubomir Dimitrov (Agency for Economic Analysis and Forecasting, Sofia)
Todor Gradev (Queen Mary University of London and University College Dublin)

The paper rationalizes product switching: the firms' adjustment to their optimal product mix when faced with severe exogenous shocks. Exploring a rich dataset of firms operating in a highly turbulent economy (Bulgaria 1991-2001), we find evidence that aggregate industry productivity is driven by firms moving across industries and diversifying their output. The ex ante total factor productivity of the firm determines the direction of the switch - to industries with higher or lower aggregate productivity.

The method used is an extension of the Olley and Pakes (1996) two-stage inversion algorithm, which takes care of endogeneity biases in the estimation of production functions. Following Levinsohn and Melitz (2003), we adjust this algorithm for the presence of market power in differentiated output and in put markets along the lines of Klette and Griliches (1996). The modified estimator applied in this paper, along with extensive work on firm-level price deflators, purify productivity from price distortions, distinguishes between demand-side and supply-side shocks, and finds as a by-product industry price markups.

Estimations of productivity have been conducted in four of the most-numerous industries at 4-digit disaggregation of NACE Rev.1 representing each of the respective OECD STAN classes: low, medium-low, medium-high, and high technology industries.
The question how market structure and innovation are related has been extensively studied in the literature. However, no studies exist for the automobile industry, which spends more on R&D than any other industry. We fill this gap by studying the relationship between market structure and innovation in the global automobile industry for the 1980-2005 period. We use the dynamic industry framework of Ericson and Pakes [1995] and estimate the parameters of the model using a two-step procedure proposed by Bajari et al. [2007]. Since the industry has seen a lot of consolidation since 1980, mergers are an important ingredient of our model.

After estimating the parameters of the model, we simulate the industry forward and study how changing market structure (mainly due to mergers) affects innovative activity at the firm as well as at the industry level. Our findings are the following: (1) The effect of market structure on innovation in the global auto industry depends on the initial state. If the industry is not very concentrated, as it was in 1980, some consolidation may increase the innovative activity. However, if the industry is already concentrated, as in 2005, further consolidation may reduce the incentives to innovate. (2) Mergers reduce the value of merging firms though they may increase the aggregate value of the industry. (3) Mergers between big firms eventually reduce consumers’ utility.
Vertical Restraints in Manufacturing Firms: an Empirical Analysis
Xulia Gonzalez (Universidade de Vigo)

The objective of this paper is to identify some empirical regularities about vertical restraints in manufacturing firms. We use a data set with more than 3000 firms from 1990 to 2001 that reports detailed information on firms' distribution systems and the type of vertical restraints that firms impose: Franchise fee, Resale price maintenance, Full-line forcing, Exclusive territories and Exclusive dealing, which is a rather unusual feature. First, we analyze the scope of vertical restraints through identifying industry and size heterogeneities for each vertical restraints and secondly, we explore the determinants of resale price maintenance and we focus on the effect of the upstream firm effort to increase demand. A very simple theoretical example is presented to show that the gains of vertical coordination in prices are higher when the upstream firms makes an effort to increase demand and we will test empirically this result. The empirical results based on a discrete choice model confirm that those firms that invest in product R&D impose price restraints more frequently.

FISCAL R&D POLICIES
Room AR122
Chair: Beatriz Corchuelo
Friday 5 Sep 2008, 11:00 – 12:30

Wage Effects of Government R&D Investment Incentives
Boris Lokshin (University of Maastricht)
Pierre Mohnen (University of Maastricht)

This paper examines the impact of the Dutch R&D fiscal incentives program, known as WBSO, on the wages of R&D workers. In our model these wages are partly determined by the government’s WBSO tax disbursements. We construct detailed firm- and time specific R&D tax credit rates as a function of the R&D tax incentives scheme to capture the wage effects of the government R&D support. An instrumental-variables econometric model is estimated using an unbalanced firm-level panel data covering the period 1996-2004. After controlling for firm and industry effects and business cycle fluctuations, R&D fiscal incentives are found to increase R&D wages. The R&D wage effect of these incentives is smaller than their effect on real R&D investment, but it is still sizable. The elasticity of the R&D wage with respect to the fraction of the wage supported by the WBSO scheme is estimated at 0.1.
Ownership Concentration, Public Governance and the Demand for Law Protecting Investors
Jean-Bernard Chatelain (University of Paris 10, PSE)
Kirsten Ralf (Ecole Superieure du Commerce Exterieure)

The present paper analyses theoretically and empirically how the quality of the tax system and the quality of investors’ protection affect ownership concentration and investment. It turns out that in countries with a weak tax system and a high degree of corruption, the improvement of investors’ protection does not lead to more investment since private monitoring is too costly for monitoring investors. If the tax system is efficient, however, private monitoring is a substitute for public governance and an improvement of investors’ rights will decrease ownership concentration and increase the number of investment projects realized. As a consequence, policy makers should first allocate funds to reduce corruption in the tax system and later on improve the legal system protecting investors.

The Effects of Fiscal Incentives for R&D in Spain
Beatriz Corchuelo (University of Extremadura (Spain))
Ester Martinez-Ros (University Carlos III of Madrid (Spain))

This paper explores the effect of fiscal incentives for R&D on innovation. Spain is considered one of the most generous countries in the OECD in fiscal treatment of R&D, yet our data reveal that tax incentives are little known and, especially, seldom used by firms. Restricting our empirical analysis to those firms that do report knowing about such incentives, we investigate the average effect of tax incentives on innovation, using both nonparametric methods (matching estimators) and parametric methods (Heckman’s two-step selection model with instrumental variables). First, we find that large firms, especially those that implement innovations, are more likely to use the tax incentives, while small and medium enterprises (SMEs) encounter some obstacles to using them. Second, the average effect of the policy is positive, but significant only in large firms. Our main conclusion is that tax incentives increase innovative activities by large and high-tech sector firms, but may be used only randomly by SMEs.
Financial and Economic Determinants of Firm Default

Giulio Bottazzi (LEM-Scuola Superiore Sant'Anna, Pisa, Italy)
Marco Grazzi (LEM-Scuola Superiore Sant'Anna, Pisa, Italy)
Angelo Secchi (Università di Pisa, Italy)
Federico Tamagni (LEM-Scuola Superiore Sant'Anna, Pisa, Italy)

This paper investigates the relevance of both financial and economic variables on firm defaults. While corporate finance literature focuses on the former as the almost exclusive short term determinants of default, industrial economics do not typically include financial indicators among the relevant long-term predictors of survival or exit probability. We couple size, growth, profitability and productivity with a standard set of financial indicators. Non parametric tests allow to assess to what extent defaulting firms differ from the non-defaulting group. Bootstrapped probit models confirms that default cannot be considered a mere financial phenomenon revealing the short term relevance of economic characteristics.

The Efficiency of Internal Capital Markets

Klaus Gugler (University of Vienna, Department of Economics)
Esther Kalkbrenner (University of Vienna, Department of Economics)
Evgeni Peev (Universiy of Vienna, Department of Economics)

We construct a unique data set of parent firms as well as listed and unlisted subsidiaries to examine the effects of ownership, country governance and financial institutions on the workings of internal capital markets (ICM). The evidence for efficient ICMs is mixed. On the one hand, we find that (1) parent firms re-allocate cash flows and the subsidiaries with better investment opportunities get a higher share of the pie, (2) the investment of unlisted subsidiaries is more sensitive to parent firm cash flow than the investment of their listed counterparts, and (3) subsidiaries from "bad" institutional countries, and in particular subsidiaries in Eastern Europe, are more dependent on ICMs than their counterparts in "good" institutional countries. On the other hand, the (own) cash flows of subsidiaries have a strong association with the subsidiary’s investment, particularly so for listed subsidiaries. We find support that managerial motives may explain this sensitivity, e.g. in the sub-sample of firms with parent firm ownership of less than 50 percent, the re-allocation of funds across subsidiaries is smaller and less sensitive to the subsidiaries’ investment opportunities than in the other sub-sample.
Testing Reputational Effects: How did Arthur Andersen Clients Choose their New Auditor?

Aron Toth (University of Warwick)

Reputation, the market mechanism which is widely believed to effectively resolve problems of asymmetric information, essentially relies on consumers taking into account any available information on unobserved product characteristics (quality). Exploiting the natural experiment of Andersen’s demise, I investigate to what extent if at all former Andersen clients took into consideration information on unobserved audit quality when they chose their new public accountant. In particular, the effect of auditors’ financial restatement history on firms’ auditor choice is examined in discrete choice settings. After controlling for auditor and client characteristics and for the endogeneity of audit fees, I find that although financial restatements are thought to be very noisy and often uninformative indicators of quality, former Andersen clients appear to have based their succeeding auditor decision on them.

MERGERS II
Room J100

Chair: George Symeonidis
Friday 5 Sep 2008, 11:00 – 12:30

Investment and Merging Strategies

David Bartolini (Università Politecnica delle Marche)

In this paper we deal with merging behaviour of firms, as a strategy to reduce both competition in the market and marginal costs. We consider a three-stage game in which firms decide whether to invest in a cost-saving technology, then they have the possibility to merge (forming coalitions), and eventually, in the third stage, a Cournot oligopoly game is played by the resulting firms (coalitions). We show that, when all firms invest, the monopoly market structure fails to form. We propose a methodology to take into account the possible asymmetry among firms and show that a situation in which all firms acquire the cost-reducing asset cannot be sustained as an equilibrium of the game, even if the cost of the investment goes to zero.
Ownership and Control in Differentiated Product Markets

Heiko Karle (University of Mannheim)
Tobias Klein (Tilburg University)
Konrad Stahl (University of Mannheim)

We study a differentiated product market in which an investor owns a controlling stake in one of two competitors. We characterize her decision to invest in a stake in the other competitor or to initiate a cross ownership arrangement, possibly to gain control, and analyze the dependence of the equilibrium allocation of ownership and control rights on the initial ownership structure in the economy. We find that both partial and full acquisitions may occur. In some cases, cross ownership arrangements between firms are important, whereas in others they are dominated by a direct investment of investors.

Downstream Merger and Welfare in a Bilateral Duopoly

George Symeonidis (University of Essex)

I analyse the effects of a downstream merger in a differentiated duopoly when there is bargaining between downstream firms and upstream agents (firms or unions). When competition is in quantities, upstream agents are independent and bargaining is over a uniform input price, a merger between the downstream firms may raise consumer surplus and overall welfare. However, when competition is in prices or the upstream agents are not independent or bargaining is over a two-part tariff or bargaining covers both the input price and the level of output, the standard welfare results are restored: a downstream merger always reduces consumer surplus and overall welfare.
Entry into New Pharmaceutical Submarkets: the Role of Submarket Concentration
Gianni Amisano (dg-research ECB)
Letizia Giorgetti (University of Milan)

We analyze entry into a new submarket subject to prior entry or not-entry into a new submarket by controlling for submarkets concentration levels. We study pharmaceutical companies over the period 1987-1998 for seven countries together and for each of them separately. By employing a Bayesian panel probit we manage the inclusion among regressors of not strictly exogenous variables, which can be correlated with unit specific effects. To summarize our results, entry probabilities is correlated with the level of submarket concentration (negatively) and with company characteristics. There is not entry persistence into new submarkets.

Regulation, Generic Competition and Pharmaceutical Prices: Theory and Evidence from a Natural Experiment
Kurt Richard Brekke (Norwegian School of Economics and Business Administration)
Tor Helge Holmås (University of Bergen)
Odd Rune Straume (University of Minho)

We study the impact of regulatory regimes on generic competition and pharmaceutical pricing using a unique policy experiment in Norway, where reference pricing (RP) replaced price cap regulation in 2003 for a sub-sample of off-patent products. We exploit a detailed panel dataset at product level covering a wide set of off-patent drugs before and after the policy reform. Off-patent drugs not subject to reference pricing serve as our control group. We find that RP leads to lower relative prices, with the effect being driven by strong brand-name price reductions, and not increases in generic prices. We also find that RP increases generic competition, resulting in lower brand-name market shares. Finally, we show that RP has a strong negative effect on average prices at molecule level, suggesting significant cost-savings.
Regulation of Pharmaceuticals after Generic Entry

Rafael Morais (TSE and UCL)

The existing literature on generic drugs heavily counts on explicit product differentiation (mainly vertical but sometimes horizontal) for explaining the off-patent market features and analyzing public policy in such a context.

In this paper, we propose an alternative approach. The physician decides the substance the patient should take but it is the patient herself who makes the decision between the brand or the generics. However, in such patient-based model, consumers’ demand decisions are based not on the drugs qualities themselves, but on the perception consumers have about the equivalence between the generic and the brand-name drugs. Moreover, this perception can be influenced by the marketing expenditures pharmaceutical firms make.

We first deal with exogenously given perceptions. We show that the equilibrium is always efficient if every consumer perceives the quality gap to be the same (homogeneous perceptions) and is never efficient when those perceptions are heterogeneous.

We then endogenize perceptions: pharmaceutical companies’ marketing expenditures can impact the shape of the distribution of perceptions. First best is not achieved in such case either. Under quite general conditions, equilibrium generic penetration is smaller than the optimal one.

We finally integrate the impact of public policy to the analysis. The government can implement price cap regulation, a cap on brand holders’ marketing expenditures, public campaign in favor of generic usage (or subsidization of generic firms’ spending on marketing), copayments and a reference price system for the reimbursement of medicines. We show that copayments and/or reference pricing alone are a waste of resources (if drugs manufacturing costs are negligible) but can be effective in increasing generic participation if associated with price cap regulation. We further show that public campaigns for generic usage are a better alternative to the subsidization of generic firms’ spending on marketing or the imposition of a cap on brand’s expenditures.
Econometric Evidence on the Impacts of Privatization, New Entry, and a Separate Regulator on the Mobile Network Expansion

Yan Li (ESRC Centre for Competition Policy, University of East Anglia, U.K.)

This study examines the impacts of regulatory reforms “privatization, new entry and a separate regulatory authority” on the mobile network expansion using three approaches to an econometric system, with panel data for 30 national mobile markets (i.e. 29 OECD countries and China) over the period 1991-2006. More specifically, this study tests the effects of various combinations between those reforms, and estimates the detailed effects of each new entry into a market. The estimation results suggest the following insights. First, the effect of privatization on network expansion is less important than are new entry and a separate regulator in most cases. Especially, dynamic model estimates imply that the change in the ownership of mobile incumbents from public to private does not benefit mobile network expansion at all, unless there has been (is) a separate regulator in the sector and/or the market operates in a competitive environment. Second, the effect of new entry on mobile penetration follows an inversed U-shape. More precisely, a three-to-five-firm oligopolistic market structure is associated with the highest mobile penetration and expansion. Third, the effect of a separate regulator is particularly outstanding when mobile incumbents are privately owned. Finally, the mobile services price and labour productivity partially mediate the effects of regulatory reforms, in particular, of new entry and a separate regulator, suggesting that the impacts of those reforms on network expansion are partially through their effects on price reduction and labour productivity improvements.
On the Regulation of Next Generation Networks
Duarte Brito (Universidade Nova de Lisboa)
Pedro Pereira (Autoridade da Concorrência)
João Vareda (Autoridade da Concorrência)

We examine the telecommunications market equilibria when an incumbent firm may invest in a Next Generation Network, and show that the regulator must prove to operators that he is able to commit to his decisions, with the risk of discouraging investment. When the regulator can commit, and in order to induce investment, he must set higher access prices. For intermediate investment costs, the regulator should concede a monopoly to the incumbent, and if investment costs are too high, he should discourage investment. Finally, we show that a two-part tariff allows the regulator to induce investment in the case of no commitment, but only for low investment costs.

Politics, Regulation and Investment in Telecommunications Industry
Hairong Mu (University of Southampton)

This paper attempts to examine the facility-based incumbent operator’s incentives to invest in its network, which may benefit both the incumbent and the entrant. We develop a Cournot model taken political economy into consideration, in which special-interest groups make political contributions in order to influence the regulator's access price regulation. The game we analyze has three stages. First, the incumbent makes investment decision on its upstream network. Second, both firms lobby the government for a preferential regulated access price. Finally, in the production stage quantities offered on the market are selected. We derive the following main insights. First, the presence of lobbying may provide an incentive for the incumbent to invest more than the socially optimal level if the entrant's ability to use the investment is not very high and the entrant is not far more efficient than the incumbent. Second, we demonstrate if the government sets the access price above the marginal cost under political influence, the incumbent benefits from lobbying, while the rival's profit is lower than it would be in the absence of lobbying. Overall the existence of lobbying is welfare-reducing. In addition, the incumbent can foreclose the entrant if the government values the political contributions only. However, the incumbent may lose its incentive to lobby as the government puts more weight on social welfare. An the end of the paper, the empirical evidence from Chinese telecommunications industry is given as the prediction of the model.
Analyzing the Relationship between Regulation and Investment in the Telecom Sector

Hans Friederiszick (ESMT)
Michal Grajek (ESMT)
Lars-Hendrik Röller (ESMT)

This study analyses the relationship between entry regulation and infrastructure investment in the telecommunication sector. The empirical analysis we conduct is based on a comprehensive data set covering 180 fixed-line and mobile operators in 25 European countries over 10 years and employs a newly created indicator measuring regulatory intensity in the European countries. We carefully treat the endogeneity problem of regulation by applying instrumental variables and find that tough entry regulation (e.g. unbundling) discourages infrastructure investment by entrants but has no effect on incumbents in fixed-line telecommunications. We do not find significant impact of entry regulation on investment in mobile telephony.

Investment in Telecommunications Markets: Evidence from OECD Countries

Heimeshoff Ulrich (University of Erlangen-Nuremberg)

Recent studies provide strong evidence that the quality of telecommunications infrastructure has strong impacts on economic growth. Especially in Germany there is a controversial debate if we have a so called infrastructure gap, because per capita investment in telecommunications infrastructure lags behind most of the levels in other OECD countries. Using a panel of 30 OECD countries for the period 1990 to 2003 and taking account of possible non-stationarities in aggregate data, we investigate the main drivers of telecommunications investment.
**Vertical separation and network investment in telecommunications**

Alessandro Avenali (Dipartimento di Informatica e Sistemistica, Universiti degli Studi di Roma "La Sapienza")

Giorgio Matteucci (Dipartimento di Informatica e Sistemistica, Universiti degli Studi di Roma "La Sapienza")

Pierfrancesco Reverberi (Dipartimento di Informatica e Sistemistica, Universiti degli Studi di Roma "La Sapienza")

When the access network is an enduring economic bottleneck, vertical separation of the telecommunications incumbent may be an effective and proportionate remedy. There is the presumption that separation would reduce quality-enhancing network investment. We show that, despite efficiency losses of vertical disintegration, mandatory separation improves quality investment and welfare provided that the demand-side investment spillover, or the rival firm’s (perceived) service quality is sufficiently high. We find that separation mostly encourages investment when the integrated firm provides downstream competitors with low-quality access. The results shed light on the effect of separation on the incentive to deploy Next Generation Access Networks.

**FRIDAY 5TH SEPTEMBER 2008**

**16:00 - 18:00**

**CONTRIBUTED SESSIONS IV**

**COLLUSION THEORY**

Room J101

Chair: Nicolas Woelfing

Friday 5 Sep 2008, 16:00 – 18:00

**R&D-Fostering Collusion**

Emanuele Bacchigia (University of Bologna)

Luca Lambertini (University of Bologna)

Andrea Mantovani (University of Bologna)

We prove that in a repeated-game version of d’Aspremont and Jacquemin’s (1988) model of R&D competition in R&D may induce a zero investment at equilibrium. Allowing for collusion may represent a means for improving social welfare.
Customer-Side Transparency, Elastic Demand, and Tacit Collusion under Differentiation

Jesko Herre (University of Cologne)
Alexander Rasch (University of Cologne)

We analyze the effect of market transparency on the possibility to sustain maximum collusive profits for horizontally differentiated firms that face an elastic demand. It is shown that there is a non-monotone relationship for low levels of differentiation. If, however, there is a high degree of differentiation, a more transparent market makes full collusion easier to sustain as deviation becomes less attractive.

Market Transparency and Collusion : Revisited

Aufa Doarest (Universiteit van Amsterdam)
Jeroen Hinlooopen (Universiteit van Amsterdam, KU Leuven)

In this article, we investigated the effect of transparency on collusive behavior. We found that transparency has non-monotonic effect of cartel stability. If initial degree of transparency is low (high), an increasing transparency will decrease (increase) cartel stability, thus collusive behavior. Furthermore, if there is imperfect information on future degree of transparency, firms will either collude in lower price or compete in price if current degree of transparency is low. Yet, firms will still charge monopoly price if degree of transparency is high.
Coordinating Supply Schedules by Asymmetric Cost Transmission, Carbon prices and the German Electricity Spot Market
Nikolas Woelfing (Centre for European Economic Research (ZEW))

In January 2007, first evidence for an asymmetric pass-through of CO2 emission allowance (EUA) prices was reported for the German electricity spot market. The presented paper explores the theoretical basis for such an asymmetry in the framework of a supply function bidding duopoly. It interprets fluctuating carbon prices as a coordination mechanism for tacitly colluding firms and studies incentive compatibility in the repeated game. It is new in its attempt to model asymmetric behaviour at a spot market without relevant frictions, and can explain why the asymmetry shows up for EUA only. Three claims state that asymmetric price transmission is sustained up to a certain maximum level which might include the monopoly solution and that this mechanism is always preferred to non-cooperation.

EMPIRICAL ANALYSIS OF MERGERS III
Chair: Jingang Zhao
Room AR318
Friday 5 Sep 2008, 16:00 – 18:00

Resource Complementarity, Alliances, and Merger Waves
Fernando Anjos (ISCTE Business School)

The fact that mergers cluster in time is an important puzzle in finance. Recent explanations rely on over-valuation arguments or the existence of an economy-wide component in merger transaction costs. This essay proposes an alternative theory for merger waves. I develop a static game-theoretic model of network formation where firms combine complementary non-tradable resources, either by establishing an alliance or by merging. In a dynamic extension, I use the results from the static model and solve an option exercise game where distinct sets of firms may choose to merge. In both the static and dynamic cases, the existence of inter-industry alliances may propagate merger activity across sectors. The model is consistent with time-series data on the aggregate number of alliance and merger deals. In particular, the data seems to indicate that merger waves are preceded by an increase in alliance activity. The model also has implications beyond the topic of merger waves: (i) merger excess returns and/or merger frequency between firms in different industries should (a) display an inverted-U relationship with respect to complementarity, controlling for the level of coordination problems in alliances; and (b) controlling for complementarity, be higher in industries where alliances exhibit starker coordination problems; (ii) the model offers a rationale for the diversification discount, namely that it is optimal for diversifying acquirers to choose inexpensive targets, if the objective of the diversifying firm is to obtain only a subset of the target’s resources; (iii) spin-offs take place optimally when the level of complementarity within the conglomerate is lower and/or the acquirer of the spun off division has a high firm-specific productivity, relative to the conglomerate; (iv) mergers may be socially inefficient, for reasons distinct from market power.
Rent Appropriation and Competitor Blocking: The Two Faces of Technology Acquisition

Christoph Grimpe (ZEW, KU Leuven)
Katrin Hussinger (U Maastricht, KU Leuven, ZEW)

Gaining access to technological assets has since long been a major motive and objective for firm acquisitions. Technologies may be used in combination with existing resources to enhance an existing technology portfolio. Patents underlying an acquired technology may, however, also be used to block competitors in technology markets. In this paper, we analyze the importance of these two faces of technology acquisition at the market for corporate control. Our empirical results for European firm acquisitions in the period from 1999 to 2003 indicate that acquiring firms pay a higher price for target firms with valuable patents and those with a blocking potential, especially if these are closely related to the patent portfolio of the acquirer. Value creation hence occurs not only through economies of scale and scope as well as technological complementarities realized in the merged firm but also through a strategic use of patents.

Mergers of Equals and Unequals

Mike Gibbs (University of Chicago, GSB)
Kathryn Ierulli (University of Chicago, GSB)
Valerie Smets (Aarhus University, Aarhus school of Business)

We study post-merger organizational integration. Our basic question is whether there is evidence of conflict between employees from the two merging firms. Conflict can arise for several reasons, including firm-specific human capital, corporate culture, power, or favoritism. A competing hypothesis is that firms enjoy organizational synergies from mergers, because of the benefits of a more diverse workforce. We examine this issue using a sample of Danish mergers. Controlling for other effects, employees from the acquiring firm fare better than employees from the acquired firm, suggesting that they have greater power in the newly merged hierarchy. As a separate effect, the more that either firm dominates the other in number of employees (at the firm or plant level), the better do its employees fare compared to employees from the other firm. This suggests that majority / minority status is also important to assimilation of workers, much as in ethnic conflicts. Greater overlap of operations decreases turnover. This is inconsistent with the view that workers of the two firms may be substitutes for each other. Our findings are least consistent with the views that post-merger organizational dynamics are driven by economies of scale or scope, or the benefits of workforce diversity. They are most consistent with the view that more similar workers (in terms of either firm- or industry-specific human capital) are easier to integrate post merger, and that conflict caused by integration is a serious cost of implementation of mergers.
Estimating the Merging Costs of the 1887-1914 Sugar Monopoly

Jingang Zhao (University of Saskatchewan)

This paper estimates the merging costs of the 1887-1914 American sugar monopoly using the bounds of merging costs established in Zhao (2008). It first provides closed-form estimations for the lower (upper) bounds of merging costs for observed (dissolved) monopoly with linear and quadratic demands. Then, it shows, using linear cost and demand estimated in Genesove and Mullin (1998), that the sugar monopoly’s merging costs were at most 35% (at least 252%) of the pre-merger (post-dissolution) total profits. In other words, it shows that the enforcement of Sherman act increased the monopoly merging costs from at most 35% of pre-merger total profit at its formation in 1887 to at least 252% of post-dissolution total profits at its dissolution in 1914.

EMPIRICAL INNOVATION II
Room J4
Chair: Pia Weiss
Friday 5 Sep 2008, 16:00 – 18:00

Patent Thicket and Market Value: An Empirical Analysis

Mahdiyeh Entezarkheir (University of Waterloo)

The pro-patent shift of the United States has created a patent thicket. This has made the use of other firms’ innovations more costly, due to higher transaction costs and the possibility of hold up. Using a panel data on publicly traded US manufacturing firms from 1979 to 1996, this study finds a negative impact from the patent thicket on the market value of the firm. I also find that firms with larger patent portfolios experience a smaller effect, likely because stronger bargaining position lowers the occurrence of the hold-up problem for these firms. The advantage of larger firms is even more prominent following the pro-patent shift. My results also capture heterogeneity in the impact of the patent thicket across industries.
Renewal of Patents and Government Financing
Roger Svensson (IFN)

I apply a survival model to a detailed dataset of Swedish patents to estimate how different factors affect the likelihood of patent renewal. Since the owners know more about the patents than potential external financiers, there is a problem of asymmetric information. To overcome this, Sweden has for a long time relied on government support rather than private venture capital. The empirical results show that patents which have received soft government financing in the R&D-phase have a higher probability of expiring than patents without such financing. But patents that have received more market-oriented government loans during the commercialization phase are renewed for as long as other commercialized patents. This finding indicates that it is the financing terms rather than bad choices of projects that explain the low renewal of patents with government financing.

The Nature of Collaborative Patenting Activities
Roberto Fontana (Department of Economics, University of Pavia)
Aldo Geuna (SPRU, University of Sussex)

We investigate the determinants of the governance structure for a sample of successful collaborative patenting activities. We find that firm size and incoming spillovers have a positive impact on the probability to collaborate. We then extend the analysis to four possible modes of governance: co-assignment, co-invention, formal agreement, and informal agreement. We find that higher project complexity and technological scope are associated to tighter modes of governance while licensing to less hierarchical ones. Inventor specific characteristics matter too. In particular, experience increases the probability of choosing less hierarchical governance modes while better education is associated to tighter modes.

Pia Weiss (Chemnitz University of Technology)

A two country framework is used to model a situation in which patent races are global, but patent policy remains national as far as the non obviousness standard (NOS) is concerned. We find that countries having higher abilities to innovate tend to choose stronger NOSs. However, Against the intuitive perception that identical countries would choose the same NOS, we find that even identical countries choose different NOSs to their mutual benefit. It is argued that the international differentiation of NOSs tends to be too narrow to be optimal. Hence, a harmonisation of the NOSs should not be a goal of future international negotiations.

EMPIRICAL IO
Room AR122
Chair: Frode Steen

Does Competition for the Field Improve Cost Efficiency? Evidence from the London Bus Tendering Model

Miguel Amaral (University Paris 1)
Stéphane Saussier (University Paris 11)
Anne Yvrande-Billon (University Paris 1)

In this paper we investigate the relationship between auctions’ results and the number of bidders for local transportation contracts in London. Using an original database concerning 294 local transportation routes we find that a higher number of bidders is associated with a lower cost of service. This finding, in addition of being one of the first empirical test of a crucial and understudied theoretical issue has important policy implications, especially for countries in which bids are organized such that only few bidders are allowed to answer (e.g. France).
Collusion in Repeated Procurement Auction: A Study of a Paving Market in Japan
Rieko Ishii (Osaka University)

We examine auction data to determine if bid rigging presents in procurement auctions for paving works in Ibaraki City, Osaka, Japan. We first show that sporadic bidding wars are caused by the participation of potential ‘outsiders’. Assuming that the ring is all-inclusive if the auction is not the bidding war, we estimate the scheme by which the ring allocates a win to its members. It is found that the ring tends to select a bidder whose winless period is long and whose winning amount in the past is small relative to other bidders.

Entry in an Auction with both Private and Common Value Bidders
Janne Tukiainen (University of Helsinki, RUESG and HECER)

I compare the determinants of entry between a bidder to whom common value components are more important and a bidder to whom private value components are more important in the City of Helsinki Bus Transit Auctions. I find that these bidders do not react any differently to changes in the amount of expected competition. I also find that the City should try shortening the contract lengths because that would simultaneously induce more entry and decrease the importance of common value components.
Gasoline Prices Jump up on Mondays: An Outcome of Aggressive Competition?
Øystein Foros (Norwegian School of Economics and Business Administration)
Frode Steen (Norwegian School of Economics and Business Administration)

This paper examines Norwegian gasoline pump prices using daily station-specific observations from March 2003 to March 2006. Whereas studies that have analyzed similar price cycles in other countries find support for the Edgeworth cycle theory (Maskin and Tirole, 1988), we demonstrate that Norwegian gasoline price cycles involve a form of coordinated behavior. We also show that gasoline prices follow a fixed weekly pattern, with prices increasing significantly every Monday at noon, and that gasoline companies appear to use the recommended price as a coordination device with a fixed link between the retail and recommended prices. Moreover, the weekly pattern changed in April 2004; whereas Thursday had been the high-price day, Monday now became the high-price day. The price–cost margin also increased significantly after the weekly pattern changed in April 2004.

Heterogenous Wage Effects of Computer Use - A Bayesian Model Averaging Analysis
Marianne Saam (Centre for European Economic Research (ZEW))

When assessing heterogenous wage effects of computer use, one has to deal with a high degree of model uncertainty. I explicitly take into account model uncertainty using Bayesian Model Averaging. With two different German data sets containing a large number of individual, firm and computer use characteristics, I identify heterogenous wage effects that are robust across models. Strong evidence is obtained for above average effects of computer use related to work experience, for female users and for male early adopters. PC experience and using advanced applications also have a positive effect. A positive effect of Internet use is not found.
**IT Training and Employability of Older Workers**

*Katrin Schleife (ZEW Mannheim)*

This paper analyzes empirically the relationship between firm-provided IT training and the firm's proportion of older workers. Using data from the ZEW ICT survey of the years 2004 and 2007, the results show that a firm's IT intensity plays a crucial role: firms intensively using information technologies employ a significantly smaller proportion of older workers than firms that are less IT-intensive. However, higher participation rates of older workers in IT training are related to a larger proportion of older workers within firms. It turns out that this effect is of particular importance in firms that intensively use IT.

**Who Benefits from Creativity?**

*Philipp Koellinger (Erasmus University)*  
*Christian Roessler (University of Queensland)*

We study the distribution of income between entrepreneurs and wage employees in a network-formation model of the labor market. Individuals are a priori distinguished by their creativities (abilities to envision productive uses for themselves and others). They are also associated with fixed "social addresses," background characteristics that determine the ability to communicate with each other. Firms grow either through the entrepreneur's own ideas for new employees, or through existing employees' ideas and contacts in their social neighborhood. As a result, the creativity of certain employees can be valuable and rewarded by high wages. This explains why many gifted individuals do not become entrepreneurs, and many less gifted do - a phenomenon that is lacking in existing models.
**Return to Inventors**  
*Otto Toivanen (HECER, U of Helsinki)*  
Lotta Väänänen (HSE and HECER)

The return that inventors appropriate from their inventions forms a key incentive and remuneration mechanism for innovation. We utilize data of U.S. patents and their inventors linked to matched employer-employee data in Finland to estimate the effect of patenting on wages. Inventors get a temporary 3.4% wage increase in the year of the patent grant. In addition, there is a 5-6% increase in wages four years after the patent grant, which remains there for at least the following two years. The returns to inventors depend on the quality of the patent, and are nonlinear in the number of patents.

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**ENERGY MARKETS**  
Room AR140  
Chair: Natalia Fabra  
Friday 5 Sep 2008, 16:00 – 18:00

**Im-perfectly competitive contract markets for electricity**  
*Monica Bonacina (IEFE Bocconi University and University of Pavia)*  
Anna Creti (IEFE Bocconi University)  
Federica Manca (AGCM)

Notwithstanding academic and regulatory interests as well as empirical evidence, to date the effect of contracts on competition in electricity markets is a very controversial issue. We suggest an original approach to shed light on this debate. Modeling competition by mean of conjectural variations we demonstrate that anti-competitive effects follow the upsurge of discrimination practices. Altering the time distribution of the perfect arbitrage constraint (i.e. ex-post in spite of ex-ante) we put a bridge between IO and financial models on price manipulation. Endogenizing forward demand we provide a rationale for shifting dominant attitudes to forward markets. Finally, studying sequential choices we balance quantity and price competition with Stackelberg leadership. Simulations and qualitative estimates support our findings.
Transportation Pricing and Market Power in the Natural Gas Industry
Marco Haan (University of Groningen)
José Luis Moraga-González (University of Groningen)
Remco van Eijkel (University of Groningen)

We study the role of transportation pricing in shaping the incentives of gas producers with market power. Two downstream gas producers, each located at one of the ends of a pipeline, serve two markets connected by the pipeline. We show that, when pipeline capacity is relatively large, there exists a symmetric equilibrium where the pipeline is not fully utilized. In this case, nodal pricing is not optimal: a budget-constrained and welfare-maximizing transportation operator (TSO) adjusts transportation tariffs upwards to account for the presence of downstream market power. When capacity is relatively small, an (essentially) unique asymmetric equilibrium exists where one firm lowers its exports until the pipeline is used at full capacity. In this case, it is optimal for the TSO to subsidize the reverse flow and tax the dominant one so as to mitigate market power. In this case too, second-best tariffs differ from the nodal pricing system.

Multimarket Interdependent Energy Strategies
Lucie Bottega (GREMAQ, Université Toulouse 1. Agro Montpellier)
Florent Pratlong (PRISM-Sorbonne, Université Paris1. ERASME, ECP.)

This paper looks at the interactions between energies (fossil fuel and renewable) market and an international market for emission permits. With implementation of the Kyoto Protocol, Russia will most likely be able to exert market power in the emission of permit. Meanwhile the price of permits affects the energy market equilibrium, which also alters the emission levels. Hence, Russia faces a trade-off between exerting market power in the permits market and preserving its export revenues on the energy markets and is brought to adopt a strategic behaviour in this respect. The European Union (EU) is also a key player in the international climate policy and aims to reach an efficient distribution of its energy consumption based both on the Russia and the ROW (Rest of the World) energy exports and the development of its renewable energy. We intend to shed more light on the interdependence of the energy and the emission permits markets using a general equilibrium model. We show that the coordination of FSU strategies on the brown and the permits market affects strategic behaviour on the brown energy market vis-à-vis the ROW, the permits price and the environment cost-effectiveness. The impact depends crucially on the degree of substitutability between the brown and the green energies.
Forward Contract Obligations in Multi-Unit Auctions

Natalia Fabra (Universidad Carlos III de Madrid and CEPR)
Maria Angeles de Frutos (Universidad Carlos III de Madrid)

Several regulatory authorities worldwide have recently imposed forward contract obligations on electricity producers as a way to mitigate their market power. In this paper we investigate how such contractual obligations affect equilibrium bidding in electricity markets, or in any other auction-based market. For this purpose, we introduce forward contracts in a uniform-price multi-unit auction model with complete information. We find that forward contracts are pro-competitive when allocated to relatively large and efficient firms; however, they might be anti-competitive otherwise. We also show that an increase in contract volume need not always be welfare improving. >From a methodological point of view, we aim at contributing to the literature on multi-unit auctions with discrete bids.

INFORMATION DECISION INSURANCE
Room AR322
Chair: Sylvain Bourjade
Friday 5 Sep 2008, 16:00 – 18:00

Genetic Tests and Inter-temporal Screening in Competitive Insurance Markets

Winand Emons (University of Bern)

We consider successive generations of non-altruistic individuals carrying a good or bad gene. Daughters are more likely to carry their mother's gene than the opposite one. Competitive insurers can perform a genetic test revealing an agent's gene. They may condition their quotes on the agent's or on her ancestors' genetic status. In equilibrium generation one is bribed to take the test with an unconditional quote. The insurer uses this information to profitably screen a finite number of generations of their offspring. The offspring of good gene carriers subsidize the tested generation.
Information Gathering, Disclosure and Contracting in Competitive Markets

Alberto Bennardo (Università di Salerno)

The paper studies the determinants of information gathering in insurance and credit markets. In our set-up, information may improve allocative decisions or allow agents to appropriate a larger share of gains from trade at the contracting stage. The timing of information gathering is endogenous: Agents can gather information either before or after contracting. Access to precontractual information generates a negative contracting externality, which was first identified in Hirshleifer's (1971) seminal contribution. In contrast with a well established conventional wisdom and a substantial literature, we prove that if the operational value of information is positive and not "too small", private returns of information fall short of its social returns, and pre-contractual access to information leads to under-investment. On the contrary, agents over-invest in information gathering activities when the operational value of the available signals is sufficiently low. Consistently with contractual arrangements observed in the real world, we also show that equilibrium contracts have also a very simple shape when private information can be voluntarily disclosed. Finally, we extend the analysis to a setting where agents can acquire information only after contracting, but can opt-out from their contract after having acquired payoff relevant information. We show that all qualitative results of our model hold true in that setting.

The Strategic and Social Power of Signal Acquisition

Anna Maria C. Menichini (Università di Salerno and CSEF)
Peter J. Simmons (University of York)

Within a principal-agent framework with costly state verification, the paper analyses the consequences on the properties of the relationship of the agent acquiring, either before or after a loan contract has been agreed, a public signal which reduces the variance of revenues. It finds that information should be collected but only after a contract has been agreed and never before. Moreover, whenever this information is acquired, audits should be deterministic, but only for good signal realisation, while there should never be any audit after a bad signal realisation. Thus the optimal strategy after a good signal realisation involves auditing low revenue reports with probability one and high revenue reports with probability zero. There should instead never be an audit after a bad signal realisation following any type of report. The intuition is that gathering information allows to better select the reports to audit and thus reduce the inefficiency of costly audits.
In this paper, we develop a model of a decision maker using an expert to obtain information. The expert is biased toward some favoured decision but cares also about its reputation on the market for experts. We then analyse the corresponding decision game depending on the nature of the informational linkage with the market. In the case where the expert is biased in favour of the status quo, the final decision is always biased in the same direction. Moreover, it is better to rely on experts biased against the status quo. We also show that it is optimal to publically disclose the expert report and his identity. Finally, we prove that when using several experts, a sequential consultation is optimal. The presence of another expert raises an expert’s incentives to report truthfully when reports are public but reduces it when they are secret. In particular having an option to call another expert may be detrimental to the decision maker’s welfare if reports are not public.
Multinational Corporations and his Effect on the Incentives to Invest in Product Innovation by Host Country Firms

Jaime F. Campos (Universidad de Santiago de Chile)

This paper examines the strategic interaction between a Multinational Corporation (MNC) and a host country firm focused on its effect on product innovation by the host country’s firm. To address this issue we analyse the channels through which Multinational corporations affect the incentives to invest in product innovation by host country firms. We consider a market for a vertically differentiated product that consist of a domestic firm, which produce only for domestic consumption, and a MNC, which can reach the local market by exporting or by establishing a subsidiary. To address these issues, in the context of an oligopolistic market, we build and analyse a three stages duopoly model. In the first stage the foreign firm chooses the mode of serving the domestic market. Then, the firms choose simultaneously product quality level in the second stage and prices (Bertrand competition) in the third stage. We also analyse the preferred mode of entry of the foreign firm from the host country’s point of view. The model is then used to determine if there is scope for a domestic R&D policy. In this respect, our analysis suggests that any mechanism that provide an incentive for the domestic to increase its product quality would be welfare improving.

Formal and Strategic Appropriability Mechanisms of Multinational Firms â€“ A Cross Country Comparison

Pedro Faria (Technical University of Lisbon, Portugal)

Wolfgang Sofka (Centre for European Economic Research (ZEW), Mannheim, Germany)

International knowledge spillovers, especially through multinational companies (MNC), have been a major theme of recent academic and practitioner discussion. However, most research in the field focuses on knowledge sharing activities of MNC subsidiaries. Relatively little is known about their capabilities for protecting valuable knowledge from spilling over to host country competitors. We extend this stream of research by investigating MNC appropriability strategies that are not limited to formal methods (patents, copyrights, trademarks) but include also strategic ones (secrecy, lead time, complex design). Hence, we conceptualize a firm’s breadth and depth of knowledge protection strategies and relate them to the particular situation of MNC subsidiaries. Moreover, we argue that their approaches differ with regards to host country challenges and opportunities. We test these hypotheses empirically based on a harmonized survey of more than 1,800 firms and their innovation activities in both Portugal and Germany. We find that MNCs prefer broader sets of appropriability strategies in host countries with fewer opportunities for knowledge sourcing. However, munificent environments require targeted sets of appropriability strategies instead. We suspect that this is due to a need for reciprocity in promising host country knowledge flows.
Innovation, International R&D Spillovers and the Heterogeneity of Knowledge Flows

Franco Malerba (CESPRI, Bocconi University)
MariaLuisa Mancusi (CESPRI, Bocconi University)
Fabio Montobbio (CESPRI, Bocconi University)

This paper analyses the relative effects of national and international, intra-sectoral and inter-sectoral spillovers on innovative activity in six large, industrialized countries (France, Germany, Italy, Japan, UK and US) over the period 1981-1995. We use patent applications at the European Patent Office to measure innovation and their citations to trace knowledge flows within and across 135 narrowly defined technological fields. We find that, in addition to international ones, intra-sectoral spillovers are an important determinant of innovation.

The Impact of Cost-Reducing R&D Spillovers on the Ergodic Distribution of Market Structures

Christopher Laincz (Drexel University)
Ana Rodrigues (Autoridade da Concorrância)

We extend the literature on knowledge spillovers between firms by studying a dynamic duopoly model of R&D. Our analysis highlights the previously ignored welfare effects of spillovers through dynamic changes in industry concentration. In addition, we find that the impact of imperfect appropriability of R&D on concentration and welfare depends crucially on the manner in which spillovers are obtained.

To date, the analysis of the impact of knowledge spillovers between firms has been largely restricted to static two-stage models (R&D decisions followed by product market decisions). These models generally predict suboptimal R&D expenditures and lower welfare. Such models are silent on the evolution of the market structure, and the resulting welfare implications, because they need to assume initial conditions (symmetry or asymmetry). We find that when spillovers require absorptive capacity investment in own R&D, larger spillovers lead to declines in concentration while rates of innovation increase and welfare rises. In contrast, when spillovers are costlessly obtained increases in the extent of spillovers rates of innovation fall leading to losses in welfare through both reduced consumer surplus and firm values, while the effect on concentration is ambiguous.
The Effect of Increasing Copyright Protection: the Role of Market Potential

Patrick Waelbroeck (Telecom ParisTech)

We argue that there are two ways to protect intellectual property: through investment to deter piracy (make it less appealing) or through legal protection. By innovating, a firm makes the copy less appealing either because the copy becomes obsolete with a large number of new titles each year or because the new product has reached a level of quality with which the copy cannot compete. For instance, videogames includes cinematographic scenes and effects, while software buyers benefit from customer support and regular updates. Therefore, there exist situations in which increasing intellectual property protection act as a direct substitute for creative investment. We illustrate our point with a very simple model of investment in demand expansion.

Licensing Technology and Foreclosure in Contests

Derek Clark (University of Tromså)
Østein Foros (Norwegian School of Economics and Business Administration)
Jan Yngve Sand (University of Tromså)

We consider an industry where one firm with a superior technology competes for market shares with several rivals. The owner of the superior technology (the dominant firm) can license or transfer the source of its dominance to a subset of rivals. Allowing the non-license takers to remain active in the market is a drain on the profit of the insiders, and we demonstrate that the dominant firm will only make a transfer of the superior technology if it can be used to foreclose some rival firms. Foreclosure of a subset of firms may thus be the outcome even without restrictions on the licensing schemes. Moreover, we show that when licensing is profitable, the dominant firm will prefer a complete transfer even if a partial transfer can be made.
The 40% Handicap Auction
Yosuke Yasuda (GRIPS)

We study efficient license provisions when a government allocates a second license to operate in a monopoly market where a demand function and firms' cost functions are linear. Firms have different marginal costs, and depending on these costs, either a monopoly or a duopoly can be efficient. We show that an extremely simple mechanism that does not depend on the detailed information about the market achieves efficiency. Namely, the 40% handicap auction, a modified English auction in which a newcomer that wins a license has to pay only 40% of the winning price, always achieves an efficient market structure. Our benchmark results are extended in general cases that introduce fixed costs, increase the number of incumbents, and incorporate general social welfare functions.

Optimal Two Part-Tariff Licensing Contracts with Differentiated Goods and Endogenous R&D
Ramon Fauli-Oller (University of Alicante)
Joel Sandonis (University of Alicante)

In this paper we get the optimal two-part tariff contract for the licensing of a cost reducing innovation to a differentiated goods industry of a general size. We do it for the cases where the patentee is an independent laboratory or an incumbent firm. We show that the innovation is always licensed to all firms. Moreover, we endogenize R&D investment and get that an internal patentee invests more (less) in R&D when the technological opportunity in the industry is low (high).
Above and Beyond the Inverted-U Relationship: Innovation and Product Market Competition in a Dynamic Duopoly

Xavier Boutin (INSEE, CREST-LEI)

This paper revisits the theoretical grounds of Aghion, Bloom, Blundell, Griffith, Howitt (2006) seminal paper on competition and innovation. It uses a comparable framework but allows for simultaneous innovations, potentially free for the laggard. With quite a low probability of free catch-up by laggards, the inverted-U pattern between symmetric duopoly profits and innovation does not emerge. Besides, some “free” innovation is always beneficial to innovation. At last, the paper specifies a model of product market competition and simulates the dynamic output. This raises important interpretative issues. Overall, even inverted-U patterns between dynamic output and markups cannot be interpreted as a causal non-monotonic impact of “competition” on innovation.

R&D Spillovers, Concentration and Market Performance.

Anna Stepanova (University of Kent, United Kingdom)

In a setup of a two-stage R&D game of process innovation, we investigate the effect of exogenously changing R&D spillovers and market concentration on the equilibrium effective cost reduction, total output, profits and social welfare. Interpreting spillover as an inverse measure of distance between firms, we find that tight proximity among firms slows down the innovative as well as the productive activity of the firms. We also show that neither profit-maximizing nor welfare-maximizing spillover level can take an extreme value of 0 or 1. Both per-firm equilibrium profit and equilibrium social welfare are inverse U-shaped in the spillover rate. An intermediate location achieves the objective of maximizing per-firm equilibrium profit, while closer proximity between firms is more desirable for welfare-maximizing purposes.
Firm Organisation, Entry and Agglomeration
Saioa Arando (University of Deusto)
Jan Podivinsky (University of Southampton)
Geoff Stewart (University of Southampton)

Panel data on entry in the Basque country is used to test for the presence of agglomeration effects for worker cooperatives and capitalist firms. We find, first, that cooperatives are attracted to locations where there are established concentrations of cooperatives either in the same sector or in other sectors. Second, it is the presence of cooperatives in the same sector that provide the strongest attraction. Third, both sector-specific and non sector-specific agglomeration effects are greater for cooperatives than for capitalist firms.

The Timing of Licensing: Theory and Empirics
Marie-Laure Allain (Ecole Polytechnique)
Emeric Henry (London Business School)
Margaret Kyle (London Business School)

The timing of licensing can have a significant impact on overall innovation rates as the licensee might be more efficient than the licensor to conduct certain phases of research. We show that in an environment with asymmetric information about the value of the innovation and where information becomes available over time, deviations from the optimal timing will occur. We demonstrate that the market structure has an ambiguous effect on the timing of the technology transfer. For initially concentrated markets, an increase in the number of players might delay licensing. The reverse effect might occur for less concentrated markets. We will test these predictions with data on contracts signed between biotechnology firms and large pharmaceutical firms.
Patent-Secret Mix in Complex Product Firms
Franco Cugno (University of Torino)
Elisabetta Ottoz (University of Torino)

Different protection mechanisms may be employed at the same time for a given innovation when the innovation is comprised of separately protectable components. If patents and trade secrets can be mixed in protecting single innovations, a strengthening in patent breadth may induce a lower level of patenting, as innovators are more prone to rely on secrecy.

The Patent Quality Control Process: Can We Afford An (Rationally) Ignorant Patent Office?
Jing-Yuan Chiou (IMT Lucca)

This paper considers patent granting as a two-tiered process, which consists of patent office examination and court challenges. It argues that, when the patent-holder has private information about the patent validity, (i) a weak patent is more likely to be settled and thus escape court challenges than a strong patent; and (ii) a tighter examination by the patent office may strengthen private scrutiny over a weak patent. Both work against Lemley (2001)’s hypothesis of a ‘’rationally ignorant’’ patent office. The paper also considers application fees and a pre-grant challenge procedure, and shows that the former, used as a tool to deter opportunistic patenting, may crowd out private enforcement but cannot replace public enforcement; while the usefulness of the latter is subject to several restrictions, including the private challenger’s timing choice.
Preventing Hold out in Patent Pool Formation
Françoise Lévéque (Mines ParisTech)
Yann Ménière (Mines ParisTech)

This paper explores in what circumstances patent owners can be expected to join unilaterally a patent pool. We develop a simple model in which owners of patents reading on a standard grant licences to competing manufacturers. Assuming that manufacturers must sink a fixed cost to enter the market for standard compliant products, we compare two timings of patent pool formation. We show that the formation of non-cooperative patent pools nearly always fails if it takes place once manufacturers have incurred fixed costs - as is usually the case. By contrast, allowing the formation of patent pools ex ante facilitates the emergence of stable non-cooperative patent pools. Such ex ante pools moreover yield lower prices and higher licensing profits than ex post patent pools would. We show the policy implications of these results concerning the early formation of patent pools in standard setting bodies.

``Is That a Gun in Your Pocket... ?'' Applications for Patents and Costly Verification
Delphine Prady (TSE-GREMAQ)

I model the process of patent granting as a signaling game in which the examiner--receiver exerts costly effort to tell received messages apart. Applicants--senders are of two types: either genuine inventors, or imitators. The preferences of applicants over the message they send depend on their type and sending costs. I define the concept of "communication" as the coincidence of i) the costly production of some piece of hard information by patent applicants, and ii) the strictly positive effort of an examiner. I show that a lenient granting policy is necessary to sustain communication in equilibrium when messages cannot be observed ultimately. This highlights potential costs of too strict granting policies.
Why is There a Home Bias? A Case Study of Wine

Richard Friberg *(Stockholm school of economics)*
Andrew Richardson (University of New Hampshire)
Robert Paterson (Industrial Economics inc)

Many goods markets are characterized by domestic products having a disproportionate market share. Taking the set of products available on a market as given, the main candidates for creating this "home bias" are preferences for home goods or trade cost reflected in higher prices of imports or weaker distribution networks for imported goods. We explore the contribution to home bias of these factors using a structural model of demand on very detailed data on wine sales in New Hampshire (brand per week per store over a one year period). Preferences rather than trade costs are the main force behind the home bias. Simulations where we confront New Hampshire consumers with an exogenous set of products (equally detailed data from Sweden) points to that the preferences for home goods fall far short of generating important home bias with this alternative choice set. Our findings reinforce recent work that stresses the extensive margin (new products and new suppliers) of trade.

Why Does Popcorn Cost So Much at the Movies? An Empirical Analysis of Metering Price Discrimination

Ricard Gil (UC Santa Cruz)
Wesley Hartmann *(Stanford University)*

Prices for goods such as blades for razors, ink for printers and concessions at movies are often set well above cost. This paper empirically analyzes concession sales data from a chain of Spanish theaters to demonstrate that high prices on concessions reflect a profitable price discrimination strategy often referred to as ‘metering price discrimination’. Concessions are found to be purchased in greater amounts by customers that place greater value on attending the theater. In other words, the intensity of demand for admission is ‘metered’ by concession sales. This implies that while some consumers’ surplus may be reduced by the high concession prices, surplus of other consumers on the margin of attending may increase from theaters’ decisions to shift their margins away from movies and toward concessions.
Price, Quality and Welfare Consequences of Alternative Club Objectives in a Professional Sports League  
*Paul Madden (University of Manchester)*

A 2-club professional sports league model is presented where gate revenues are the revenue source and expenditure on players ("quality") is the only cost. Clubs choose quality and the ticket price for a match at their stadium (of given capacity). Performance of clubs and leagues is studied under three club objectives, profit, quality and fan welfare maximization, the last two subject to non-negative profits. Results suggest that fan welfare maximization is interesting positively (in explaining black markets for tickets and empirically observed price inelasticities) and normatively. Profit maximization does not find strong normative support.

Market Power in the Fresh Tomato Vertical Chain  
*Vincent Réquillart (Toulouse School of Economics (GREMAQ-INRA, IDEI))*  
Michel Simioni (Toulouse School of Economics (GREMAQ-INRA, IDEI))  
Xosé-Luis Varela-Irimia (Toulouse School of Economics (GREMAQ-INRA))

In this paper, we analyse the market power of the retail industry in the French tomato market. Following the methods developed in the New Empirical Industrial Organization, we develop a structural model of this industry. The analysis is based on detailed data on final consumption and prices at both shipper and consumer levels for one of the two most important type of tomatoes in France. The structural model is composed of a system of demand, supply and pricing equations. A term that representing the market power of the retail sector is included. Results show that: i) elasticity of demand varies during the year, ii) because demand is more elastic than supply the price distortion on the retail price is lower than the price distorsion on the supply price, iii) oligopoly-oligopsony distortions lower consumption by 15 to 20 percent on average.
R&D and Productivity: Testing Sectoral Peculiarities Using Micro Data

Raquel Ortega-Argilés (European Commission, DG JRC, IPTS)
Lesley Potters (European Commission, DG JRC, IPTS)
Marco Vivarelli (Catholic University, Milan)

The aim of this study is to investigate the relationship between a firm’s R&D activities and its productivity using a unique micro data panel dataset and looking at sectoral peculiarities which may emerge; more specifically, we used an unbalanced longitudinal database consisting of 532 top European R&D investors over the six-year period 2000-2005. Our main findings can be summarised along the following lines: knowledge stock has a significant positive impact on a firm’s productivity, with an overall elasticity of about 0.125; this general result is largely consistent with previous literature in terms of the sign, the significance and the estimated magnitude of the relevant coefficient. More interestingly, the coefficient increases monotonically when we move from the low-tech to the medium-high and high-tech sectors, ranging from a minimum of 0.05/0.07 to a maximum of 0.16/0.18. This outcome, in contrast with recently-renewed acceptance of low-tech sectors as a preferred target of R&D investment, suggests that firms in high-tech sectors are still far ahead in terms of the impact on productivity of their R&D investments, at least as regards top European R&D investors.

Next Stop: Restructuring? A Nonparametric Efficiency Analysis of German Public Transport Companies

Astrid Cullmann (DIW Berlin)
Christian von Hirschhausen (TU Dresden and DIW Berlin)

In this paper, we present a nonparametric comparative efficiency analysis of 157 communal public transport bus companies in Germany (1994-2004). We apply both deterministic data envelopment analysis (DEA) and bootstrapping to test the robustness of our estimates and to test the hypothesis of global and individual constant returns to scale. We find that the average technical efficiency of German bus companies is relatively low, but that it rose over the observation period. We observe that the industry appears to be characterized by increasing returns to scale for smaller companies. These results would imply increasing pressure on bus companies to restructure.
European Railway Deregulation: The Influence of Regulatory and Environmental Conditions on Efficiency

Heike Wetzel (Leuphana University Lueneburg)

The objective of this paper is to analyze the impact of regulatory and environmental conditions on technical efficiency of European railways. Using a panel data set of 31 railway firms from 22 European countries for the period 1994-2004, a multi-output distance function model, including regulatory and other country- and firm-specific environmental factors, is estimated using stochastic frontier analysis (SFA). The results obtained indicate positive and negative efficiency effects of regulatory reforms. Furthermore, estimating models with and without regulatory and environmental factors clearly indicates that omission of environmental factors, such as network density, substantially changes parameter estimates and technical efficiency ranking.

Intra-Sectoral Structural Change and Aggregate Productivity Development: A Robust Stochastic Nonparametric Frontier Function Approach

Jens Krueger (Johannes Gutenberg-Universität Mainz)

This paper investigates the sources of total factor productivity growth in the German manufacturing sector, 1981-1998. Decomposition formulae for aggregate productivity growth are used to identify the effects of structural change and entry-exit on aggregate productivity growth. Documented is a substantial rise of productivity growth after the German reunification. The bulk of this rise can be attributed to structural change and entry-exit. Two methodological refinements are implemented, the first is the application of a robust stochastic nonparametric approach to frontier function analysis and the second is the calculation of bootstrap confidence intervals for the components of the productivity decompositions.
Social Housing under Oligopoly

Jose Maria Usategui (Universidad del Pais Vasco/EHU)

In this paper it is shown that the setting up of a social housing system may decrease the total number of houses built in the market, induce a price of non-social houses greater than the price of houses without that system and increase the profits of housing developers even in situations where they have to sell social houses at a price below production cost. The analysis considers a situation with imperfect competition in the housing market and with a social housing system where housing developers must provide some social houses when they obtain a permit to build non-social houses.

Production under Uncertainty: A Characterization of Welfare Enhancing and Optimal Price Caps

Veronika Grimm (University of Cologne)
Gregor Zoettl (University of Cologne/UCL-CORE)

We analyze the effect of price caps on equilibrium production and welfare in oligopoly under demand uncertainty. We find that high price caps always increase production and welfare as compared to the situation without price cap. Price caps close to marginal cost may lead to zero production, depending on the nature of uncertainty. We characterize the optimal price cap and show that typically, the optimal price cap is bounded away from marginal cost, while for certain demand distributions a price cap close to marginal cost may even be optimal.
Static Costs vs. Dynamic Benefits of a Minimum Quality Standard under Cournot Competition

Gunnar Oldehaver (University of Bayreuth)
Stefan Napel (University of Bayreuth)

Imposing a minimum quality standard (MQS) is conventionally regarded as harmful if firms compete in quantities. This, however, ignores dynamic effects. We show that an MQS can hinder collusion, resulting in dynamic welfare gains that may outweigh the usual static losses. Verdicts on MQS thus need to be even more sensitive to the market structure at hand than has been acknowledged.

Regional Regulation and Economic Integration

Emmanuelle Auriol (Toulouse School of Economics)
Sara Biancini (European University Institute)

We consider the regulation of national firms in a common market constituted by two countries. National regulators can influence the production of domestic firms only. There is a positive opportunity cost of public funds so that public subsidies to national champions are costly. Market integration removes all barriers to trade, but production expansion is limited by transportation costs. We show that market integration in the absence of a supra-national authority can be welfare decreasing in both countries. This occurs when public funds are costly and the production cost in the two countries are not very different. We also show that the impact of market integration on investment incentives is very different depending on whether investment is in transportation and interconnection infrastructures or in production cost reducing technologies.
Dynamic Store Adjustment: Switching Store Formats in Retail

Florin Maican (Goteborg University)

This paper proposes a dynamic oligopoly model to measure the switching costs associated with changes in store formats in the retail food industry. The ability of firms to change their store formats affects both demand and market structure in different local markets. I study case of Sweden, which is representative for other European countries with entry regulation. My preliminary results indicate that switching costs increase with market size and switching costs growth decreases moving to a larger market. Since retail entry is regulated in most of the OECD countries, switching format costs have important implications for policy debate.

Entry and Differentiation in Food Retailing

Matilda Orth (University of Gothenburg)

This paper investigates entry and differentiation in local retail food markets. We use an endogenous model of store decisions including entry and differentiation in both location and type. The model is based on an incomplete information game where each store has private information about its own profitability. Moreover, it allows for asymmetric competitive effects among store types. We use data on all Swedish retail food stores in the empirical application. The results show high returns to spatial differentiation and that the magnitude of the effect depends on store type. Discount stores are strong competitors to small stores whereas large stores affect discount stores. Our findings are important as they emphasize the role of product differentiation for market outcomes and competitive interactions.
The Effects of Zoning Regulation on Entry in the Retail Industry

Mitsukuni Nishida (University of Chicago)

Zoning regulations restrict entry in retail markets. This paper analyzes to what extent the zoning regulations affect firms' coordinated entry decisions using land use regulation enacted in 1968. I specify a static game by two retail chains that strategically choose outlet configurations in multiple locations, taking into account the role of geography. Using data on outlet locations and local demographics, I estimate the model parameters by method of simulated moments (MSM). I find negative effects of zoning laws on firm entry behavior. Counterfactual policy experiments demonstrate that the number of convenience store outlets will increase by 10% in Okinawa, Japan, if the current zoning policy is abolished.

Policy Reform and Bargaining structures

Jianyu Yu (Toulouse School of Economics (GREMAQ))

The French dairy sector experiences changes in both the raw milk price schemes and the structures of bargaining over the raw milk prices among the French dairy associations. In this article, we develop a bargaining model to investigate the link between current and potential changes and the on-going policy reform. We find that the policy reform changes the relative importance of the downstream processors therefore induces the change in price schemes and equilibrium bargaining structures.
Estimating Switching Costs from Aggregate Data

Gergely Csorba (GVH (Hungarian Competition Authority))
Gabor Kezdi (Central European University)

This paper proposes a method to identify and quantify switching costs using firm-level data. The method is based on a simple thought experiment that compares the behavior of already contracted consumers to the behavior of new consumers, as the latter are not subject to switching costs. In two panel regressions on new and quitting consumers, we look at the differential response to firm-specific price changes, and identify switching costs from the difference between the two. We apply our method to the Hungarian personal loan market and find significant switching costs: the estimated reaction by a bank’s old consumers is around 70 percent weaker than the estimated reaction of new consumers to the market.

Product Durability in Markets with Consumer Lock-in

Tobias Langenberg (Freie Universität Berlin)

This paper examines a two-period duopoly where consumers are locked-in by switching costs that they face in the second period. The paper’s main focus is on the question of how the consumer lock-in affects the firms’ choice of product durability. We show that firms may face a prisoners’ dilemma situation in that they simultaneously choose non-durable products although they would have higher profits by producing durables. From a social welfare perspective, firms may even choose an inefficiently high level of product durability.
Bertrand Competition in Markets with Network Effects and Switching Costs

Irina Suleymanova (Deutsches Institut für Wirtschaftsforschung (DIW Berlin), Humboldt Universität zu Berlin)
Christian Wey (Deutsches Institut für Wirtschaftsforschung (DIW Berlin), Technische Universität Berlin, and CEPR)

We analyze market dynamics under Bertrand duopoly competition in industries with network effects and consumer switching costs. Consumers form installed bases, repeatedly buy the products, and differ with respect to their switching costs. Depending on the ratio of switching costs to network effects, our model generates convergence to monopoly as well as market sharing as equilibrium outcomes. Interestingly, convergence can be monotone or alternating in both scenarios. A critical mass effect, where consumers are trapped into a technology for sure only occurs for intermediate values of switching costs, while for large switching costs market sharing is the unique equilibrium and for small switching costs both monopoly and market sharing equilibria emerge. We also analyze stationary and stable equilibria, where we show that a monopolization outcome is almost inevitable, if switching costs increase over time. Finally, we examine firms’ incentives i) to make their products compatible and ii) to create additional or to mitigate switching costs.

Automobile Replacement: a Dynamic Structural Approach

Pasquale Schiraldi (London School of Economics)

This paper specifies and estimates a structural dynamic model of consumer preferences for new and used durable goods. Its primary contribution is to provide an explicit estimation procedure for transaction costs, which are crucial to capturing the dynamic nature of consumer decisions. In particular, transaction costs play a key role in determining consumer replacement behavior in both primary and secondary markets for durable goods. The data set used in this paper is collected by the Italian Motor Registry and covers the period from 1994 to 2004. It includes information about sales dates for individual cars over time as well as the initial stock of cars in the sample period. Identification of transaction costs is achieved from the variation in the share of consumers choosing to hold a given car type each period, and from the share of consumers choosing to purchase the same car type that period. Specifically, I estimate a random coefficients discrete choice model that incorporates a dynamic optimal stopping problem in the spirit of Rust. I conclude by applying this model to evaluate the impact of scrappage subsidies on the Italian automobile market in 1997 and 1998.
The Optimality of Delegation under Imperfect Commitment

Fumitoshi Moriya (Hitotsubashi University)

Should a boss (principal) delegate authority (decision right) to his or her subordinate (agent) if the subordinate has private information? This paper answers this question under the ‘imperfect commitment’ assumption that compensation schemes are contractable but decisions are not verifiable. Our conclusions are that (i) the allocation of authority is determined by a trade-off between a self-commitment cost due to centralization and an incentive cost due to delegation, (ii) and that the principal should adopt a performance-based compensation scheme under both delegation and centralization; however, the optimal compensation schemes are rather different. Furthermore, we find a new kind of advantage from delegation.

The Value of Monitoring Information

Jeanine Miklós-Thal (University of Mannheim)

This paper analyzes the role of a monopolistic monitoring firm in affecting trade between one or many long-lived sellers and short-lived buyers. In every period of an infinitely repeated game, the seller is subject to a moral hazard problem, which cannot be solved without the monitoring firm. We analyze whether a profit-maximizing monitoring firm has an incentive to promote efficiency by choosing a recommendation policy that induces high seller effort in as many periods as possible. Under perfect monitoring, there is a conflict between rendering the advice valuable and promoting efficiency. Under imperfect monitoring, this conflict vanishes for sufficiently high discount factors, even if monitoring is almost perfect.
Strategic Delegation and Market Competitiveness
Alessandra Chirco (University of Salento, Italy)
Caterina Colombo (University of Ferrara, Italy)
Marcella Scrimitore (University of Salento, Italy)

This paper examines the determinants of the degree of strategic delegation in a quantity setting framework. In particular, the sub-game perfect equilibrium degree of strategic delegation is derived as a function of the two key parameters that define market competitiveness in a homogeneous product set-up, i.e. the price elasticity of market demand and the number of firms. The main result of the paper is that the relationship between the degree of strategic delegation and both the elasticity and the number of firms is not necessarily monotone. Indeed, for an inverse relation between strategic delegation and market competitiveness to arise, the initial degree of market competition must be sufficiently high.

Marketing vs Engineering: Who Should Decide?
Stefan Ambec (Toulouse School of Economics (INRA-LERNA))

A production process involves a major shareholder and two privately informed agents, a marketing division and an engineering unit. Production requires coordinated decision making. It might be carried in a centralized organization or through delegated contracting in a hierarchical structure. We compare the performance of different organizational structures when renegotiation of initial contracts is possible. We show that delegated contracting always dominates centralization if the downstream contract between the agents is observable. Contracting (resp. control) should be delegated to the agent with the least (resp. most) important information. If downstream contracts are not observable, we obtain a tradeoff between centralization and delegation depending on parameter values.
Exposure to Low-Wage Competition, Activity Changes and Quality Upgrading: An Empirical Assessment

Claire Lelarge (OECD-CREST)
Benjamin Nefussi (DGTPE)

In this paper, we study the responses of French firms to the competitive pressure arising from low wage countries. More specifically, we test whether the "defensive innovation" assumption is compatible the observed "avoidance", product switching strategy. We use unique French firm level data sourced from various matched datasets and covering the 1999-2004 period which enable to track precisely (at the three digit level) the productive activities of a large sample of French manufacturing firms, their innovative (R&D) effort and the competitive pressure they face on each of their markets, in particular from Southern countries. Our work yields several results. First, Southern competition turns out to be an important driver of R&D spendings. Both the level of R&D spendings and the decision to conduct R&D spendings are affected by Southern competition. Furthermore, the impact of Southern competition on R&D spendings is larger for more productive firms. Third, these higher R&D spendings are associated with more frequent changes in firms' activities and with higher increases in the quality of their exported products. Fourth, we find no evidence of market segmentation at the firm level, suggesting that firms progressively get rid of lower quality goods and climb the quality ladder.

Export and Product Innovation

Massimiliano Bratti (University of Milan, IZA, Child)
Giulia Felice (University of Milan, Centro Studi Luca d'Agliano)

Past research showed that exporters perform better than non-exporters in several dimensions, among which innovation activities. However, while the positive impact of innovation on export is widely accepted, research on the innovation-enhancing effect of export is scant. In this paper, we analyze the relationship between product innovation and export by using a rich firm-level survey on Italian manufacturing. First, we explore the statistical association between firms’ exporting and innovating activities. Second, we identify the causal effect of export status on the introduction of new products (learning by exporting). Preliminary evidence shows large and positive average causal effects of exporting on the probability of introducing new products.
Global Trade and Firm Exit: Does Firm Size Matter?
Italo Colantone (K.U.Leuven)
Kristien Coucke (EHSAL)
Leo Sleuwaegen (K.U.Leuven)

The effects of increasing import competition on the exit of heterogeneous domestic firms are investigated by developing an oligopoly model of international competition. In this framework a domestic firm competes with a foreign one, which is assumed to be able to supply any quantity at a constant marginal cost (inclusive of tariffs and transport costs). The model predicts that the domestic firm faces a reduction in its level of output and profits following a decline in import barriers. This displacement effect is stronger for large ‘output flexible’ firms, while small ‘cost flexible’ ones are less affected by increasing import pressure. Extending the model to allow for product heterogeneity between the domestic and the foreign firm, we also find that product differentiation lowers the displacement effect. The theoretical findings are confirmed at the empirical level by analysing firm exit dynamics for 12 manufacturing sectors in 8 European countries, from 1997 to 2003.

Grey Power: An Empirical Investigation of the Impact of Parallel Imports on Market Prices
Steve Thompson (University of Nottingham, UK)

The persistence of price discrimination across international markets with falling costs of unofficial importing is both paradox and policy concern. E-commerce facilitates a ‘grey’ market in parallel imports, particularly for high-value goods such as electronics. This paper explores the impact of unofficial imports on price using a panel of product markets mediated via an Internet shopbot. It finds the presence of an import model lowers prices across the market. However, unlike the refurbished model it is not simply an inferior substitute. The import price discount increases over the model life cycle, suggesting that model-specific preferences fall as each model ages.
Competitive Effects of Vertical Integration with Downstream Oligopsony and Oligopoly

Simon Loertscher (University of Melbourne)
Markus Reisinger (University of Munich)

This paper analyzes the competitive effects of backward vertical integration by a partially vertically integrated firm that competes à la Cournot with non-integrated firms both on the upstream and on the downstream market. We find under general conditions that vertical integration is only anticompetitive if the ex ante degree of integration is high and the number of competitors is large. That is, for most cases vertical integration has a procompetitive effect and leads to a price decrease of the final output. This result contrasts with previous findings of slightly different market structures, e.g. a dominant firm model. Therefore, the present model's implications for the regulation of vertical mergers differ from the previous literature by suggesting a more permissive approach.

Downstream Competition, Buyer Power and Upstream Collusion

Marie-Laure Allain (CNRS and Laboratoire d'Econométrie Ecole Polytechnique)
Claire Chambolle (INRA and Laboratoire d'Econométrie Ecole Polytechnique)
Clémence Christin (Laboratoire d'Econométrie Ecole Polytechnique)

This paper analyzes the emergence of collusive equilibria in an oligopoly of producers facing an oligopolistic downstream industry. In a vertical industry where producers simultaneously offer two-part tariff take-it-or-leave it contracts to the retailers, we show that: (1) Compared to a situation with vertical integration, the presence of an oligopolistic downstream level always deters collusion; Compared to the case where producers face a monopolistic downstream sector, (2) when intra-brand competition is strong enough and inter-brand competition is weak enough, downstream firms' competition facilitates upstream collusion; (3) when intra-brand competition is weak enough and inter-brand competition is strong enough, on the contrary, downstream competition hinders upstream collusion. These results bring new elements to the classic competition authorities' analysis.
Legal Unbundling can be a Golden Mean between Vertical Integration and Separation
Felix Hoeffler (WHU - Otto Beisheim School of Management)
Sebastian Kranz (University of Bonn)

We study an industry in which an upstream monopolist supplies an essential input at a regulated price to several downstream firms. Legal unbundling means that a downstream firm owns the upstream firm, but this upstream firm is legally independent and maximizes its own upstream profits. We allow for non-tariff discrimination by the upstream firm and show that under quite general conditions legal unbundling yields (weakly) higher quantities in the downstream market than vertical separation and integration. Therefore, typically, consumer surplus will be largest under legal unbundling. Outcomes under legal unbundling are still advantageous when we allow for discriminatory capacity investments, investments into marginal cost reduction and investments into network reliability. If access prices are unregulated, however, legal unbundling may be quite undesirable.

Vertical Limit Pricing
Aggey Semenov (Department of Economics, National University of Singapore)
Julian Wright (Department of Economics, National University of Singapore)

A new theory of limit pricing is provided which works through the vertical contract signed between an incumbent manufacturer and a retailer. We establish conditions under which the incumbent can obtain full monopoly profits, even if the potential entrant is more efficient. A key feature of the optimal vertical contract we describe is quantity discounting, typically involving three-part incremental-units or all-units tariffs, with a marginal wholesale price that is below the incumbent’s marginal cost for sufficiently large quantities.
Is It Worth all the Trouble? - The Costs and Benefits of Antitrust Enforcement

Kai Hueschelrath (Centre for European Economic Research (ZEW))

The paper aims at assessing the costs and benefits of antitrust enforcement. The analysis starts with an investigation of why competition is typically worth protecting followed by a collection of empirical evidence which shows that competition actually needs protection by antitrust policy in order to hinder firms to permanently abuse market power to the detriment of consumers. Subsequently, an estimation of the costs and benefits of antitrust enforcement is undertaken for the United States and the Netherlands. The analysis differentiates between an aggregate level approach which basically focuses on deadweight losses and a disaggregate level approach which estimates the benefits of antitrust enforcement in particular antitrust cases and compares these figures with estimates of the costs of antitrust enforcement. The results basically show for the United States and the Netherlands that the realised benefits overtop the realised costs by far as long as overcharges/redistribution effects and deadweight losses are considered as welfare loss. However, if only the avoidance of deadweight losses is considered as benefit of antitrust policy, the benefits estimate for cartel and merger enforcement under a disaggregate approach cannot cover the derived cost estimate for the United States and the Netherlands.
On Optimal Legal Standards for Competition Policy - A General Analysis

Yannis Katsoulacos (Athens University of Economics and Business)
David Ulph (University of St. Andrews)

We present a new welfare-based framework for the optimal choice of legal standards. By formally capturing the quality of the underlying economic/legal analysis and information available to a regulatory authority, we formalise the decision-theoretic considerations widely discussed in the existing literature and obtain a precise set of conditions for determining when a Rule of Reason approach would be able to effectively discriminate between benign and harmful actions and consequently dominate Per Se as a decision-making procedure. We also show that in a welfare-based approach the choice between legal standards must additionally take into account (i) the indirect (deterrence) effects of the choice of standard on the behaviour of all firms when deciding whether or not to adopt a particular practice; and (ii) the procedural effects of certain features of the administrative procedure employed by the decision-making authority in particular delays in reaching decisions; and the coverage rate of the actions taking place. We therefore derive necessary and sufficient conditions for adopting discriminating rules (such as Rule of Reason). We also examine what type of discriminating rule will be optimal under different conditions. We apply our framework to two recent landmark decisions "Microsoft vs. EU Commission (2007) and Leegin Vs. PSKS (2007)" in which a change in legal standards has been proposed, and show that it can powerfully clarify and enhance the arguments deployed in these cases.

The Effectiveness of European Antitrust Policy: Evidence from the Stock Market

Andrea Guenster (Maastricht University)
Mathijs van Dijk (RSM Erasmus University)

This paper analyzes the stock market response to antitrust investigation announcements and decisions to assess the effectiveness of European antitrust policy. We analyze a sample of 269 publicly traded companies involved in 118 antitrust cases over the period 1978-2004. We uncover significantly negative abnormal stock returns around the time of the dawn raid and around the final decision date. The average abnormal stock return is around -4.5% for the dawn raid and close to -2% for the final decision. These stock price reactions translate into a decrease of almost â‚¬50 billion in the aggregate market value of the companies involved. These valuation effects can only to a limited extent be explained by fines and legal costs. Stock markets, it seems, anticipate a decrease in future profitability. We examine the relation between the stock price reaction and several case and company characteristics. We shed light on several policy issues, including the 1996 Leniency Notice. Overall, our results suggest that European antitrust policy has a profound impact on the value of the companies involved.

Dieter Schmidtchen (CSLE, Saarland University)
Birgit Will (CSLE, Saarland University)

This paper analyzes the new Council Regulation (EC) 1/2003 which came into force in May 2004. This regulation replaces the mandatory notification and authorization system as under Council Regulation (EC) 17/62 by a legal exception system, i.e. anticompetitive agreements are now subject to abuse control.

The aim of this paper is to show that the widespread allegation that the new system would lead to an ineffective cartel control is misplaced in its generality. For this purpose we build a game theoretic model that represents the legal exception system by modeling the interaction between the European Commission and potentially cartelizing firms. We operationalize the criterion effectiveness via two subcriteria: compliance of the cartelizing firms to article 81 EC Treaty and the probabilities of type I and type II errors committed by the cartel authority.

We show that in equilibrium four different kinds of outcomes are possible including a full-compliance equilibrium, where the cartelizing firms fully obey to the requirements of article 81(3) EC Treaty and both error probabilities are zero. Hence, the legal exception system cannot be said to be not effective.

Are Information Asymmetries Unfair?

Nora Szech (BGSE)

For takeover as well as public procurement auctions legislation requires in many countries that the bidders get furnished with the same amounts of information. We discuss such "fairness" requirements in an independent private value second price auction with entry fees where informing the bidders is costly to the seller. We find that for some intermediate levels of costs some but not all information should be released to maximize social surplus. For the two bidder case, it is shown that a fixed total amount of information should not be distributed symmetrically among the bidders. With two bidders, bidders are willing to pay identical maximal entry fees, no matter how asymmetrically information is distributed among them.
Alternative Procurement Policies with Horizontally Differentiated Suppliers

Nicola Doni (University of Florence)
Rupert Gatti (University of Cambridge)

In this work we extend the recent model of multidimensional auction proposed by Gal-Or et al. (2007). Under the assumptions that i) suppliers’ quality is the buyer’s private information, and that ii) production costs are heterogeneous and perfectly known by suppliers, but unknown to the buyer, we compare the outcomes of different procurement policies. Unlike Gal-Or et al. we show the existence of a trade-off between efficiency and rent-extraction. Buyer will maximise expected utility by selecting a first score auction and either concealing or privately revealing suppliers’ quality - with the optimal choice depending on the degree or heterogeneity in suppliers costs and the importance the buyer places on quality. Neither of these auction mechanisms will be efficient however. Efficiency requires the buyer to adopt instead a second score auction or a first score auction associated with public disclosure of suppliers’ quality. The results exploit an equivalence between auction models and models of Hotelling competition and apply results for asymmetric auctions developed by Maskin & Riley (2000).

Equilibrium Selection with Risk Dominance in a Multiple-unit Unit Price Auction

Anette Boom (Copenhagen Business School)

This paper uses an adapted version of the linear tracing procedure, suggested by Harsanyi and Selten (1988), in order to discriminate between two types of multiple Nash equilibria. Equilibria of the same type are pay-off equivalent in the analysed multiple-unit unit price auction where two sellers compete in order to serve a fixed demand. The equilibria where the firm with the larger capacity bids the maximum price, serves the residual demand and is undercut by the low capacity firm that sells its total capacity risk dominate the equilibria where the roles are interchanged.
Ratifiable Collusion and Bidding Systems in Procurement
Tadanobu Tanno (Atom University)

This paper explores stability in efficient collusion in government procurement auctions. In first and second price auctions in independent private values we bring the possibility of vetoing collusion mechanism and the learning of the other bidders after vetoing. The collusions in first price auctions in simple case and second price auctions are stable against competition after potential veto to take part in bid-rigging.

Exclusivity and Bidding for Premium Broadcasting Rights
Eirik Norvald Christensen (University of Bergen)
Bjørn Olav Johansen (University of Bergen)

This paper analyses a TV-channel’s incentives to exclusive distribution on a platform, conditioned on premium content being present or not. The TV channel can obtain the premium content by joint bidding with another TV-channel (horizontal joint bidding) or distributor (vertical joint bidding). We show that absent of premium content, the channel has incentives to choose exclusive distribution, but the existence of premium content dramatically reduces these incentives, and full distribution is the likely outcome. While consumers always will prefer full distribution of the TV-channel, the rightsholder of the premium content, will benefit (substantially) from exclusive distribution as this drives the price for the content up in case of vertical bidding consortia. The broadcasting rights for Norwegian football serves as a motivation for the paper.
Asymmetric Procurement Systems
Florian Müller (McKinsey)
Frank Rosar (University of Mannheim)

We consider a repeated asymmetric procurement problem in which a part can either be procured from an incumbent, who can make an relationship-specific up-front investment, or from one of several entrants. We compare two distinct procurement systems resembling Japanese and American procurement procedures: in the first one, the procurer is not restricted in his procurement mechanism choice, in the second one he commits himself to negotiating with the incumbent first. While the American system performs better if investment is not or very important, the Japanese system does for intermediate important investment.

Auctioning Tenancy Rights to Increase Price Competition between Retail Gasoline Stations on Highways; Effects of a Dutch Policy Experiment
Marco Haan (University of Groningen)
Pim Heijnen(University of Amsterdam)
Adriaan Soetevent (University of Amsterdam)

Since 2002, the Dutch government has been organizing annual auctions of tenancy rights to operate gasoline stations along state-run highways. The explicit objective of the auctions is to allow for entry and to enhance price competition between outlets. This paper empirically evaluates to what extent the auctions have succeeded in increasing price competition. We use a new panel data set which contains detailed price information for almost all Dutch gasoline stations for the time period between October 2005-August 2007. Our main finding is that the auctions did not affect local price competition. Moreover, we provide evidence that prices at highway stations are significantly higher than at non-highway stations and show that the price level at highway station is unaffected by the number of non-highway station in its neighborhood. This gives some support to the common view that fuel retailing on highways constitutes a separate product market.
When the Highest Bidder Loses the Auction: Theory and Evidence from Public Procurement

Francesco Decarolis (University of Chicago, Dept. of Economics)

This paper presents a theoretical and empirical analysis of a very common class of auctions in public procurement, where the winner of the auction is not the highest bidder, but the bidder closest to the average bid. The paper demonstrates that when bidders’ valuations are private and independent, this type of auction is inefficient and, also, revenue minimizing for the auctioneer when bidders are numerous. On the other hand, when agents have a common valuation of the object and asymmetric budgets, this auction is preferred over the standard first-price type by an auctioneer who bears a high enough cost due to the winner’s bankruptcy. Finally, another point of discussion is how, compared to the first-price auction, this format leaves more room for collusion and how this affects the longevity of this mechanism. The empirical analysis is based on data from Italian public procurement auctions which, after a change in the regulation in June 2006, are now run alternately using a form of the average-bid-wins rule or the first-price rule. In line with the theory, a switch toward a first-price rule is strongly associated with quantitatively large increases in the winning bid and decreases in the number of bidders. On the other hand there is some, moderate, evidence that this also leads to greater renegotiations after the contract is awarded.

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The Role of the Local Business Environment in Banking Consolidation

Luca Colombo (Università Cattolica di Milano)
Gilberto Turati (Università di Torino)

We study the impact of local economic conditions on banking industry consolidation. By using probit and count data (ZIP) models, we document a direct effect of the “business environment” on the concentration of the Italian banking industry at the regional level in the period 1996-2000. This effect complements the well known indirect effect of local economic conditions on the profitability of banks. We also show that institutional and organizational variables affect the likelihood and number of M&A deals, and help explaining differences in performance. Our results appear to be robust to different specifications, and to a number of robustness checks.
Discriminatory Fees and Coordination in Shared ATM Networks

Stijn Ferrari (K.U. Leuven)

The introduction of cash withdrawal fees and the partial incompatibility that is generated by the discriminatory nature of some of these fees have been major issues in debates and regulation on ATMs. This paper analyzes how consumers and banks react (in terms of withdrawal behaviour and ATM investment) to the introduction of a discriminatory withdrawal fee, and how welfare in the market is affected. In a setting where bank coordinate their investment decisions and retail fees for cash withdrawals are absent, we develop an empirical model in which consumers decide which ATM (or branch) to use for cash withdrawals and banks decide at which branch to deploy an ATM. We find that the investment behaviour after a discriminatory fee introduction critically depends on the consumers' price sensitivity, and that the effects on ATM availability, usage and welfare differ substantially for foreign fees as compared to surcharges when banks invest in ATMs in a noncooperative way. While surcharges may result in welfare improvements when ATM availability is increased, the introduction of a foreign fee always results in a reduction in ATM availability and welfare as compared to a situation where retail fees for cash withdrawals are absent.

Interaction of Externalities in the Payment Sector and of Externalities in the Rest of the Economy

Christian von Weizsaecker (Max Planck Institute Bonn)

The paper develops a model to show the importance of interaction effects between externalities inside and outside of the payment sector. These interaction effects may easily be more important than those externalities so far examined in the academic literature.
Paying for ATM Usage: Good for Consumers and Bad for Banks?
Jocelyn Donze (TSE-GREMAQ)
Isabelle Dubec (TSE-GREMAQ)

We develop a theoretical model to compare the effects of the three most common ATM pricing regimes on consumers' welfare and banks profits. The regimes have in common an interchange system but differ in the number of usage fees customers have to pay when they make a foreign withdrawal. Under regime one, the ATM usage is free. Under regime two, customers pay a foreign fee per foreign withdrawal and under regime three they pay a foreign fee and a surcharge. We show that increasing the number of available usage fees adversely affects banks' profits: it makes banks deploy more ATMs because usage fees introduce differentiation between banks' networks. Consumers' welfare is higher when ATM usage is not free. When travel costs to access cash are high enough, consumers prefer regime three to regime two because they highly value the extra ATMs generated by surcharging. Our results also shed light on two recent regulatory reforms of the interchange scheme, namely the average cost pricing applied in the UK and the "direct charging model" proposed by the Australian regulatory authority.

CONSUMER BEHAVIOUR
Room J3
Chair: Ramon Caminal
Saturday 6 Sep 2008, 8:30 – 10:30

Product Pricing when Demand Follows a Rule of Thumb
Christina Matzke (University of Bonn)
Benedikt Wirth (University of Bonn)

In our model, individual consumers follow simple behavioral decision rules governed by imitation and habit as suggested in consumer research. Demand can be viewed as the outcome of a population game in which the revision protocol is determined by the consumers' behavioral rules. The resulting description of consumer dynamics is used to investigate the monopoly market and competition between firms. We derive a Nash-equilibrium in a price-competition model in which demand is determined via such a population game. Our model is consistent with observed market behavior such as product life cycles.
Introducing Green Goods
Philippe Mahenc (Toulouse School of Economics)

Faced with greenwashing, consumers cannot ascertain the environmental friendliness of products and green goods may be driven out of the market. An informed government can overcome the lemons problem by using taxes to reveal information about the environmental performance of firms. This requires the tax choice to prevent consumers from mistaking brown firms for green firms. The Pigovian tax signals brown firms, and green firms are introduced either by zero tax, or a specific tax. When positive, the "introductory tax" internalizes the negative externality consumers exert on green firms by ignoring them. When taxes fail to separate brown and green firms, pooling equilibrium taxes mitigate the lemons problem.

Efficient Consumer Altruism and Fair Trade
David Reinstein (University of Essex)
Joon Song (University of Essex)

Consumers have shown willingness to pay a premium for products labeled as "Fair Trade" and to prefer retailers that are seen as more generous to their suppliers and employees. We define a fair trade product as a bundle of a consumption good and a donation. An altruistic consumer will only choose this bundle over its separate elements if the bundle is less expensive. Thus, for fair trade to be sustainable in a competitive equilibrium, an efficiency must be generated. In general, the first-best level of investment (to reduce the retailer's cost or boosts quality) cannot be achieved when it is non-verifiable. However, the altruism of the consumer facilitates a more efficient contract: by paying the supplier more, the retailer can both extract more consumer surplus and increase the level of contracted investment, while preserving incentive compatibility. We provide empirical and anecdotal evidence for the assumptions and predictions of this model, focusing on the coffee industry.
Markets and linguistic diversity
Ramon Caminal (Institut d’Anàlisi Econòmica, CSIC)

The choice of language is a crucial decision for firms competing in cultural goods and media markets with a bilingual or multilingual consumer base. To the extent that multilingual consumers have preferences over the intrinsic characteristics as well as over the language of the product, we can examine the efficiency of market outcomes regarding linguistic diversity. In this paper, I extend the spokes model and introduce language as an additional dimension of product characteristics. I show that: (i) if each firm supplies its product in a single language (the adoption model) then the degree of linguistic diversity is inefficiently low, and (ii) if each firm can supply more than one linguistic version (the translation model) then in principle the market outcome may exhibit insufficient or excessive linguistic diversity. However, excessive diversity is associated to markets where the fraction of products in the minority language is disproportionately high with respect to the relative size of the linguistic minority.

CONTRACTS III
Room J100
Chair: Heiko Gerlach
Saturday 6 Sep 2008, 8:30 – 10:30

Countervailing Incentives in Multi-agent Environments
Annalisa Vinella (Toulouse School of Economics (GREMAQ); University of Bari (DSEMM))

We consider a principal who contracts with two risk-neutral agents. Each of the latter may have countervailing incentives to misrepresent private information on costs. We show that the outcome à la Crémer and McLean (1988) entails i.e., with correlated types, the full information efficient allocation is implemented and expected surplus entirely retained. The peculiarity here is in the profile of ex post payoffs, which are doubly state-contingent: for each agent, the payoff depends not only on the partner’s type, but also on the realization of the agent’s type itself. We further show that, under limited liability, distortions and expected rents appear at the bottom/top of the type distribution and that, as in single-agent settings with correlated signals, the maximum loss is assigned to each type of agent in one state of nature (at most). Yet, the outcome à la Crémer and McLean still arises at certain levels of cost uncertainty/liability.
Cooperation in Knowledge-Intensive Firms

Ola Kvaloy (University of Stavanger; Norway)
Trond E. Olsen (Norwegian School of Economics and BA)

The extent to which a knowledge-intensive firm should induce cooperation between its employees is analyzed in a model of relational contracting between a firm (principal) and its employees (two agents). The agents can cooperate by helping each other, i.e. provide effort that increases the performance of their peer without affecting their own performance. We extend the existing literature on agent-cooperation by analyzing the implications of incomplete contracts and agent hold-up. A main result is that if the agents' hold-up power is sufficiently high, then it is suboptimal for the principal to implement cooperation, even if helping effort is productive per se. This implies, contrary to many property rights models, that social surplus may suffer if the investing parties (here the agents) are residual claimants. The model also shows that long-term relationships facilitate cooperation even if the agents cannot monitor or punish each others effort choices.


Lionel Artige (Université de Liège)
Rosella Nicolini (Instituto de Análisis Económico)

The objective of this paper is to identify the role of memory in repeated contracts with moral hazard in financial intermediation. We use an original dataset from the European Bank for Reconstruction and Development to test a basic model with repeated moral hazard. To capture the role of memory, we need to control for the adverse selection effect. We propose a simple empirical method to achieve it. Our results unambiguously isolate the effect of memory in the bank's lending decisions.
Exclusionary Contracts, Entry, and Communication

Heiko Gerlach (University of Auckland/IAE Barcelona)

I examine the incentives of firms to communicate entry into an industry where the incumbent writes exclusionary, long-term contracts with consumers. The entrant's information provision affects the optimal contract proposal by the incumbent and leads to communication incentives that are non-linear in the size of the innovation. Entry with small and medium-to-large innovations is announced whereas small-to-medium and large innovations are not communicated.

It is demonstrated that this equilibrium communication behavior maximizes ex ante total welfare by attenuating the anti-competitive impact of excessively exclusive contracts. By contrast, consumers always prefer more communication and the incumbent's equilibrium contract maximizes ex ante consumer surplus.

DYNAMICS OF INNOVATION

Chair: Thibault Larger
Saturday 6 Sep 2008, 8:30 – 10:30

Timing of Technology Adoption and Product Market Competition

Chrysovalantou Milliou (Athens University of Economics & Business)
Emmanuel Petrakis (University of Crete)

This paper examines how product market competition affects the adoption and diffusion of a new technology. It considers both price and quantity competition and allows for product differentiation. It demonstrates that the timing of technology adoption differs not only among symmetric firms but also among a Cournot and a Bertrand market. More specifically, it demonstrates that technology can be adopted by firms earlier in a Cournot market than in a Bertrand market. When goods are sufficiently differentiated, adoption occurs always later than it is socially optimal.
Waiting to Imitate: On the Dynamics of the Market for Technology
Emeric Henry (Economics Subject Area, London Business School)
Carlos Ponce (Departament of Economics, Universidad Carlos III de Madrid)

We examine the profits of an innovator in the absence of intellectual property rights protection but in the presence of a market for technology. Potential imitators can enter the product market by either copying the invention at a cost or by obtaining a license from the inventor. As imitators enter the product market, they also compete with the innovator on the market for technology. The price of the technology transfer licenses falls as competition to provide them increases. This creates an incentive for imitators to wait to enter the market, in the hope that a competitor will enter before them. Furthermore, we show that if there is free entry of imitators, competition on the market for technology can be so fierce that it dissuades any imitator to incur the initial entry cost, thus guaranteeing monopoly profits for the inventor. Our results challenge the traditional view that in the absence of intellectual property protection, the innovators’ rents will be competed away.

The Dynamics of Innovation and Horizontal Differentiation
Borghan Narajabad (Rice University)
Randal Watson (University of Texas-Austin)

We study innovation and duopoly in a dynamic stochastic model of quality improvement with endogenous horizontal differentiation. Innovation takes the form of a quality ladder in which laggards benefit from spillovers; horizontal differentiation is Hotelling competition. We use the Pakes-McGuire numerical algorithm to compute Markov-perfect equilibria. Multiple equilibria are sometimes observed -- we draw on analytic results from a simpler deterministic model to argue for uniqueness in certain parameter ranges. Within these ranges we analyze the effects on the industry’s long-run innovation rate of changes in: (a) consumer taste heterogeneity, and (b) the costs of horizontal differentiation. A large enough fall in taste heterogeneity will raise innovation. In contrast to previous results the heterogeneity-innovation relationship may be U-shaped rather than inverse-U shaped. Less costly differentiation raises innovation if taste heterogeneity is high, and lowers it otherwise.
Differentiation and Innovation Adoption
Thibault Larger (Toulouse School of Economics - Enac)

The paper’s main contribution is to argue that, under price competition, Minimal Differentiation can occur. In a sequential game where two firms competing in prices choose whether to adopt an innovation or not, I show that either maximal or minimal differentiation equilibria occur depending on the state of the art of the technology. Then, the paper focuses on two applications: the adoption of telemedicine by airline companies and the adoption of green technologies when environmental norms are likely to.

EMPIRICAL ANALYSIS OF REGULATION
Room AR322
Chair: Adriana Hernandez-Perez
Saturday 6 Sep 2008, 8:30 – 10:30

Did Quality Regulation pay off in Norway? Dynamic Comparisons of Allocative Efficiency and Welfare
Anton Burger (Vienna University of Economics and B. A.)
Philipp von Geymüller (Vienna University of Economics and B. A.)

Is quality regulation of electricity supply beneficial from a welfare point of view? In this paper we propose a method to answer this question and apply it to the case of Norway, one of the first countries where quality regulation was introduced. Specifically, we first derive sufficient conditions for an increase in welfare due to quality regulation and then show how these conditions can be checked by means of cost Malmquist indices and their decomposition. The application of this method to a representative sample of Norwegian distribution system operators yields strong evidence for a positive effect of quality regulation on welfare.
Yardstick Competition to Elicit Private Information: An Empirical Analysis of the Japanese Gas Distribution Industry
Ayako Suzuki (Osaka University)

This study examines the effect of yardstick regulation in Japan’s gas distribution sector, especially focusing on its effect of reducing the adverse selection problem. The Japanese government has regulated the price of city gas supplies by a combination of fixed-price regulation and ex-ante yardstick regulation. The yardstick compares a firm’s reported costs with those of “similar” firms before the price is determined. Realizing that yardstick inspection will lead the industry to a full-information outcome if it works perfectly, we infer its effect from the difference between the current and the counterfactual full-information welfare levels.

We estimate the cost function of retail gas distributors under the assumption of asymmetric information between the regulator and the distributor in the efficient level of labor. The estimation allows us to obtain informational parameters such as firms’ efficiency levels and effort levels. Using the estimated cost structure and the firms’ behavior in response to the regulatory incentive, along with the demand system and the behavior of the regulator, we calculate the current and the hypothetical full-information welfare levels, and examine whether the discrepancy of the current level from the full-information one has been significantly reduced since the introduction of yardstick regulation. Our results suggest that, on average, yardstick regulation reduces welfare discrepancy, implying it is somewhat effective in reducing firms’ incentive to report higher costs. This effect, however, comes mainly from the very first inspection conducted in 1995. There seems to be a dynamic problem, similar to the Ratchet effect, because subsequent inspections cannot be effective for a firm that has learned the relative position of its own cost in the comparison group.
**Wholesale Regulation and Capital Structure in European Telecommunications Industry**
Carlo Cambini (Politecnico di Torino)
Laura Rondi (Politecnico di Torino)
Yossi Spiegel (Tel Aviv University and CEPR)

We empirically examine the relationship between leverage, wholesale access regulation and investment in the European telecommunications market. Specifically, since leverage affects both the way regulated wholesale charges are set by NRAs and the firm’s investment decision, debt level represents a strategic tool in the hand of the regulated firm influencing the regulator’s pricing decision and so the degree of competition in the market. Using a panel of 15 EU Public Telecommunication Operators over the period 1994-2005, we test the relationship between capital structure and regulated charges - both retail and wholesale. To investigate the impact on competition we also consider the relationship between leverage and the number of competitors in the retail segment. Finally we investigate the interaction between debt and investment in fixed networks. Preliminary results show that increases in leverage positively affect regulated rates, as well as the PTOs’ investment rate, as predicted by the theory of Spiegel and Spulber (1994). However, leverage has also a positive impact on interconnection charges paid by downstream alternative operators. When we test the relationship between leverage and the number of competitors we find that increases in leverage are followed by a decrease in the number of competitors. This suggests that leverage encourages investment, but also has a potential anticompetitive effect, making the entry of alternative operators more difficult and costly.

**The (Unintentional) Regulation of Rail Safety in Europe**
Adriana Hernandez-Perez (Toulouse School of Economics)

The reform promoted by the Directive 91/440 aimed to change the way European railway incumbent operators did businesses in the industry by setting the basis for the improvement of their commercial and financial viability. While safety regulation has been only in the background of these developments, its implications on rail inter-operability become crucial as the European Commissions goal is to open train operations to competition. This article investigates the role of the reform on the provision of safer services. We assume rail operators face a disutility from accidents which is linked to its incompatibility to the network. However, its prevention also entails costs, this time linked to the network’s maintenance and renewal efforts, double security checks, accuracy and staff training programs. We argue that while the reform can elicit laxer safety concerns by the operator, the costs it imposes from network incompatibility can force the operator to perform better. After merging industry data with regulation information for the period 1991-2003, we estimate an accident equation simultaneously with a cost function and an engineering function relating supply to demand. We identify the technological and disutility parameters of the industry and obtain that reform had a net positive effect on the operators’ safety performance. Also, we find that regulatory governance matters with respect to safety and vertically separated operators are unsafer.
The return to technological frontier: The conditional effect of plants’ R&D on their productivity in Finnish manufacturing

Petri Bockerman (Labour Institute for Economic Research)
Janne Huovari (Pellervo Economic Research)
Eero Lehto (Labour Institute for Economic Research)

This paper analyses by using plant-level data whether R&D’s productivity impact is contingent on the distance of a plant’s productivity from the industry’s technological frontier. R&D is specified as an accumulated stock from the R&D-investments. We examine the productivity effect of a plant’s own R&D as well as the productivity impact of plant’s parent firm’s and other firms’ proximity-weighted R&D-stocks. This paper shows that a plant’s own and a parent firm’s R&D have a positive productivity impact and that the former impact decreases as the distance from the industry’s technological frontier increases. Furthermore, the productivity effect of other firms’ proximity-weighted R&D is on average positive, but this impact increases as the distance from the technological frontier increases.

Search Patterns in Transition Economies: A Comparison of Thirteen European Countries

Christoph Grimpe (Centre for European Economic Research (ZEW))
Wolfgang Sofka (Centre for European Economic Research (ZEW))

Searching for externally available knowledge has been characterised as a vital part of the innovation process. The availability of such innovation impulses, however, critically depends on the environment a firm is operating in. Little is known on how national environments differ with respect to the munificence in providing innovation impulses. These differences may be particularly pronounced between transition economies and established market economies. We argue that firms from transition and established economies differ in their search pattern and that these search patterns moderate the relationship between innovation inputs and outputs. Based on a sample of almost 7,000 firms from 13 European countries we find strong support for open innovation strategies in both settings. However, performance differs in established and transition economy contexts.
Successful Patterns of Scientific Knowledge Sourcing in High Tech Firms - Mix and Match

Birgit Aschhoff (Centre for European Economic Research (ZEW))
Wolfgang Sofka (Centre for European Economic Research (ZEW))

Valuable knowledge emerges increasingly outside of firm boundaries, in particular in public research institutions and universities. The question is how firms organize their interactions with universities effectively to acquire knowledge and apply it successfully. We argue conceptually that firms need broad and deep collaborative arrangements to maximize the results from this knowledge inputs. Our empirical investigation rests upon a survey of more than 700 high technology firms in Germany. We find that both the richness and intensity of collaborative engagements with universities propel innovation success. However, a combination of both proves detrimental to innovation success. Applying latent class cluster analysis we identify five distinct patterns of collaborative arrangements. Our findings show that the exploitation of informal contacts appears especially relevant for innovation success across these patterns.

Non-R&D Innovation of Manufacturing Firms: Theory and Evidence from the Third European Community Innovation Survey

Anthony Arundel (United Nations University-MERIT)
Hugo Hollanders (United Nations University-MERIT)
Can Huang (United Nations University-MERIT)

Non-R&D innovation is a prevalent economic phenomenon, though R&D has been central focus of policy making and scholarly research in the field of innovation. The third European Community Innovation Survey (CIS3) shows that more than half of the European innovative firms did not conduct intramural or extramural R&D. Instead of investing in R&D, they acquire advanced machinery, purchase patents and licenses or carry out training and marketing activities to develop product or process innovation. In this paper, we develop a two-stage non-cooperative game to model the decisions of firms with regard to innovation budget and the allocation of the budget to R&D and non-R&D innovation activities. We demonstrate how the initial productivity of firms, share of their budgets in non-R&D innovation activities, and potential of cost reduction of available technology and R&D project would affect the decisions of firms. Following the theoretical framework and arguments, we examine the CIS 3 data of the 18 European countries to provide the empirical evidence.
Financial Innovation and the Persistence of the Extensive Margin

Kim Huynh (Indiana)

Some have predicted that through technological progress, the use of paper and coin currency would become almost obsolete. However, the adoption rates have remained quite low in some countries, see Humphrey, Pulley, and Vesala (1996). This paper explores the persistence of the adoption decision using discrete-choice dynamic panel data models. Data from the Bank of Italy Survey of Household Income and Wealth is used in this study. The empirical evidence indicates that true state dependence/fixed costs play a role in the adoption decision of financial innovation.

The Application for and the Award of Soft Credits: Evidence about Spanish Public Aids for R&D Projects

Elena Huergo (GRIPICO - Universidad Complutense de Madrid)
Mayte Trenado (Impact Analysis Department - CDTI)

The objective of this paper is double. On the one hand, we analyse the determinants of firms’ applications for soft credits to finance their R&D projects. On the other hand, we study the awarding decision by the Centre for the Development of Industrial Technology, the Spanish agency that manages these public aid programmes. To do so, we use information of about 1,800 proposals and more than 23,000 firms. The results suggest that the decision to apply for a soft credit depends on firm characteristics as the size, the age, the export activity, the belonging to a high tech industry and, specially, the previous experience in similar programmes during the last 5 years. In what refers to the award, the most important effects are related to the features of the proposal. In comparison to these, other firm characteristics loose their significance.
The Return to Entrepreneurship Puzzle
Ari Hyytinen (University of Jyväskylä)
Pekka Ilmakunnas (Helsinki School of Economics)
Otto Toivanen (HECER)

Entrepreneurs appear to work longer hours and bear greater (labor income) risk than employees do. And yet, returns to entrepreneurship are often reported to be negative on average. This paper offers a re-assessment of these findings by i) showing why (at least some of) the existing estimates of returns to entrepreneurship using cross-section and panel data may be biased, and ii) estimating the returns to entrepreneurship using data on a large sample of identical twins that has been matched to linked employee-employer data. Our results suggest that the returns to entrepreneurship-puzzle may be partly a straw-man.

An Empirical Model of Multi-Venue Trading Competition Post-Mifid
Ricardo Ribeiro (London School of Economics - STICERD)

The Market in Financial Instruments Directive (MiFID) aims to increase competition and to foster client protection in the European financial market. Among other provisions, it abolishes the concentration rule and challenges the market power of existing trading venues. The directive introduces venue competition in order to achieve better execution and ultimately lower trading costs. In this paper I address the question of whether fostering competition between alternative trading venues alone may or not be able to impact actual competition in the market. I consider two reasons for why it may not: cash trading exhibits direct network effects and the typical trading and post-trading bundling in the EU. I then propose an empirical framework to evaluate the actual degree of competition between trading venues. This empirical approach constitutes, for the best of my knowledge, one of the first attempts to structurally model financial trading, which is instrumental for measuring empirically the impact of network effects and of the bundle of trading and post-trading services as barriers to competition. This evaluation is provided in the companion paper, Ribeiro (2008).
Privatization and Policy Competition for FDI
Oscar Amerighi (CORE, Université catholique de Louvain, and DSE, University of Bologna)
Giuseppe De Feo (Department of Economics, University of Strathclyde, and CSEF, University of Salerno)

This paper provides an explanation of why privatization may attract foreign investors interested in entering a regional market. Privatization turns the formerly-public firm into a less aggressive competitor since profit-maximizing output is lower than the welfare-maximizing one. The drawback is that social welfare generally decreases. We also investigate tax/subsidy competition for FDI before and after privatization. We show that policy competition is irrelevant in the presence of a public firm serving just its domestic market. By contrast, following privatization, it endows the big country with an useful instrument to reduce the negative impact of an FDI-attracting privatization or to protect the domestic industry from foreign competitors.

Strategic Technology Transfer through FDI in Vertically Related Markets
Eiji Horiuchi (Hitotsubashi University)
Jota Ishikawa (Hitotsubashi University)

Using a simple North-South trade model with vertically related markets, we show that a North downstream firm may have an incentive to strategically utilize technology spillovers to a local rival caused by foreign direct investment (FDI). Whether the North firm invests in the South depends on the South firm’s capacity to absorb the North technology. FDI arises only if the capacity is medium. Technology spillovers through FDI may benefit all producers and consumers. Our analysis also suggests that very tight intellectual property rights protection in the South may benefit neither the North nor the South, because it "discourages" FDI.
The Influence of Foreign Direct Investment on the Corporate Governance Environment

Christoph Nedopil (IMD)

It has often been conceptually and empirically shown that corporate governance impacts firm finance and the development of the country’s financial markets. Consequently it has been suggested to improve corporate governance in order to support not only stock markets development but also economic development. This idea though has two major shortcomings: (i) an unclear definition of “good” corporate governance and (ii) insufficient knowledge of how corporate governance develops and changes. Corporate governance itself is embedded in legal and sublegal standards as well as in behaviors and norms of the society. Some of the institutions, which form the environment for corporate governance, can be changed overnight (i.e. laws) while others take decades to evolve. In this paper we first try to find an explanation on how changes to this corporate governance environment (CGE) conceptually occur by employing new institutional economics and institutional theory. We can show that i.a. international factor flows including foreign investments influence the development of the CGE. In a second step we empirically test this specific finding by looking at the influence of foreign investors on the evolution of the CGE of developing countries. We find that under certain circumstances an improvement can be registered accordingly with the source country’s CGE. The findings of this paper do not only help the academic debate about corporate governance, but they also advance the discussion whether foreign investors influence various institutions relevant for doing business – to the better or the worse.

Is FDI into China crowding out the FDI into the European Union?

Laura Resmini (Università della Valle d’Aosta (Aosta), Italy)
Iulia Siedschlag (Economic and Social Research Institute (ESRI), Dublin (Ireland))

We estimate an augmented gravity panel model to analyse the effects of FDI into China originating in OECD countries on FDI into EU and other countries over the period 1990-2004. Our results suggest that on average, ceteris paribus, over the analysed period, FDI inflows into China have been complementary to FDI inflows into EU15 countries but they have substituted FDI into the new EU countries in Central and Eastern Europe. In particular, small economies such as Bulgaria and the Baltic countries have been affected negatively by the surge in the FDI into China. This FDI diversion appears in the case of efficiency-seeking FDI.
Decentralized Screening: Coordination Failure, Multiple Equilibria and Cycles

Thomas Gehrig (University of Freiburg)
Rune Stenbacka (Swedish School of Economics, Helsinki)

We explore the inter-temporal effects of the pool externalities caused by imperfect screening in competitive credit markets. We find that imperfect screening may, depending on the parameters of the model, generate excessive screening, inefficient duplication of screening or screening cycles. Whenever screening cycles occur they are manifestations of either socially excessive or insufficient screening. We present a full equilibrium characterization and a welfare analysis. The implementation of socially optimal lending decisions requires communication across lenders (i.e. information sharing), which decentralized markets typically cannot achieve.

Dissipative Advertising Signals Quality even without Repeat Purchases

Laurent Linnemer (CREST-LEI)

Economists have emphasized the role of dissipative advertising and price as signals of quality. Most works, however, limit the number of types to two options: high and low quality. Yet, production costs and quality both result from R&D efforts and therefore are both uncertain. I characterize the optimal separating marketing mix (price and advertising) when quality and marginal cost are both subject to chance. In a static framework (no repeat purchases and no informed consumers), advertising appears to be necessary together with price to signal quality. Equilibrium profits depend on cost but not on quality: all rents are dissipated for signalling purpose.
Markets with Interested Advisors - On brokers, Matchmakers, and Middlemen

Marco Haan (University of Groningen)
Linda Toolsema (University of Groningen)

We study markets in which brokers, alternatively known as matchmakers or middlemen, advise consumers which product to buy. The broker may charge a fee to consumers for his services, but also receives a commission from producers for each sale that he generates. This implies that he may not always act in the consumer's best interest. We find that, due to the presence of the broker, consumers will choose a product that better suits their needs. However, as consumers are better informed, firms have more market power, which allows them to raise their prices. The effect of higher prices more than outweights that of selecting a more suitable product, which implies that the existence of a broker makes consumers worse off. Despite the fact that they pay commissions, firms do benefit from the presence of a broker.

Linking reputations: The Signaling and Feedback Effects of Umbrella Branding

Jeanine Miklós-Thal (University of Mannheim)

I consider an adverse selection model of product quality to analyze a firm's incentives to sell different products under an umbrella brand. My main result is that umbrella branding can signal positive quality correlation to consumers, even in the absence of any exogenous "technological" correlation between the products concerned. In any equilibrium with positive endogenous quality correlation, the decision to umbrella brand has a positive signaling effect on the price consumers are willing to pay for at least one of the products. Moreover, subsequent successes (failures) of either of the products have positive (negative) feedback effects on the other product. For such equilibria to exist, it is necessary that (i) consumers’ prior information about product qualities is limited, (ii) the markets for the different products are sufficiently symmetric, (iii) potential quality differences are substantial, and (iv) firms attach sufficient weight to repeat sales of all products. There are no equilibria in which umbrella branding either fully certifies high quality, or signals negative quality correlation.
Technology Diffusion with Endogenous Adoption Cost: Patent versus Free Access
Matthieu Glachant (Ecole des Mines de Paris)
Yann Ménière (Ecole des Mines de Paris)

The paper analyzes the interplay between technology diffusion and intellectual property rights. We develop a model where initial adoptions generate learning spillovers that reduce the cost of future adoptions. In this setting, we compare a scenario where the technology is freely available with a scenario where the technology is patented. We show how the patent owner can partly internalize externalities by discriminating technology prices. We investigate the welfare properties of the two scenarios and derive policy implications.

Trolls or Elves?
Ari Hyytinen (University of Jyväskylä)
Tuomas Takalo (Bank of Finland)

We consider an equilibrium model of market for patents with patent licensing and enforcement companies (PLECs) and downstream manufacturers. PLECs seek buyers for their patents and, upon meeting a potential buyer, decide whether to send a notice of infringement. Manufacturers can invest in strengthening their intellectual property (IP) which reduces the probability that an infringement holds in the court. We determine the equilibrium mix of manufacturer types and licensing fees and consider the effects of legal changes on the liquidity of the patent market, the entry incentives of PLECs and the incentives to invest in IP management. We find that increasing the probability of obtaining an injunction always forces the manufacturers to invest more in their IP management. In some cases, this is (somewhat surprisingly) sufficient to reduce the entry of PLECs.
Open Source Software, Closed Source Software or Both: Impacts of Industry Growth and the Role of Intellectual Property Rights
Sushmita Swaminathan (German Institute for Economic Research (DIW) Berlin)
Sebastian von Engelhardt (Friedrich-Schiller-University (FSU) Jena)

There is considerable debate regarding the use of intellectual property rights to spur innovation in the software industry. Issues discussed in this context e.g. deal with the political economy of intellectual property rights, the impact of TRIPS, the role of “open innovations” in knowledge based industries, the question who uses software patents and why, or whether patents are suitable for software or not. The paper at hand focuses on the choice of intellectual property right regimes and industry growth. In our model, we examine the co-existence of open and closed source software within various institutional frameworks ranging from no protection, copyright to patent protection. Our analysis, based on the existence or absence of spillovers, confirms that a co-existence is growth optimal for the industry. Further, we find that the move from no protection to copyright protection increases the optimal growth rate and makes both sectors better off. However, despite structuring the model in a patent-friendly way, the benefits of moving from copyright to patent protection are less clear.

Inventors and Impostors: An Economic Analysis of Patent Examination
Florian Schuett (TSE - GREMAQ)

We present a model in which inventors differing in R&D productivity decide whether to invest in genuine research or to submit "bogus" patent applications (claiming that they invented something which is not truly novel). The government has to delegate the verification of novelty to an agency which must exert costly effort in order to obtain a signal of validity. Inventors self-select depending on their R&D productivity, with high-productivity types producing true innovations and low-productivity types submitting bogus applications, or staying idle. The thresholds depend on the expected examination effort and on the application fee. We show that, at the second-best optimum, all bogus applications are deterred. By contrast, when the agency lacks commitment power and its effort is unobservable, the government is forced to abandon complete deterrence. When the signal obtained by the patent office is hard information, the government rewards it for rejecting patent applications and can attain an allocation that is arbitrarily close to the optimum, consistent with results from the literature on optimal audits. However, we argue that in the case of patent examination, the signal is unlikely to be verifiable. With soft information, the government is constrained in the incentives it can offer the agency because transfers need to be designed to insure truthfulness. Therefore, there is a tradeoff between the sustainable examination effort and deterrence of bogus applications.
Endogenous Firm Heterogeneity, Competitive Advantage and ICT

Gordon Klein (ZEW Mannheim)
Daniel Cerquera (ZEW Mannheim)

This paper analyzes the role of ICT as a source of firm heterogeneity and studies whether such heterogeneity might be translated into important competitive advantages. In particular, the paper proposes a theoretical model that explains the interaction between ICT and heterogeneity and estimates its main predictions using a representative sample of German firms. The model shows that investments in ICT increase the level of heterogeneity. In addition, through their use of ICT, firms that evidence a higher initial marginal costs disadvantage tend to increase faster its distance to a productivity industry-benchmark. These findings are partially corroborated by the empirical application.

Dynamic Efficiency of Product Market Competition: Cournot versus Bertrand

Jeroen Hinloopen (Universiteit van Amsterdam and Katholieke Universiteit Leuven)
Jan Vandekerckhove (Katholieke Universiteit Leuven)

We consider the efficiency of Cournot and Bertrand equilibria in a duopoly with substitutable goods where firms invest in process R&D. Under Cournot competition firms always invest more in R&D than under Bertrand competition. More importantly, Cournot competition yields lower prices than Bertrand competition when the R&D production process is efficient, when spillovers are substantial, and when goods are not too differentiated. The range of cases for which total surplus under Cournot competition exceeds that under Bertrand competition is even larger as competition over quantities always yields the largest producers' surplus.
Social Learning and Monopolist's Product Launching Strategy
Ting Liu (Boston University)
Pasquale Schiraldi (London School of Economics)

A monopolist launches a new product to distinct markets. The monopolist does not know the quality of the product while consumers in each market receive some private information about the quality. We study how the monopolist may influence consumer learning by manipulating the launching sequence when both the monopolist and consumers can learn about the quality of the product from previous sales. We derive conditions under which the monopolist prefers a sequential launch to a simultaneous launch. The conditions depend on the price of the product and the general reputation of the product. We derive the optimal number of markets in which the monopolist will launch the product in each period. The monopolist's dynamic equilibrium strategy endogenizes informational herding.

The Effect of Rating on Reputation Building: The Importance of a second chance
Arthur Fishman (Bar Ilan University)
Arye Stern (Bar Ilan University)

We show that a firm's incentive to invest in quality may be reduced if consumers gain improved access to information about competitors' past performance. The reason is that the easier it is for consumers to learn about and switch to more successful competitors, the less likely it is that a firm's reputation will be able to rebound from initial failure. This in turn reduces firms' incentive to invest in acquiring a good reputation.
On Patent Licensing in Spatial Competition with Endogenous Location Choice

Toshihiro Matsumura (University of Tokyo)
Noriaki Matsushima (Kobe University)

Using a standard linear city model with two firms, we consider how licensing activities affect the locations of the firms (i.e., the degree of product differentiation) and the incentive for R&D investment. In contrast to recent studies showing that R&D investment results in a large cost differential between firms, thereby leading to firm agglomeration, we find that licensing activities following R&D investment always lead to the maximum differentiation between firms and the mitigation of price competition. We also show that licensing activities induce the socially optimal effort level of R&D activity.

Dynamic Location Games

Simon Loertscher (University of Melbourne)
Gerd Muehlheusser (University of Bielefeld)

We study Hotelling location games, in which market entry involves a fixed cost and occurs in an exogenously given sequence. Once a firm has chosen its location, changing it is prohibitively costly. Three questions are of interest. First, how many firms will enter in equilibrium? Second, which locations will they occupy? Third, what is the sequence of settlement? For general distributions of consumers, we determine the equilibrium locations and show that they are unique and independent of the sequence of settlement. Moreover, the sequence of settlement is generically unique. The case with uniformly distributed consumers is non-generic in that respect. It also yields a lower bound on the equilibrium number of firms entering.
Endogenous location leadership
Sergio Meza (University of Toronto)
Mihkel Tombak (University of Toronto)

We analyze a game of timing where Sellers can delay entry and a commitment to a location in a Hotelling type setting. The Sellers have marginal production cost asymmetries. When cost differences are large enough the game becomes a war of attrition that yields Stackelberg behavior where the high cost firm will delay choosing a location until the low cost firm commits to its position. We find interaction effects between timing and the degree of product differentiation and compute timing/location equilibria and mixed strategies through a range of marginal cost differences. The firms maximally differentiate with moderate cost differences; with somewhat greater cost differences there is intermediate differentiation, and; with large cost differences there is monopolistic competition. The low cost firm always moves immediately whereas the high cost firm either enters immediately, shortly after the low cost leader, or never, depending on the cost differences. We find that in equilibrium the duopoly is sustained for a larger range of cost differentials than the social optimum.

Joining Forces to Attract Consumers: Clusters of Shops in a Consumer Search Model
Marielle Non (Tinbergen Institute Rotterdam)

This paper studies the location choice of shops in a consumer search model, where the search costs consist of traveling costs between malls and costs of entering a shop. We find three effects of location in a mall. First, malls lead to more competition and lower prices. Second, when some shops are located together more consumers are active. Third, when some shops are located together and others are isolated the jointly located shops attract more active consumers than the isolated shops. The second and third effect can outweigh the first, making locating in a mall a profitable strategy.
Does Bundling Trigger Mergers?
Laurent Granier (LASER - Université Montpellier I)
Marion Podesta (LASER - Université Montpellier I)

In the recent past, several mergers between firms, belonging to independent industries, have occurred. These mergers enable firms to bundle. This paper considers two horizontally differentiated markets between which the link is the correlation of reservation prices. Using an endogenous merger model, we show that bundling strategies do in fact create incentives to form multi-market firms. Moreover, we find that this type of merger is detrimental to social welfare.

Endogenous Mergers under Multi-Market Competition
Tina Kao (Australian National University)
Flavio Menezes (University of Queensland)

This paper examines a simple model of strategic interactions among firms that face at least some of the same rivals in two related markets (for goods 1 and 2). It shows that when firms compete in quantity, market prices increase as the degree of multi-market contact increases. However, the welfare consequences of multi-market contact are more complex and depend on how two fundamental forces play themselves out. The first is the selection effect, which works towards increasing welfare as shutting down the more inefficient firm is beneficial. The second opposing effect is the internalisation of the Cournot externality effect; reducing the production of good 2 allows firms to sustain a higher price for good 1. This works towards increasing prices and, therefore, decreasing consumer surplus (but increasing producer surplus). These two effects are influenced by the degree of asymmetry between markets 1 and 2 and the degree of substitutability between goods 1 and 2.
Eliminating a Competitive Constraint: Price Effects of Merging with a Potential Entrant in Airlines

John Kwoka (Northeastern University)
Evgenia Shumilkina (Northeastern University)

This paper analyzes the increase in pricing power that a firm achieves by eliminating the competitive constraint posed by a potential entrant into its market. Using pricing data for the merger of USAir and Piedmont, the analysis finds that prices rose by 5.9-7.0 percent on routes served by one carrier where the other was a potential entrant. This effect was 50-60 percent of the price increase on routes where the two carriers were direct competitors. Other influential factors were the identity of the incumbent, and whether the potential entrant was positioned at one or both endpoints of the route.

Asymmetric Collusion and Merger Policy

Mattias Ganslandt (IFN)
Lars Persson (IFN)
Helder Vasconcelos (Universidade Católica Portuguesa)

In their merger control, EU and US have considered symmetric size distribution (cost structure) of firms to be a factor potentially leading to collusion. We show that forbidding merger leading to a symmetric market structure can induce merger leading to asymmetric market structure with higher risk of collusion, when firms face indivisible costs of collusion. In particular, we show that if the rule determining the collusive outcome has the property that the large (efficient) firm benefits sufficiently more from collusion when industry asymmetries increase, collusion can become more likely when firms are moderate asymmetric.
Tariff-Mediated Network Externalities: Is Regulatory Intervention Any Good?

Steffen Hoernig (FEUNL, Lisbon, Portugal)

Mobile phone networks' practice of charging higher prices for offnet than for on-net calls has been pinpointed as the source of various competition problems: underprovision of calls and permanent disadvantages for small networks and entrants. We consider these allegations and four different remedies. Lower termination charges, asymmetric termination charges, limits on the on/off-net differential and limits on off-net margins. In all cases a trade-off has to be made between efficiency and networks' profits on the one hand, and consumer surplus on the other. Furthermore, generically price discrimination or uniform pricing (or anything inbetween) can maximize welfare.

The Impact of Integrated Tariff Systems on Public Transport Demand:

Evidence from Italy

Graziano Abrate (University of Piemonte Orientale and HERMES)
Massimiliano Piacenza (University of Torino and HERMES)
Davide Vannoni (University of Torino and HERMES)

The increasing problems of pollution and traffic congestion requires the definition of a model of sustainable mobility, in particular in the largest urban areas. An indirect control on these negative externalities associated with private transport may be pursued by means of policies aiming at improving quality and accessibility of public transit networks. To that respect, one popular option is the design of an Integrated Tariff System (ITS): the crucial question remains if such a policy can be effective in raising the number of public transport users. In this study we use a twelve-years panel of 69 Italian public transit providers (with or without ITS) and estimate alternative specifications of the demand function. Results show that the impact due to the ITS introduction is on average quite small, but it becomes more relevant when the ITS is characterized by specific factors making it more attractive for potential users, such as the validity over an extended network, the availability of a single ticket option and the application of zonal pricing schemes.
Doing Better With Less: Implementing Peak-load Pricing for Managing Residential Water Demand
Arnoud Reynaud (TSE (LERNA-INRA))

The first objective of this paper is to determine under which conditions peak pricing can be an effective tool for managing residential water demand under limited water availability conditions. To answer this question, we first develop a theoretical model allowing to assess the impact of peak pricing on consumer’s surplus and on water consumption. The main result of this model is that, whatever the level of the price elasticity of water demands during the peak and the off-peak periods, it is always possible to find a system of peak and off-peak prices such as moving from a single price towards seasonal differentiated prices results in an increase in the aggregate consumer surplus and a decrease in the aggregate water consumption. The second part of the paper provides an empirical application of this model on French data. We first estimate seasonal residential water demands, using data on a sample of local communities located in South-West of France. This allows us to check if the determinants of residential water demand in France vary according to the period of the year. Based on these econometric estimations, we simulate the impact on consumer surplus of moving toward peak-load pricing. In the French case, peak prices do not result neither in a substantial increase in the aggregate consumer surplus nor in a significant reduction of the aggregate water consumption. This result is due to the fact that the price elasticity difference between the peak and the off-peak period is almost negligible in the French case.

Links between Wholesale and Domestic Retail Electricity Prices in the UK?
Monica Giulietti (Aston Business School)
Luigi Grossi (University of Verona)
Michael Waterson (University of Warwick)

We investigate the linkages between electricity retail prices, wholesale prices and prices of the underlying fuels over the period since 2001, following reforms both in the retail supply market and in wholesale market trading arrangements. We find that despite these reforms, there is rather little observed linkage between retail and wholesale prices. To this extent, the operation of what is intended to be a competitive market is somewhat opaque and consumers have at times experienced large increases in price.
Ordered Search and Equilibrium Obfuscation

Chris Wilson (University of Oxford)

This paper demonstrates the incentives for an oligopolist to obfuscate by deliberately increasing the cost with which consumers can locate its product and price. Consumers are allowed to choose the optimal order in which to search firms and firms are able to influence this order through their choice of search costs and prices. Competition does not ensure market transparency - for a large range of parameters, equilibrium search costs are positive and asymmetric across firms. Intuitively, an obfuscating firm can soften competition for consumers with low costs of time by inducing the remaining consumers to optimally first search its rival.

Reference Dependence and Market Competition

Jidong Zhou (Department of Economics, UCL, London)

This paper studies the implications of consumer reference dependence in market competition. If consumers take some product (e.g., the first product they have considered) as the reference point in evaluating others and exhibit loss aversion, then the more ‘prominent’ firm whose product is taken as the reference point by more consumers will randomize its price over a high and a low one. All else equal, this firm will earn a larger market share and a higher profit than its rival. The welfare impact is that consumer reference dependence could harm firms and benefit consumers by intensifying price competition. Consumer reference dependence will also shape firms’ advertising strategies and quality choices. If advertising increases product prominence, ex ante identical firms tend to differentiate their advertising intensities. If firms vary in their prominence, the less prominent firm might supply a lower-quality product even if improving quality is costless.
Existence Advertising, Price Competition, and Asymmetric Market Structure
Curtis Eaton (University of Calgary)
Ian MacDonald (Lincoln University)
Laura Meriluoto (University of Canterbury)

We examine a duopoly pricing game where some customers know of no firms, others know of only one firm, and some know of both firms. Firms have constant and identical marginal costs, sell homogenous goods and choose prices simultaneously. Customers observe the prices of the firms that are known to them. We show that there is no equilibrium in pure price strategies for this game. We find a mixed strategy equilibrium, and show that it has intuitively appealing comparative static properties. We then examine the two stage game in which firms advertise their existence in stage 1 to create their customer bases, and in stage 2 play the pricing game described above. The equilibrium to the two stage game is asymmetric, and far from the Bertrand equilibrium.

Oligopoly with Hyperbolic Demand and Capital Accumulation
Luca Lambertini (University of Bologna)

A dynamic approach is proposed for the analysis of the Cournot oligopoly game with hyperbolic demand, showing that the adoption of capital accumulation dynamics either à la Solow-Swan or à la Ramsey eliminate the indeterminacy problem characterising the static model when marginal costs are nil. It is proved that the steady state equilibria produced by both models are stable in the saddle point sense. Finally, it is also shown that the solutions of the corresponding feedback problems share analogous properties, although they cannot be fully characterised from an analytical standpoint.
Control and Contract Design in Research Collaborations

Claudio Panico (Department of Management, Bocconi University)

This paper investigates the design of a research collaboration between a customer (the principal) who owns a critical asset and a research firm (the agent) which can provide expertise plus complementary assets. Aghion and Tirole (1994) ask who should own the innovation, where ownership provides the incentives to invest when contracts are incomplete. Instead, I ask who should control the innovation process, and to which extent. I investigate control allocation in a complete contracts framework posing that the research output is noncontractible and that the research firm is privately informed about its expertise. Whereas the previous literature assumes that the principal can either keep full control or fully allocate it to the agent before he reports his information, I assume that control allocation is contingent to the agent’s announcement and can be fractional. Once this allocation is endogenized as part of the contractual arrangements, we obtain new insights into the role of control in contract design.

Task Assignments and Incentives: Generalists versus Specialists

Suraj Prasad (University of New South Wales, Australia)

I develop an agency model of job assignments where jobs differ based on the breadth of tasks. A tradeoff between task complementarities and relative abilities of workers results in those with balanced skills being assigned to multi-task jobs. The same tradeoff between complementarities and relative abilities also influences incentives to sort privately informed workers to jobs. I then apply the model to managerial assignments to show that relative abilities and multi-tasking play an important role in the assignment process. Using patent data on research scientists, I find in contrast to standard hierarchical theories, that scientists with a higher number of patents are less likely to switch to management.
Managerial Attention Allocation in Optimal Incentive Contracts

Ricard Gil (University of California, Santa Cruz)
Jordi Mondria (University of Toronto)

This paper presents the introduction of managerial attention allocation constraints in optimal incentive contracts. There is an agent who provides non-contractible effort in a number of tasks and a principal who designs a linear incentive contract, composed by a variable and a fixed factor, and monitors the effort of the agent. The framework in Holmstrom and Milgrom (1991) is extended to allow the principal to decide the amount of monitoring allocated in each task. More attention allocated to a given task improves the task contractibility due to a decrease in the uncertainty about the effort provided by the agent. The principal allocates the same level of attention and provides the same incentive contract across tasks under symmetric decreasing returns to scale in production and monitoring. However, when there are increasing returns to scale in the monitoring technology, the principal offers an unbalanced incentive contract and allocates asymmetric amounts of attention across tasks.

Optimal Job Design in the Presence of Implicit Incentives

Arijit Mukherjee (Bates White LLC)
Luis Vasconcelos (Universidade Nova de Lisboa)

We study optimal job design in a multitasking environment with implicit incentives. We consider two forms of job design: (i) individual accountability, where each agent is assigned to a particular job and is fully responsible for its outcome; and (ii) team accountability, where a group of agents share responsibility for a job and are jointly accountable for its outcome. We find that while team accountability is more efficient in mitigating the multitasking problem, individual accountability may make implicit contracts more easy to sustain. The optimal job design balances this trade-off. For firms with very high or very low reputation concerns team accountability is better. For firms with moderate reputation concerns individual accountability dominates.
Strategic Capacity Choice under Uncertainty: The Impact of Market Structure on Investment and Welfare
Veronika Grimm (University of Cologne)
Gregor Zoettl (University of Cologne/UCL-CORE)

We analyze a market game where firms choose capacities under uncertainty about future market conditions and make output choices after uncertainty has unraveled. We show existence and uniqueness of equilibrium under imperfect competition and establish that capacity choices by strategic firms are generally too low from a welfare point of view. We also demonstrate that strategic firms choose even lower capacities if they anticipate competitive spot market pricing (e.g. due to regulatory intervention).

We finally illustrate how the model can be used to assess the impact of electricity market liberalization on total capacity and welfare by fitting it to the data of the German electricity market.

Dynamic Duopoly Competition with Limited Supply
Jean-Jacques Herings (Maastricht University)
Hans Peters (Maastricht University)
Anita van den Berg (Maastricht University)

The aim of this paper is to analyze strategic firm behavior in settings where firms are restricted in their capacity over multiple periods, instead of per-period. We have restricted our analysis to the simplest of these settings: the two period model. Consumer demand is linear and firms compete in quantity. It is shown that in this seemingly simple situation, depending on whether firms can react on first period information, there are some striking differences in the pure strategies equilibrium outcomes. In particular, in the scenario where firms can decide upon their second period quantity after having seen their first period profits, there are situations for which no pure equilibrium exists, situations in which second period price decreases and situations in which destroying some of the initial resource will make profits increase.
A Strategic Investment Game with Endogenous Absorptive Capacity
Anna Hammerschmidt (Vienna University of Economics and Business Administration)

R&D plays a dual role: First, it generates new knowledge and second, it develops a firm's absorptive capacity. Most of the existing strategic investment game models neglect, however, the second role of R&D. The aim of this paper is to incorporate the absorptive capacity hypothesis in such a model by endogenizing the spillover. A two-stage game is established and subsequently solved, looking for the subgame perfect Nash equilibria. Considering the comparative static properties of the model as well as the simulation results, a new effect appears: The "free-rider effect" of the models with exogenous spillover, which deteriorates the higher the spillover becomes, is now counteracted by the "absorptive capacity effect". It is found that firms will invest more in R&D to strengthen absorptive capacity when the spillover parameter is higher.

EMPIRICAL INNOVATION IV
Room AR316
Chair: Isabel Pereira
Saturday 6 Sep 2008, 14:30 – 16:00

Innovation and the Survival of New Firms Across British Regions
Christian Helmers (University of Oxford)
Mark Rogers (University of Oxford)

This paper analyses the survival of the complete cohort of more than 162,000 limited companies incorporated in Britain in 2001 over the subsequent five-year period. For this purpose, we estimate firms' hazards of failure and survival functions using nonparametric and semi-parametric techniques. The paper focuses on two important policy-related issues. The first is to what extent survival rates vary across regions in Britain. The Regional Development Agencies (RDA) Act 1998 has led to the establishment of 12 RDA's in Britain and it is interesting to ask if and how firm survival varies across them. A second, and related, policy issue concerns innovation. The data available allows us to look at the intellectual property (IP) activity of all British firms, including that of the 162,000 new firms in 2001. The results indicate substantial differences in survival rates across RDAs. IP activity increases the probability of survival. These differences across regions and the importance of IP activity remain even when we control for a large range of regional, industry and firm-level characteristics shaping firms' hazards of failure.
Entry and Innovation. An Analysis of the Fabless Semiconductor Business
Margherita Balconi (Department of Economics, University of Pavia)
Roberto Fontana (Department of Economics, University of Pavia & CESPRI-Bocconi University)

We study the relationship between pre-entry experience and innovativeness for a sample of 137 firms active in the fabless semiconductor business between 1984 and 2005. We find that firms with better educated founders have a relatively higher probability to innovate soon after entry. We also find that firms whose founders has past tenure in the semiconductor industry have a relatively higher probability of innovating with respect to those with past experience in end application sectors. Finally, firms whose founders have innovated in the past are more likely to innovate. Results suggest that both general and specific human capital are important preconditions of pre-entry experience.

Patents and Business-Science Research Partnerships
Walter Garcia-Fontes (University Pompeu Fabra, CREA)
Isabel Pereira (United Nations Development Programme)

In this paper we develop an empirical analysis on how the characteristics of the research process, specially its institutional dimension, relate with the patented inventions arising from that research. We focus on one main feature of the patents, its basicness, how close they are from the Academic research goal of advancing the existent stock of knowledge. With data from the European survey, PatVal-EU, we construct a composite index of basicness of the patents, weighted by a quality indicator. Our results are aligned with the theoretical work of Pereira (2007), since the institutional identity of the inventing organizations do become visible in the basicness of the patents.
Dynamic Competition in Electricity Markets: Hydropower and Thermal Generation

Talat Genc (University of Guelph)
Henry Thille (University of Guelph)

We study dynamic duopolistic competition between hydro and thermal generators under demand uncertainty. Producers compete in quantities and each is constrained: the thermal generator by capacity and the hydro generator by water availability. Two versions of the model are analysed: an infinite-horizon game with a fixed thermal capacity and a finite-horizon game in which the thermal generator can make investments in capacity.

In the infinite-horizon game, we find the Feedback equilibrium by using collocation methods to approximate the hydro generator’s value function. The thermal generator’s equilibrium strategy is decreasing in the water level, hence there is a strategic withholding of water by the hydro generator. Comparing the Feedback equilibrium to the efficient one, we find that the thermal capacity and water availability constraints bind less frequently under the duopoly than is efficient. However, for a large range of possible thermal production capacities and water flow levels, the outcome under duopoly is very nearly efficient in terms of the level of prices. However, prices are more volatile than is efficient under duopoly.

In the finite-horizon version of the model, we examine the effects of allowing the thermal generator to make investments in capacity. We characterize the S-adapted open-loop equilibrium outputs and investment, comparing duopoly equilibrium outcomes with the socially efficient outcomes. For both market structures we find that: i) if investment is made in a period, it is fully utilized in the high-demand state in the following period; ii) investment is not all done immediately: there is an option value associated with waiting for information about future demand states; and iii) expected total profits and expected investment are increasing in demand volatility.
Entry and Externality: Hydroelectric Generators in Brazil
Rodrigo Moita (Ibmec Sao Paulo)

This work analyzes the entry problem in the hydroelectric generation industry. The operation of a generator upstream regularizes the river flow for generators located downstream on the same river, increasing the production capacity of the latter. This positive externality increases the attractiveness of the locations downstream whenever a generator decides to enter upstream. Therefore, the entry decision of a generator in a given location may affect all entry decisions in potential locations for plants downstream. This type of externality happens in any situation where the first firm to enter in a market makes it easier for later entrants.

I first develop a method to estimate an entry model specific to this type of externality, taking into account the specifications of the hydro generation industry. Finally, I use a data set on investment decisions of Brazilian hydro-generators to estimate the model. The results show a positive incentive to locate downstream from existing plants and from locations where entry is likely to occur. An interesting by-product of the analysis is that the year effects’ estimates show an increase one year before the energy crisis of 2001, providing evidence that the market anticipated the crisis. It contradicts the governmental version that the crisis was due to an unexpected drought.

Pumping Water to Compete in Electricity Markets
Claude Crampes (Toulouse School of Economics)
Michel Moreaux (Toulouse School of Economics)

The pump storage technique allows to use cheap thermal electricity at periods of low demand to restore water resources that can be used to generate electricity at periods of peak demand. When the thermal plant and the hydro plant are managed by the same operator, the two plants are used in an efficient way to substitute low cost fuel to high cost fuel. When there are two independent managers, competition requires careful analysis. The paper first analyses the optimal dispatch and the profit-maximizing dispatch of the thermal and hydro-generation units when water can be pumped up into reservoirs. We identify the demand and cost conditions where the pumping device must be used. We then switch to the case where the two plants are operated by separate owners. We analyse the Nash equilibrium of the game where the hydro unit is the client of the thermal unit at off-peak period, and compete against it at peak period under three alternative legal arrangements and/or technical constraints: i) the thermal producer cannot separate the energy sold to the hydroproducer from the energy sold to final consumers; ii) the thermal producer is obliged to sell at market price the energy demanded by the hydroproducer and iii) the hydroproducer is obliged to buy at market price the quantity of energy assigned by the thermal producer.
Underinvestment in Innovation and Reference Group Neglect: An Experimental Investigation
Daniela Grieco (Bocconi University)
Robin Hogarth (Pompeu Fabra University)

A well-known stylized fact about innovation refers to firms’ tendency to exhibit high level of technological inertia. This work aims at investigating this issue focusing on the cognitive biases that might lead to underinvestment when agents choose the R&D effort. Reference Group Neglect has been documented to be a pervasive phenomenon when individuals make their forecasts and decisions in competitive contexts. Grounding on the seminal definition by Camerer and Lovallo (1999), we argue that Reference Group Neglect is the composite outcome of two biases, False Uniqueness and Stand-Alone Bias, and test experimentally the specific effect of each one. Experimental results show that agents appear conscious of being similar to peers in their ability and act consequently (no False Uniqueness), but forget they operate in a competitive setting (Stand-Alone Bias). Moreover, tougher competition reduces the Stand-Alone Bias (Hard-Easy Effect).

Expert Opinion and the Demand for Experience Goods: An Experimental Approach
James Hilger (FTC)
Greg Rafert (University of California Berkeley)
Sofia Villas-Boas (University of California Berkeley)

There exist two significant obstacles to analyzing the effect of expert opinion on consumer demand for experience goods: (1) the relationship between good reviews and high product demand may be spurious and driven by high product quality, and (2) even if expert opinion increases consumer demand, it is unclear whether it does so by providing quality information or by alerting consumers to the existence of a particular product. We utilize an experimental approach in a retail grocery chain in which we display expert opinion information for a group of randomly selected wines to overcome these obstacles. We find that although there is no overall consumer response to expert opinion provision, a subset of highly reviewed wines experienced an increase in demand. Results indicate that consumers utilize quality information provided by expert opinion labels, as opposed to solely using the label to learn of a wine’s existence.
When Herding and Contrarianism foster Market Efficiency: A Financial Trading Experiment
Andreas Park (University of Toronto)
Daniel Sgroi (University of Warwick)

While herding has long been suspected to play a role in financial trading, especially relating to market booms and busts, theoretical analyses have struggled to identify conclusive causes for the effect. Recent theoretical work shows that informational herding is possible in a market with efficient asset prices if information is bi-polar (with contrarianism possible with single-polar information). We present an experimental test for the validity of this theory, its setup contrasting with all existing experiments where rational herding was theoretically impossible (and subsequently not observed). Overall we observe that subjects generally behave according to theoretical predictions, yet the fit is lower for types who have the theoretical potential to herd. While herding is often not observed when predicted by theory, herding (sometimes irrational) does occur, and the types identified by the theory as potential herders, are also the types most likely to behave at odds with theory. Alternative models of behavior (such as risk aversion, loss aversion or error correction) perform either quite poorly or add little to our understanding. In summary, we provide confirming evidence for the theory that traders with conflicting, bi-polar information are prone to rational herding, though also prone to irrational behavior.
Strategic Interaction between General Practitioners and Specialists: Implications for Gatekeeping

Catherine Schaumans (Tilburg University, K.U.Leuven)

We propose to estimate strategic interaction effects between general practitioners (GPs) and different specialist types to evaluate the viability threat for specialists associated to the introduction of a mandatory referral scheme. That is, we show that the specialists' loss of patientele when patients can only contact them after a GP referral has important consequences for the viability of the specialist types whose entry decisions are strategic substitutes in GPs entry decisions.

To estimate the strategic interaction effects, we model the entry decisions of different physician types as an equilibrium entry game of incomplete information and sequential decision making. This model permits identification of the nature of the strategic interaction effects as it does not rely on restrictive assumptions on the underlying payoff functions and allows for the strategic interaction effects to be asymmetric in sign. At the same time, the model remains computationally tractable and allows for sufficient firm heterogeneity.

Our findings for the Belgian physician markets, in which there is no gatekeeping, indicate that entry decisions of dermatologists and pediatricians are strategic substitutes in the entry decisions of GPs, whereas the presence of gynecologists, ophthalmologists and throat, nose and ear-specialists has a positive impact on GP payoffs of entry. Our results thus indicate that transition costs are likely upon the implementation of gatekeeping and that these costs are mainly associated to the viability of dermatologists and pediatricians.

Welfare criteria to rank lifesaving drug prices

Stefan Ambec (Toulouse School of Economics)

This paper posits welfare criteria to assess the efficiency of the price schedules of drugs that cure mortal diseases. It first argues that the Marshallian welfare (the sum of the producer's and consumer's surpluses) as well as the consumer's surplus tend to underestimate the benefit of saving life. It then introduces three criteria that prioritize life saved over consumption. They weight differently static and dynamic efficiency. First-degree price discrimination is the first-best price schedule under all criteria but one which favors marginal cost pricing. In contrast to the Marshallian welfare, the posited criteria recommend (i) to price below marginal cost, (ii) to maximize access under a profit constraint rather than pricing a la Ramsey, (iii) to supply health insurance through universal health care rather than with competing private companies.
Can We Measure Hospital Quality from Physician's Choices?
Matilde Machado (Universidad Carlos III de Madrid)
Ricardo Mora (Universidad Carlos III de Madrid)
Antonio Romero-Medina (Universidad Carlos III de Madrid)

In this paper, we provide a methodology to rank hospitals based on publicly available data on physicians' labour market. More specifically, we use data on Spanish physicians' choices over hospital vacancies at the beginning of their specialized training. Our methodology is based on a revealed preference argument similar to the one used in Avery et al. (2005) for US colleges. Our methodology is particularly relevant in those countries where there is no publicly available data on hospital outcome measures such as mortality.

Recently graduated physicians choose training vacancies sequentially according to their average grade. Thus, it is possible to infer from physicians' choices training quality differentials amongst hospitals. If the best training hospitals are also offer the best quality of treatment then our ranking can be used as a proxy for that quality. We are able to assert this positive correlation using data on mortality and nosocomial infections for a subsample of our hospitals.

We model the physician's decision as a nested-logit a la McFadden.

ICT, Consulting and Innovative Capabilities
Daniel Cerquera (ZEW Mannheim)

This paper analyzes the impact of the decision to contract ICT consulting on firms' performance. In particular, the paper develops a theoretical model that describes the effect of this decision on firms' innovative incentives and estimates some of its predictions for a sample of German firms. The model shows that: i) ICT consulting increases the incentives to innovate; ii) low productivity firms might evidence lower incentives to innovate; and iii) the lower the productivity level, the more the incentives (i.e. benefits) to contract ICT consulting. These findings are corroborated by the empirical application. These results can be explained by the role of firms' cost asymmetries and competitive pressure, and suggest that firms optimize their innovations portfolio through ICT consulting.
The Use of ICT in UK SMEs: Patterns, Determinants and Impact on Innovation Activities

Dolores Anon Higon (Aston University)

In this study, we analyse the role of Information and Communication Technologies (ICT) in UK small and medium sized enterprises (SMEs) using the Annual Small Business Survey (ASBS) database. Firstly, the paper explores the differences in ICT usage with respect to business size and industrial activity, considering the possible fields of application. Secondly, we focus on the determinants of ICT adoption and thirdly, we analyse whether firms using ICT are also more innovative. The analysis shows that there are significant differences in the use of ICT across businesses size and industrial activity. While medium firms have adopted more intensively any form of ICT than micro-firms; the differences across industries depend on the type of ICT application used. Regarding the analysis of the determinants of ICT adoption by SMEs we find that firm size, market orientation and entrepreneur’s qualifications impact significantly on the likelihood to adopt ICT applications and on the intensity in which these technologies are used. Finally, the analysis also shows that ICT operate primarily as efficiency-enhancing technologies, although specific market oriented applications (i.e. website development) exhibit a potential to create competitive advantage through product innovation.

Triplay Vs Software Voice in France

Grazia Cecere (University of Paris Sud XI ADIS and University of Turin (Italy))

The literature on innovation diffusion investigates on the rate and direction of technology adoption. Whether the demand side is considered, great attention has been given to the diffusion of ICT services and devices among consumers and households. Which are the determinants influencing consumers’ choices when competing services appeared on the market? The article applies the literature on innovation diffusion for analysing the determinants influencing the diffusion of services enabling unlimited voice communications offered by VoIP providers, in other words the software voice and the IP network voice services. The empirical investigation has been conducted on a French survey data drawn in 2005 on ICT usages of household and individuals. Two hypotheses are tested. Firstly, the two services might be complementary or substitutes. Secondly, it is tested the influence of the consumers’ geographical residence. This enables both to capture the intensity of relation with others and the diffusion of IP network service which has been concentrated at the beginning to highly density populated area.
Trade Policy and Innovation

Huasheng Song (Zhejiang University, China)
Hylke Vandenbussche (CORE, UCL, Belgium)

This paper develops a model where firms across countries differ in their capacity to innovate. Our main goal is to study firm level innovation under various trade policy shocks. We consider two countries where firms are heterogeneous in their innovation efficiencies. We find that the benefits of trade liberalization and trade protection differ across firms. One of the main results we obtain is that trade protection hurts the productivity of highly efficient firms while it increases the productivity of lowly efficient firms. The predictions of our model are in line with recent empirical evidence that while trade protection fosters the productivity of lowly efficient firms, it reduces productivity of highly efficient firms.

Innovation by Leaders without Winner-Take-All

Raymond De Bondt (Katholieke Universiteit Leuven)
Jan Vandekerckhove (Katholieke Universiteit Leuven)

In innovative races with winner takes all, leading firms invest less than each follower, given exogenous entry (Reinganum, 1985). But with endogenous entry this result is reversed (Etro, 2004). It is argued here that sharing of rewards between the players may alter these predictions. Moreover, reward sharing can also yield first mover advantages in patent races with fixed entry.
Learning and Innovations in a Theoretical Microeconomic Framework
Sebastian Scholz (Ludwig-Maximilians-University Munich)

A government that wants to increase welfare by subsidizing either an industry’s sales and or process innovations must account for possible changes of production, when firms can foresee the government’s actions. An earlier innovation date will increase the price that the monopolist will charge up to that innovation date, but decrease it afterwards. Hence the welfare effect might be negative, in particular then then the discount rate is large. This paper will be the first that sets up a framework, which helps to examine the optimal mixture of sales and innovation subsidies, where innovations occur through time and sales through production quantities.

INTERCONNECTION IN TELECOM
Room J201
Chair: Claudia Salim
Saturday 6 Sep 2008, 14:30 – 16:00

Do international Roaming Alliances Harm Consumers?
Benno Buehler (Toulouse School of Economics / Munich Graduate School of Economics)

Zusammenfassung We develop a model of international roaming in which mobile network operators (MNOs) compete both on the wholesale market to sell roaming services to foreign operators and on the retail market for subscribers. As operators own a mobile network only in their home country, they have to buy roaming services provided by foreign MNOs to allow own subscribers to conduct roaming calls abroad. We show that in absence of international alliances and capacity restrictions, competition between foreign operators ensures that wholesale unit prices would be set at marginal costs. However, firms prefer to form international alliances in which roaming services are mutually provided to members at inefficiently high wholesale prices. Alliances serve as commitment device to soften competition on the retail market and harm consumers due to excessively high per call prices. Although operators compete with two-part tariffs for subscribers, wholesale roaming prices do not exhibit profit-neutrality as do access prices in related models of network interconnection. We also show that international alliances are endogenously formed if not prevented by regulation.
Economic Analysis of International Mobile Telecommunication Services: the EU Roaming Markets Case
Lidia Tsyganok (ECARES)

This paper analyses the price setting process in the markets for international roaming services when the inter-operator tariffs are determined either in a cooperative or in a noncooperative way. The model shows collusion of foreign providers increases the domestic consumers’ welfare and has no effect on the foreign consumers’ welfare. However, it might not always be profitable for the firms. The model also considers the impact of regulation constraints that operators currently face. It shows that under the actual technical constraints the regulation is inefficient and has an ambiguous effect on the global welfare.

Interconnection of Telecommunication Platforms and Quality Incentives
Claudia Salim (DIW Berlin, TU Berlin)

We analyze competition between two platforms with positive network externalities. These can can choose to interconnect or alternatively, operate exclusively. We examine how this decision will affect pricing behaviour and incentives to invest in platform quality subsequently. We find that interconnection is a means to reduce cross-effects in a two-sided market. However, even though interconnection allows for spillovers to the rival platform, it will result in higher quality investment than the case of exclusive platforms. Coordination will always facilitate collusion on the lowest quality levels possible.
Optimal Law Enforcement and Welfare in the Presence of Organized Crime

Jenni Pääkkönen (University of Helsinki)

This paper explores the optimal law enforcement by the Leviathan government in the presence of organized crime. The government has no means to stop the upsurge of the crime, contrary it makes it possible for the mafia to generate a positive payoff by extracting rents in the shadow economy. Even with the possibility to monitor the shadow production, the government neither chases the illegal production nor the mafia away. Instead, the Leviathan government will use its policing activity to make more profits. The option to exit to shadow economy benefits the firms even though this utility is diluted by the entry of the mafia. Monitoring hurts both the legal and illegal firm whereas both the government and the mafia benefit.

Judicial Errors and Innovative Activity

Giovanni Immordino (University of Salerno)
Michele Polo (Università Bocconi)

We analyze the effect of errors in law enforcement on the innovative activity of firms. If successful, the innovative effort allows to take new actions that may be ex-post welfare enhancing (legal) or decreasing (illegal). Deterrence in this setting works by affecting the incentives to invest in innovation, what we call average deterrence. Type-I errors, through over-enforcement, discourage innovative effort while type-II errors (under-enforcement) spur it. The ex-ante expected welfare effect of innovations shapes the optimal policy design. Accuracy, in this setting may be undesirable, when it would influence the innovative effort in the wrong way. This result is in contrast with the traditional model, where accuracy is always welcome since it enhances marginal deterrence. When innovations are ex-ante welfare enhancing, they can be sustained by laissez-faire or, if the enforcement effort is exogenous, through better (type-I) accuracy. When instead the innovative effort is ex-ante welfare decreasing, it is discouraged through positive enforcement and (type-II) accuracy. Finally, when the enforcer can selectively reduce type-I and type-II errors, he will always concentrate accuracy on one of them only, depending on the expected impact of innovations on welfare, adopting asymmetric protocols of investigation.
Private Antitrust Enforcement in the Presence of Pre-Trial Bargaining

Sylvain Bourjade (Toulouse Business School)
Patrick Rey (Toulouse School of Economics)
Paul Seabright (Toulouse School of Economics)

We study the effect of encouraging private actions for breaches of competition law. We develop a model in which a plaintiff, who may or may not have private information about whether a breach of law has been committed, decides whether to open a case against a defendant. If opened, the case may be settled out of court or may proceed to full trial. The authorities can facilitate private actions by lowering the costs of opening a case or of proceeding to a full trial, or by raising the damages to be expected in the event of success. We show that facilitating private action increases the number of cases opened and sometimes but not always makes plaintiffs more aggressive in pre-trial bargaining. The latter, if it occurs, tends to make defendants who have committed anti-trust violations more likely to settle than innocent defendants. Indeed, rather than being the place where antitrust violators are examined and punished, the courts become principally the place where those innocent of antitrust violations can prove their innocence so as to resist the demands of plaintiffs for out-of-court settlements. There are welfare benefits from increasing deterrence for anti-trust violators but welfare costs from increasing the expense for the others of proving their innocence. We discuss conditions under which the benefits exceed the costs, but show that it may easily happen that private actions simply transfer resources from defendants to plaintiffs without sorting antitrust violators from others. We show that for screening to work requires the Court to be committed to rely only on submitted evidence in the case, and not on other possibly relevant background material.

**MERGER REMEDIES**

**Room J203**

Chair: Thibault Vergé
Saturday 6 Sep 2008, 14:30 – 16:00

Settlement in Merger Cases: Remedies and Litigation

Bertrand Chopard (BETA UMR CNRS 7522 and Nancy University)
Thomas Cortade (ID2 and BETA UMR CNRS 7522, University of Metz)
Andreea Cosnita (EconomiX UMR CNRS 7166, University of Paris X Nanterre)

This paper performs a pre-trial settlement analysis for the negotiation of asset divestitures in merger control cases. Taking into account the asymmetric information between the competition agency and the merging firms concerning the true competition impact of the merger, we examine the impact on the likelihood of settlement divestiture and the divestiture amount in equilibrium of various factors, such as the transfer rate of the merger’s cost savings, the severity of the appeal court, as well as the bargaining power of the merging partners in the sale of the divested assets.
**Asset Divestitures and Horizontal Mergers: An N-Firm Cournot Story**

*Patrice Bougette (LAMETA)*

With an n-firm Cournot model in which m firms merge, we show that asset divestitures allow the remeding of certain price increases. We find a set of possible divestiture shares and detail some. We also see that letting two firms buy the divested assets leads to lower post-merger prices but one should be cautious when reinforcing merging parties’ market power. Hence a comparison from both consumer and welfare standards helps determine the most relevant share. In addition, if efficiency gains from the merger are taken into account, the higher the efficiency gains, the smaller the scope of the sell-off. Lastly, we deal with a carve-out divestiture and emphasize viability issues.

**Cournot Oligopoly with Assets and Applications to Merger Control**

*Thibaud Vergé (CREST-LEI)*

Competition authorities sometimes require that firms divest some of their assets to potential or existing rivals in order to allow a merger to take place. This paper shows that the use of such structural remedies is unlikely to be useful and mergers should thus be blocked if they do not generate technical synergies. This thus extends the result of Farrell and Shapiro (1990a) showing that, absent synergies, a merger necessarily causes the price to raise.
Competition for Quality and Optimal Merger Policy

Luis Granero (Universidad de Valencia)
Miguel Gonzalez-Maestre (Universidad de Murcia)

We analyze optimal merger policy in oligopoly markets with endogenous quality and fixed costs. The antitrust authority maximizes a generalized welfare function where consumer surplus can be over or under valued. We show that even with moderate overvaluation of consumer surplus all the mergers should be forbidden. Comparisons with a benchmark model with exogenous quality and fixed costs show that optimal merger policy should not be substantially more permissive in the model with endogenous quality. Those results contrast sharply with some literature tending to justify permissive merger policies reinforcing the presence of "national champions" in high-tech industries.

Implications of Unprofitable Horizontal Mergers: A Re-Interpretation of the Farrell-Shapiro-Framework

Oliver Budzinski (Marburg University)
Jürgen Peter Kretschmer (Marburg University)

We demonstrate that the popular Farrell-Shapiro-framework (FSF) for the analysis of mergers in oligopolies relies regarding its policy conclusions sensitively on the assumption that rational agents will only propose privately profitable mergers. If this assumption held, a positive external effect of a proposed merger would represent a sufficient condition to allow the merger. However, the empirical picture on mergers and acquisitions reveals a significant share of unprofitable mergers and economic theory, moreover, demonstrates that privately unprofitable mergers can be the result of rational action. Therefore, we extend the FSF by explicitly allowing for unprofitable mergers to occur with some frequency. This exerts a considerable impact on merger policy conclusions: while several insights of the original FSF are corroborated (f.i. efficiency defence), a positive external effect does not represent a sufficient condition for the allowance of a merger anymore. Applying such a rule would cause a considerable amount of false positives.
Optimal Merger Policy
Lars Sørgard (Norwegian School of Economics)

The purpose of this article is to investigate the optimal merger policy in the presence of deterrence as well as type I and type II errors. We derive the optimal number of merger investigations. We show that as long as the quality of the competition authority’s final decision to ban or not a merger is sufficiently high, a part of, but not all, the potential anticompetitive mergers are deterred in optimum. There will be a positive welfare effect of the merger investigations due to its deterrence effect, while the merger investigations as such might have a negative impact on welfare (enforcement effect). The results have important implications for how one should interpret the empirical studies of the effects of merger enforcement.

NETWORK INDUSTRIES
Chair: A. Laura Baraldi
Saturday 6 Sep 2008, 14:30 – 16:00
Room J5

Regulated Retail Tariff Structures, Dial-Up Substitution and Broadband Diffusion: learning from New Zealand's experience
Bronwyn Howell (New Zealand Institute for the Study of Competition and Regulation, Victoria University of Wellington)

Despite an apparent absence of supply side impediments to the uptake of broadband, New Zealand has persistently exhibited one of the lowest numbers of connections per capita in the OECD. Whilst geographic, demographic and economic factors may partially explain the disparity, they fail to explain the comparatively low uptake in a country that, in the early 2000s, ranked amongst the top OECD countries in the number of internet users per capita and average usage per account. Demand side factors, however, offer some insights. Using a combination of diffusion theory, two-part tariffs, price discrimination and bundling, this paper proposes that the historic flat-rate tariff for local voice telephony has resulted in substitution from legacy dial-up to frontier broadband internet access in New Zealand occurring at a higher user valuation of both internet connection and usage than if the telephony tariff was set at a level whereby the fixed component recovered fixed costs and the variable usage component was set at marginal cost â€“ the tariff structure that prevails in most other OECD countries.

The New Zealand experience suggests that the extensive use of flat-rate tariffs for the current generation of broadband technologies (e.g. ADSL) may impose similar braking of the rate and timing of substitution to future internet access technologies (e.g. fibre to the home). These effects are exacerbated if the legacy connection is purchased as part of a bundle where customers predominantly value other elements more highly than the internet component. Substitution inertia created by the flat-rate tariff may only be overcome by the development of new applications which are both highly-valued by the majority of users and which can only be feasibly deployed using the frontier technology.
Solving Metcalfe's Paradox - Competition in Growing Communication Network Markets
Kai Hüschelrath (Centre for European Economic Research (ZEW))
Tobias Veith (Centre for European Economic Research (ZEW))

According to Metcalfe's Law, the total value of a network to all the users is proportional to \( n(n-1)/2 \) and therefore maximized in a world with a single network provider. Nevertheless, in contrast to the prediction of the law, real markets often show the growth and persistence of multiple network providers. In this paper we provide a solution to this Metcalfe Paradox by departing from standard network assumptions in two aspects: First, for each individual the utility of being in a communication network is an inverse u-shape function in the number of customers and, second, customers can use network services for free. We show that more than one network could exist simultaneously. Furthermore assuming double platform usage, own platform investments could also increase the competitor's network size. Thus, even with substitutive goods complementary features could appear. Dependent on the platform providers' profit function multiple equilibria could exist given the competitor's investment decisions.

Estimation of Network Externalities and Critical Mass in the Mobile Telephone Market: a panel data analysis of the OECD Countries
A. Laura Baraldi (Second University of Naples (Italy))

This paper provides an empirical study on the extent of network effects from mobile telecommunications. We specify and estimate a model of consumer demand for mobile telephone calls, to identify the extent of network externalities and to prove that, with network effects, the demand curve is not downward sloping everywhere but it has an increasing part, verifying empirically the existence of the critical mass of the installed base of consumers. In order to do that we use a panel data of the 30 OECD Countries from 1989 to 2006 for estimating a quadratic relationship between price of 3-minute cellular call and the installed base of subscribers; we find strong network externalities effects on mobile telephone market which drive the demand curve for this network good to be upward sloping until the critical mass point is reached, and then, downward sloping.
A Coasian Organization of Industry

*Andrea Mangani (University of Pisa)*

This paper studies the make-or-buy decision and its effects on the organization of industry. The model proposed assumes homogeneous firms, transaction costs with a purely informative nature and two stages of production. More unintegrated firms imply higher transaction costs. This enables to obtain an industrial equilibrium with both integrated and unintegrated firms. This results ofers an explanation of asymmetric vertical integration based on transaction costs and partially contrasts the traditional approach of the neo-institutional literature that tend to assume firm heterogeneity.

Vertical Integration and Operational Flexibility

*Michele Moretto (University of Padova)*  
*Gianpaolo Rossini (University of Bologna)*

The main aim of the paper is to highlight the relation between flexibility and vertical integration. To this purpose, we go through the selection of the optimal degree of vertical disintegration of a flexible firm which operates in a dynamic uncertain environment. The enterprise we model enjoys flexibility since it can switch from a certain amount of disintegration to vertical integration and viceversa. This means that the firm never loses vertical control, i.e., the ability to produce all inputs even when it buys them in the market. This sort of flexibility makes for results which are somehow contrary to the Industrial Organization recent literature and closer to the Operations Research results. In this sense we provide a bridge between the two approaches and rescue Industrial Organization from counterintuitive conclusions.
Designing Empires for Consensus: Responsibility Allocation and the Budgeting Process

Pierre Fleckinger (Columbia Business School & Ecole Polytechnique)

It is recognized by organizational researchers that responsibility over divisions of a firm comes both with private information and private benefits. This paper investigates the efficiency of the budgeting process in relation to responsibility allocation by the organizational form. The stylized model with two functions/two products/two managers allows to compare the product-line and the functional organizations. Incentive concerns in the budgeting process arise from adverse selection and (potential) divergence of interest, and it is argued that organizational structure should align preferences between the agents to perform better in terms of information revelation. This illustrates for example why the conflict between divisions is more intense in functional firms. Functional organization induces more informational rent through exacerbated exaggeration compared to product-line organization. Also, communication between agents responsible for products allows some information revelation through the channel of a 'consensus effect'. This allows to make investment responsive to private information even absent monetary incentives, which is not the case in a functional organization.

OUTSOURCING

Room J3
Chair: Johanes van Biesebroeck
Saturday 6 Sep 2008, 14:30 – 16:00

Institutions and Offshoring Decision

Marcella Nicolini (DIG - Politecnico di Milano & FEEM)

Several papers show that the choice to establish an FDI may be affected by the institutional environment of the receiving country. Property rights theory suggests that contract enforcement matters differentially across sectors. The novelty of this paper is to test whether institutions matter differentially across different sectors in FDI decision. Using data on U.S. Direct Investment Abroad, I find that institutional characteristics of the country and the industry positively affect the volume of offshoring between U.S. companies and their affiliates. This depends also on the type of relationship between parent company and foreign affiliate. The suggested argument is stronger for the intermediate products, while the evidence is weak for products ready for sale.
Outsourcing Behaviour: the Role of Sunk Costs and Firm and Industry Characteristics
Carmen Díaz-Mora (University of Castilla-La Mancha)
Angela Triguero-Cano (University of Castilla-La Mancha)

This paper studies the determinants of outsourcing intensity using firm-level panel data for Spanish manufacturing industries. Outsourcing refers to contract out the manufacturing of custom-made finished products or parts and components. Following the theoretical framework of Grossman and Helpman (2002), we take into account the presence of sunk entry costs as well as other firm, industry and market characteristics that influence the level of outsourcing. Moreover, we consider firstly that the company decides to outsourcing or not, and once outsourcing has been the chosen option, the firm establishes the volume of production to be subcontracted. Although the problem of sample selection is typically ignored in panel data settings, we use the Heckman procedure to eliminate the effect of selection bias from the estimated results. Our results show that some variables influencing the outsourcing intensity are different from those that affect decision of outsourcing.

Outsourcing when Investments are Specific and Complementary
Alla Lileeva (York University)
Johannes Van Biesebroeck (University of Toronto)

Using the universe of large Canadian manufacturing firms in 1988 and 1996, we investigate to what extent firms' outsourcing decision can be explained by a simple property rights model. A novel aspect of the data is the availability of disaggregate information on outputs as well as inputs which permits the construction of a very detailed measure of vertical integration. We also construct five different measures of technological intensity to proxy for investments that are likely to be specific to a buyer-seller relationship. A theoretical model that allows for varying degrees of investment specificity and for complementarities|an externality between producer and supplier investments|guides the analysis. Our main findings are that (i) greater specificity makes outsourcing less likely; (ii) complementarities between the investments of the buyer and the seller are also associated with less outsourcing; (iii) only when we focus on the range of transactions with low complementarities do we and support for several nuanced predictions of the property rights model.
Standard Breach Remedies, Quality Thresholds, and Cooperative Investments

Alexander Stremitzer (University of Bonn)

When investments are non-verifiable, inducing cooperative investments with simple contracts may not be as difficult as previously thought. Indeed, modeling “expectation damages” close to legal practice, we show that the default remedy of contract law induces the first best. Hence, there is no need for privately stipulated remedies. Yet, in order to lower informational requirements of courts, parties may opt for a "specific performance" regime which grants the breached-against buyer an option to choose "restitution" if the tender’s value falls below some (arbitrarily chosen) quality threshold. In order to implement this regime, no more information needs to be verifiable than is implicitly assumed in Hart and Moore (1988).

Optimal Penalty for Investment Delay in Public Procurement Contracts:

evidence from the Italian experience

Chiara D’Alpaos (University of Padova)
Michele Moretto (University of Padova)
Paola Valbonesi (University of Padova)

The aim of this paper is to provide a general framework to determine the optimal penalty fee usually included in public procurement contracts (PPCs) to induce the contractor to respect the contracted delivery date. We do this by developing a real option model that allows us to investigate the contractor’s value of investment timing flexibility which the penalty rule - de facto - introduces. We then apply this setting to evaluate the range of penalty fees defined by the Italian legislation on PPCs: according to our analysis, there is no evidence that the consistent delays of the contract’s execution time recorded in the Italian experience should be referred to penalty fees incorrectly set. This result opens up the field to other explanations for delays, i.e. costly and time consuming enforcement of the penalty and/or non-verifiability of the contractor’s work execution time. We finally extend our analysis to the case of a penalty/premium rule and to the optimal penalty fee in a concession contract.
Capital Structure and Renegotiation in Public-Private Partnerships

Daniel Danau (Institute for Advanced Study)

In this paper, I characterize the optimal leverage of the private firm in a public-private partnership (PPP) when the firm privately observes the realization of its operating cost ex post. I show that the debt plays multiple roles in renegotiation. Low debt discourages the firm from trying to renegotiate either the PPP or the credit. When renegotiation cannot be avoided, high debt decreases the rent of the firm from PPP renegotiation but increases its rent from credit renegotiation. I characterize the optimal PPP contract when renegotiation can (cannot) be avoided and the capital structure of the firm is contractible.

PUBLIC UTILITIES

Room AR232
Chair: Elisabetta Iossa
Saturday 6 Sep 2008, 14:30 – 16:00

Capital Structure and Regulation: Does Ownership Matter?

Bernardo Bortolotti (University of Turin and FEEM, Milan)
Carlo Cambini (Politecnico di Torino, Italy)
Laura Rondi (Politecnico di Torino, Italy)
Yossi Spiegel (Tel Aviv University and CEPR)

We construct a comprehensive panel data of 96 publicly traded European utilities over the period 1994-2005 in order to study the relationship between the capital structure of regulated firms, regulated prices, and investments, and examine if and how this interaction is affected by ownership structure. We show that firms in our sample increase their leverage after becoming regulated by an independent regulatory agency, but only if they are privately-controlled. Moreover, we find that the leverage of these firms has a positive and significant effect on regulated prices, but not vice versa, and it also has a positive and significant effect on their investment levels. Our results are consistent with the theory that privately-controlled firms use leverage strategically to shield themselves against regulatory opportunism.
Public-Private Partnerships and the Privatization of Financing: An Incomplete Contracts Approach
Jean-Etienne de Bettignies (Queen’s School of Business)
Thomas Ross (Sauder School of Business, UBC)

Governments have begun to embrace public-private partnerships (P3s) as vehicles for providing public services. This paper considers the controversial question of when private financing of public projects is optimal. Private development can dominate public financing through more efficient termination decisions for bad projects, resolving soft budget constraint problems. Due to contractual incompleteness, on the other hand, private developers cannot commit to large debt repayments, and hence can finance only a subset of valuable projects. Public developers, who do not face the same commitment problems, can finance a larger set of projects.

The Economics of Public Private Partnerships
Elisabetta Iossa (Brunel University)
David Martimort (Toulouse School of Economics)

In this paper we provide a unified theoretical framework to discuss incentive issues in Public Private Partnerships (PPPs) and to identify the circumstances in which the main characteristics of PPPs are suitable to provide adequate incentives for private contractors in infrastructure and public service provision. We also extensively describe the empirical evidence on PPPs and use our insights to derive clear policy implications.
Sharing the Market or Getting Close for Fight? New Trade Opportunities Due to Electronic Coordination and the Interaction of Investments in New Distribution Channels and for Repositioning of Products

Martin Bandulet (E-Bridge)
Karl Morasch (Bundeswehr University Munich)

Electronic coordination links markets that have initially been separated by transport costs, which in turn raises competitive pressure and affects incentives to differentiate products. However, making use of electronic coordination and repositioning of products is not costless. We analyze investment decisions in a heterogeneous product duopoly with two spatially separated markets. We consider both price (most likely with digital products) and quantity competition (capacity choices for physical products) and compare private and social investment incentives. While firms always invest in transport cost reductions, product differentiation may be enhanced or reduced.

Group-Size Effects on Endogenous Tariff in a Lobbying Contest Model

Takeshi Yamazaki (Niigata University)

Hillman and Ursprung (1988) and Fabella (1991) analyze lobbying contest models with homogeneous agents to show that the equilibrium probability of high tariff being imposed is decreasing in the number of pro-tariff domestic firms. Their theoretical results support Olson’s (1965) analysis of collective action that small group size is advantageous in influencing endogenous policy. However, empirical studies fail to find an unambiguous relation between industry concentration and policy effectiveness of an industry. This paper shows in a simple contest model that cooperation among agents in an interest group and/or heterogeneity between domestic and foreign firms can theoretically explain diversified relation between industry concentration and policy effectiveness of an industry.
International Trade in Bilateral Oligopoly  
Johan Stennek (Gothenburg University)

In many intermediate goods markets, prices are negotiated between buyers and sellers. Being able to appropriate a share of their partner’s efficiency, all firms prefer trading with efficient foreign firms rather than inefficient domestic firms (if the efficiency differential is large in comparison to transportation costs). Thus, independent of nationality, the most efficient firms may trade with each other, the second most with each other, and so on. With two-sided market power and heterogenous firms, there is trade both in accordance with comparative advantage and comparative disadvantage. In contrast to the case of reciprocal dumping, trade is unambiguously wasteful. Still, the (overall) least efficient country may gain from trade.