NETWERK ALGEMENE EN KWANTITATIEVE ECONOMIE

NETHERLANDS NETWORK OF ECONOMICS

NAKE DAY 2007

Book of Abstracts

October 26, 2007

Utrecht University

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Netwerk Algemene en Kwantitatieve Economie

Netherlands Network of Economics

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Jaap Abbring
"Mixed Hitting-Time Models"

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Abstract:
We study a mixed hitting-time (MHT) model that specifies durations as the first time a Lévy process—a continuous-time process with stationary and independent increments—crosses a heterogeneous threshold. Such models are of substantial interest because they can be reduced from optimal-stopping models with heterogeneous agents that do not naturally produce a mixed proportional hazards (MPH) structure. We show how strategies for analyzing the MPH model's identifiability can be adapted to prove identifiability of an MHT model with observed regressors and unobserved heterogeneity. We discuss inference from censored data and extensions to time-varying covariates and latent processes with more general time and dependency structures. We conclude by discussing the relative merits of the MHT and MPH models as complementary frameworks for econometric duration analysis.

Cesar Ariza
"Ancillary Statistics and Bimodality in the Structural Equation"

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Abstract:
We investigate the conditional density of the Maximum Likelihood Estimator (MLE) in a simple structural Keynesian model (one stochastic behavioral

equation and one identity) with known variance. We show that bimodality in this model not only depends on the relevance of the instrument in the system, but also on the value of a relevant ancillary statistic. We find a saddle point approximation that captures the bimodality when we condition on this ancillary statistic. In the analysis we also exploit the geometrical properties of the model.

Ana Babus

"The Formation of Financial Networks"

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Abstract:
Modern banking systems are highly interconnected. Despite their various benefits, the linkages that exist between banks carry the risk of contagion. In the paper, we investigate how banks decide on direct balance sheet linkages and the implications for contagion risk. In particular, we model a network formation process in the banking system. Banks form links with each other in order to reduce the risk of contagion. The network is formed endogenously and serves as an insurance mechanism. We show that banks manage to form networks that are resilient to contagion. Thus, in an equilibrium network, the probability of contagion is virtually zero.

Sjoerd Beugelsdijk, Arjen Slangen, Roger Smeets, and
Jean Francois Hennart

"Measuring MNE Activity: FDI Data and the Bermuda Problem"

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Abstract:

To measure multinational enterprise (MNE) activity at the macro level, many scholars use Foreign Direct Investment (FDI) data. As FDI data are based on capital flows between home and host countries, a mismatch may exist between the reported and actual MNE activity. Comparing operational sales and value-added data with FDI data of US MNEs, we find that in order to properly interpret FDI data a country-specific correction is required. This correction is related to the type, quality, and structure of the host country's financial market. The implication of this finding is that sample, research question, and the FDI data measures are interrelated, having a number of consequences for some key debates in international economics and business.

Christiaan van Bochove

"Growth and Integration in Northern Europe During the Early Modern Period"

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Abstract:

During the early modern period economic growth was largely restricted to the Netherlands and England. Both countries faced high wage levels and thus had an incentive to economize on the input of labor in the production process. In

the timber processing industries—crucial to contemporary shipbuilding and construction—this resulted in different outcomes in both countries, however. Whereas in the Netherlands the production process was already mechanized during the late 16th century through the introduction of sawmills, England did not mechanize its processing industry until the late 18th century. By studying this historical case, this paper will be able to substantiate on two topics. First, it will enable us to get a better understanding of the underlying variables responsible for these different outcomes. It will be shown that instead of being “ignorant” with respect to more productive technologies, early modern entrepreneurs made rational decisions about production costs. Second, by studying the wider context in which these production decisions were made, an important point about the functioning of early modern economies can be made. It will be documented that a complex system of production and trading ties came into existence that integrated the economies of northern Europe to an unprecedented extent.

Pedro Bom and Jenny Ligthart

“How Productive is Public Capital? A Meta-Analysis”

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Abstract:
The paper analyzes the contribution of public capital to private output growth using a meta-analysis and meta-regression analysis. We explicitly correct for publication bias by running true effect tests. The data set consists of 76 studies, where we include only a single measurement per study because of dependency across multiple observations taken from a single study. The weighted average output elasticity of public capital in the meta-analysis is shown to be 0.10 in the random effects model. In the meta-regression analysis we control for data set dependency—which is caused by (partially) overlapping data sets across studies—by employing Generalized Least Squares. The meta-

regression analysis shows that a substantial part of the heterogeneity across studies is explained by the econometric specification, the type of public capital, the chosen empirical model, and the level of aggregation of public capital data.

Jaap Bos, Y.L. Chang, and J. Chiang
"Critical Mass: Dominant Banks in European Banking"

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Abstract:
Empirical tests of most market power models suffer from an important omitted variable bias. These studies lack a good measure for firms' conjectural variation. As a result, most papers in the literature test whether or not we have perfect collusion. In this paper, we introduce a novel method for measuring conjectural variation. We estimate a disaggregated version of the Cowling and Waterson (1976) model and calculate "critical mass" for 15 European banking markets over the period 1994–2005. "Critical mass" is the minimum size a bank has to have in a market in order to have market power. Our results have important policy implications, for example for merger approval procedures.

Maarten Bosker
"Sub-Saharan Africa's Manufacturing Trade: Trade Costs, Zeroes, and Export Orientation"

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Abstract:
Sub-Saharan Africa (SSA) is only a marginal player on the world's export and import markets. Moreover, and in contrast to other developing countries, SSA trade is still largely dominated by trade in primary commodities. Diversifying SSA trade by developing an exporting manufacturing sector is viewed by international organizations as a vital ingredient for Africa's future economic success. By focusing on bilateral manufacturing exports and imports of 44 SSA countries over the period 1993–2002 and by properly addressing the occurrence of the many "zero trade flows," I show that the high level of trade costs faced by many SSA countries constitutes a significant barrier to its potential of developing a competitive manufacturing sector that is able to compete on world markets. It also reveals interesting differences in the importance of trade costs for intra-SSA and SSA trade with the rest of the world.

Peter Broer
"Social Security, Macroeconomic Risk, and General Equilibrium"

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Abstract:
This paper studies the interaction between macroeconomic risks, and pay-as-you-go social security. For this, it uses an applied general equilibrium model with overlapping generations of risk-averse households. Important sources of risk are productivity shocks and capital return shocks. The risk profile of pensions differs from that of financial assets, because pensions are linked partially to future wage rates and productivity. The model is used to discuss the effects social security on labor supply, private saving, and welfare, both in a closed economy and a small open economy. Results show that the welfare effects of pay-as-you-go social security are negative as crowding out effects

dominate the positive insurance effects. In addition, crowding out appears to be stronger for a small open economy than for a closed economy.

Kelly de Bruin, Rob Dellink, and Richard Tol
"Cooperation in Climate Change Adaptation and Mitigation"

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Abstract:
This article looks at different forms of cooperation in climate change. A simple two region (analytical) integrated assessment model is set up with which the optimal levels of mitigation and adaptation are derived. The exact levels of mitigation cannot be derived analytically because of the complex relations between mitigation and other variables. To understand the exact effects of different forms of cooperation, we use a numerical model (AD-DICE). The AD-DICE model is a multiregional model based on the RICE model but including implicit adaptation, which we construct based on Bruin et al. (2007). We consider cooperation in mitigation and adaptation with and without the possibility to transfer funds to adapt or mitigate in other regions.

Cem Cakmakli
"Predictability of Stock Return and Volatility: A Factor Based Approach"

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Abstract:
Using factor based approaches, we investigate a return and volatility forecasting procedure that exploits all the available information by still

keeping the econometric framework at considerable size. Our findings demonstrate that factor based approaches provide substantial gains when predicting the sign of the excess returns and state of the volatility separately as well as jointly. A striking result is that the performance of this procedure increases especially after 1990, where the existing evidence suggests lower predictive power of many econometric forecasting procedures. For evaluating the economic significance of the factor based approach, we also simulate a mean-variance investor using return and volatility forecasts to determine optimal portfolio weights. In line with the predictive performance, under moderate transaction costs, a mean-variance investor would be willing to pay several percentages of his wealth for switching from passive and dynamic strategies based on benchmark models to dynamic strategies that employ factor based approaches after 1990.

Eric Canton
"Identifying Human Capital Spillovers: Evidence from Dutch Postal Code Areas"

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Abstract:
Does schooling generate social returns in excess of the private returns captured by the individual who makes the human capital investment? To detect human capital externalities, I use Dutch survey data to estimate the impact of the average human capital stock in a region on individual wages, considering regional human capital as a local public good. The empirical findings suggest the presence of human capital externalities associated with the regional fraction of highly skilled workers, but no evidence is found for spillovers from the region's average educational attainment. Put differently, human capital spillovers arise from the right-hand side of the regional skill

distribution. The roles of selection and imperfect substitutability between various skill levels are taken into account.

Geerte Cotteleer, Tracy Stobbe, and Kees van Kooten

“Farmland Conservation near Urban Areas: Is B.C.’s Agricultural Land Reserve Able to Protect Farmland from Development?”

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Abstract:
As cities across North America extend into the countryside, farmland is often the first victim of urban development. In British Columbia (BC), the government created the Agricultural Land Reserve (ALR) to protect farmland from development. While it is possible to remove land from the ALR, such exclusions are a source of controversy. Along with rising land prices, this meant that farmland near the urban fringe is not immune to speculation and development pressure. The current research specifies a GIS-based hedonic pricing model, to shed light on the following questions: How do farm fragmentation and distance to urban areas affect farmland prices? Is it possible to demonstrate empirically that speculation is happening on ALR land that is supposed to be preserved in perpetuity? What externalities can be quantified for farmland near the urban fringe? We use ArcGIS to calculate distances, link data sets, and analyze spatial relationships in the data, and correct for spatial lag and error dependence in our data. Because there is uncertainty about the correct model specification with respect to the explanatory variables and the spatial dependence structure, we use Bayesian model averaging and Markov Chain Monte Carlo Model Composition (MC3).

Carin van der Cruijsen and Sylvester Eijffinger
"Actual versus Perceived Central Bank Transparency: The Case of the European Central Bank"

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Abstract:
Central banks have become more and more transparent about their monetary policy making process. Besides accountability reasons potential economic gains play a role as well. In the literature the distinction between actual and perceived central bank transparency is often lacking. However, as perceptions are crucial for the actions of economic agents this distinction matters. A discrepancy between actual and perceived transparency may exist because of incomplete or incorrect transparency knowledge and other (psychological) factors. Even financial experts, the most important channel through which the central bank can influence the economy, may suffer from misalignments. We show the mismatch between actual and perceived transparency and its relevance by analyzing data of a Dutch household survey on the European Central Bank's (ECB) transparency. To benefit from higher transparency perceptions the ECB feels tempted to stress its transparency strengths, while hiding its transparency weaknesses.

Thomas Dirkmaat, Stephanie Rosenkranz, and Vincent Buskens
"Crowding Out in and Indefinitely Repeated Asymmetric Trust Game"

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Abstract:
In this paper we introduce an alternative version of the trust game by Dasgupta (1988) and Kreps (1990) that allows for asymmetric information. We use this version to study the effect of “checking” on the trustee's behavior. Checking is a control option the trustor can decide to use and that takes place after both trustor and trustee made their initial decisions. “Checking” differs in this respect from the “monitoring,” which allows the trustor to control the trustee's behavior before the trustee makes his decision. The game theoretical analysis suggests that checking increases cooperation. The experimental results show checking leads to more cooperation, although not for all types of trustees.

Aufa Doarest
“Consumer Search and Cartel Stability”

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Abstract:
In this paper, we study the effect of consumer search intensity on cartel stability. By taking into account full consumer participation, we find that the proportion of informed consumer affects cartel stability in a non-monotonic way. Below a certain threshold, cartel stability is negatively correlated with the proportion of informed consumers. Above this threshold, cartel stability is positively correlated with cartel stability. In addition, we find that if the proportion of informed consumers is stochastic, there will be a price war in the market.

Martijn Dröes and Wolter Hassink
"On the Determinants of Own House Price Valuation"

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Abstract:
This paper investigates price setting in the Dutch non-rental housing market. Common measures used to determine the value of a house are the homeowner estimate and assessed value. According to the traditional literature of hedonic (price) regressions (cf. Quigley, 1994), the valuation of the house depends on the observed characteristics of the house only and any discrepancy is viewed as inaccuracy, bias or even blunt measurement error. Consequently, a regression of the own valuation markup (over the official assessed price) should have no further explanatory value. However, a growing number of papers argue that household characteristics may influence the markup. For instance, Genesove and Mayer (1997) show that the (list price) markup is higher when households face substantial collateral constraints, since those households have a higher reservation price. We add to this literature in the following way. We use a sample of about 30 thousand homeowners from the Dutch Housing Demand Survey (WBO) of 2002. First, following Genesove and Mayer (1997), we find that the markup is higher for households that are more collateral constrained. Second, households that want to move within two years have a lower markup (as instrumental variables we use the presence of young children, no children, and age), which implies that these households have a lower reservation price when they wish to move. Third, we show some evidence which may reflect the possibility of the household to learn from price setting (or bargain) in the regional housing market. In particular, highly-educated homeowners seem to have a higher markup. The length of residence has a positive, but decreasing marginal effect.

Hans Degryse, **Muhammad Ather Elahi**, and Maria Fabiana Penas
"Cross-Border Interbank Exposures and Financial Contagion"

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Abstract:
Integrated financial markets in modern times not only provide opportunities for expansion and improved risk sharing but also pose threats of contagion risk through cross-border interbank exposures. While the current literature mostly studies within-country contagion from domestic interbank linkages, this paper examines cross-border interbank contagion risk for 17 countries over the period 1999–2005 using aggregate cross-border interbank exposures of each country as reported in the BIS *International Banking Statistics*. We find strong evidence for contagion risk through cross-border interbank linkages. Particularly, the United States, through its cross-border interbank exposures with non-US banks, emerges as main triggering country besides the United Kingdom and Germany during the whole period. The Netherlands and the Scandinavian countries also pose contagion threats, though on a limited scale, in 2004 and 2005. The Netherlands appears as one of the most vulnerable countries for cross-border contagion in recent years. Finally, it is also observed that the "speed of contagion" has increased in recent years as most nations would already default in initial rounds.

Fabienne Fortanier and Rob van Tulder
"Measuring Internationalization: MNEs Between 1990 and 2004"

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Abstract:
Despite the substantial amount of research, it remains remarkably unclear how, at the corporate level, firms expand and withdraw their international activities over time. The absence of longitudinal studies is not due to a failure to recognize the importance of such analyses, but rather the notorious difficulties in gathering reliable internationalization data over time. This paper addresses this empirical issue by introducing a data set on the internationalization of sales, assets, and employment of 233 firms between 1990 and 2004. These data were manually collected from corporate sources, and the paper explores in detail the methodological problems related to the collection, use and interpretation of these data. The methodological problems are related to a wide range of definitional differences across firms and over time, which necessitate a substantial number of within-time-series corrections in order to prevent biased results. But also the treatment of sample changes due to mergers and acquisitions are discussed. Comparisons with existing secondary data sources are made before presenting the first results regarding the patterns of internationalization of the world's largest MNEs from 1990 onwards.

Koos Gardebroek
"Evaluating Different Growth Scenarios for Organic Farming Using Bayesian Techniques"

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Abstract:
Different views exist on the future development of organic agriculture. The Dutch government believes that in 2010 10 percent of the farm land will be used for organic farming. Others have a more radical view: due to increasing emphasis on sustainable production in the end all farming will be organic. Others believe in a more pessimistic scenario in which the recent growth in

organic farming was just a temporary upswing so that the share of organic farmers already reached its maximum. In this paper, different potential scenarios for the further growth of organic farming are evaluated using Bayesian techniques. A nonlinear logistic growth model explaining the share of organic farms is estimated using available historical data for Dutch agriculture. Various scenarios imply different prior values for the parameters. Because of the nonlinear model specification a Metropolis-Hastings algorithm is used to simulate the posterior densities of the model parameters. Finally, using Bayesian model comparison techniques, probabilities can be attached to the different scenarios. The proposed methodology is a promising tool for analyzing technology diffusion in general when different scenarios for diffusion are possible and limited data is available.

Natalia Goncharova, Arie Oskam, and Jos Verstegen
"Modeling Investment Decisions at Firm Level: Dutch Glasshouse Horticulture"

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Abstract:
Modeling investment decisions belongs to the most difficult parts of economic analysis. Still investments are crucial in explaining growth of firms or sectors. In this paper, we attempt to bridge "value maximizing" and "behavioral" economics. The paper supplements existing work in four ways. First, we combine theoretically the two approaches. Second, we introduce a definition of "relative zero" investment level and employ this definition for the estimation of the "participation" investment decision. Third, we separate the decision to invest from the decision on how much to invest. Fourth, we compare whether typical "behavioral variables" contribute to the explanation of investments at the firm level. Comparing sub-samples of zero and positive investments, one can see that an investing firm has a bigger scale, which

exposes a higher level of revenue, wealth and capital; and it is run by a younger entrepreneur. A two-step Heckman model investigates the decision to invest together with the investment level. Factors behind those steps often differ and are sometimes opposite. Debt, growth of capital, energy, and land prices show clear opposite signs in the decision to invest and the investment level, while more wealth and higher output prices strongly encourage the decision to invest as well as the investment level. Testing on the "behavioral variables" is done by comparing a "value maximizing" versus an extended model.

Janko Gorter, Jan Jacobs, and Jakob de Haan
"Taylor Rules for the ECB using Consensus Data"

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Abstract:
We estimate a Taylor rule for the euro area using a model that allows to differentiate between policy inertia and serially correlated shocks. In contrast to most previous research, we employ real-time expectations for inflation and real output growth. Our estimates lend support to both policy inertia and serially correlated errors in European Central Bank (ECB) Taylor rules. Our results also show that the ECB takes expected inflation and expected output growth into account in setting interest rates.

Henri de Groot, Jacques Poot, and Martijn Smit
"Agglomeration, Innovation, and Regional Development: A Meta-Analysis"

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Abstract:
The growth of cities results from a complex chain of factors. It starts with scale, density, and geography, which then combines with industrial structure—characterized by its extent of specialization, competition and diversity—to yield innovation and productivity growth that encourages employment expansion, and further urban growth. This paper revisits the central part of this virtuous circle—namely, the Marshall-Arrow-Romer externalities (specialization), Jacobs externalities (diversity) and Porter externalities (competition)—that have provided alternative explanations for innovation and urban growth. The paper evaluates the statistical robustness of evidence for such externalities presented in 31 scientific articles, all building on the seminal work of Glaeser et al. (1992). These articles yield 393 estimates of those externalities, which are characterized by their sign and statistical significance. We aim to explain variation in estimation results using study characteristics by means of ordered probit analysis. The evidence in the literature on the role of the specific externalities is rather mixed, although for each type of externality we can identify how various aspects of primary study design, such as the adopted proxy for growth, the data used, and the choice of covariates influence the outcomes.

Olaf de Groot
"The Spillover Effects of Conflict on Economic Growth in Neighboring Countries in Africa"

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Abstract:
In this paper, the influence of conflict on the economies of neighboring countries is discussed. Results from previous papers showed a strong negative effect for an entire area around a country suffering from conflict, but this paper reaches a different conclusion. The paper uses more recent data and

adjusts the methodology employed in previous papers. Additionally, a new type of contiguity matrix is constructed and used in the analysis. The final analysis consists of a large number of regressions and concludes that conflict actually has two opposing effects. First, like conflict countries themselves, directly contiguous countries actually suffer from the negative effects of proximate conflict. Second, there is also a positive spillover of conflict, which affects non-contiguous countries; this effect is larger for countries that are closer to the conflict country. The results from the paper predominantly hold for the most violent kind of conflict.

Andrea Guenster, Martin Carree, and Maarten Pieter Schinkel
"European Antitrust Policy Continued: An Analysis of Court of Appeal Rulings, 1964-2004"

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Abstract:
Competition policy is an active and debated area of government intervention in market processes. In Europe, the main institution dealing with its implementation is the European Commission. The quality of the Commission's work may be evaluated by the outcome of appeal proceedings filed to the Court of First Instance since 1989 and to the European Court of Justice previously. This paper surveys outcomes of appeal proceedings filed contra Commission decisions since the grounds for implementation were set in 1962. It presents summary statistics on appeal proceedings based on information collected from the Official Journal. The data cover all appeal proceedings filed to antitrust decisions, the first official being from 1964 up to and including 2004. Considered are issues such as the grounds for appeal, revision of the original decision, the duration and length of the proceedings. We determine the probability of success depending on characteristics like type of infringement originally found, reason for changing the analysis etcetera

using different outcome indicators, that is, final sentence, fine reduction, cost division. Findings include remarkable significant effects on the probability of revision on appeal, and some comforting neutrality results, for example, with respect to the individuals responsible for enforcement.

Marco Haan, Pim Heijnen, Lambert Schoonbeek, and Linda Toolsema
"Sound Taxation and Privatization: On the Use of Self-Declared Value"

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Abstract:
In the 16th century, foreign ships passing through the Sound had to pay ad valorem taxes to the Danish Crown. To give skippers an incentive to declare the true value of their cargo, the Crown reserved the right to purchase it at the declared value. We show that in this game, it is an equilibrium for the tax authority to confiscate the cargo with some fixed probability independent of the declared value. This mechanism does not induce truth-telling, but does allow the tax authority to achieve the desired tax revenue. We also discuss other applications of this framework, including privatization.

Metodij Hadzi-Vaskov and Clemens Kool
"Stochastic Discount Factor Approach to International Risk Sharing: Evidence from Fixed Exchange Rate Episodes"

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Abstract:

This paper presents evidence of the stochastic discount factor approach to international risk-sharing applied to fixed exchange rate regimes. We calculate risk-sharing indices for two episodes of fixed or very rigid nominal exchange rates: (i) the Eurozone before and after the introduction of the Euro; and (ii) several emerging markets in the period 1993–2005. This approach suggests almost perfect bilateral risk sharing among all countries from the Eurozone. Moreover, it implies that emerging markets with fixed/rigid nominal exchange rates against the dollar in this period achieved almost perfect risk sharing with the United States. We draw two main conclusions: (i) the risk sharing measures crucially depend on the behavior of the nominal exchange rate; and (ii) they are of limited use for cross-country risk sharing comparisons/ rankings.

Wolter Hassink and Pierre Koning

"Do Financial Bonuses to Employees Reduce Their Absenteeism? Evidence from a Lottery"

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Abstract:

This paper investigates the effectiveness of a probabilistic bonus reward system in reducing absence among workers in a Dutch manufacturing firm. Conditions of participation in the monthly lottery are: not having reported absent in the previous three months; and not having won the lottery earlier. Winners were announced among their co-workers. We argue that workers may derive utility from participation in the lottery. Consequently, we can identify the lottery effect on differences in eligibility for upcoming lotteries across workers. The lottery was beneficial to the firm. Estimates indicate that the lottery resulted in a lower rate of absence of 2.4 percentage point initially, but after more than seven months the effect of the lottery on the rate of

absence was brought back to a reduction of 1.2 percentage point. Estimates indicate that the bonus reward had no persistent negative effect on absence after termination of the incentive. Consequently, the temporal reward system cannot change workers' absence decisions permanently.

Pim Heijnen and Florian Wagener

"How Environmentally Aware do we Have to be: Growth Versus the Environment under Different Levels of Foresight and Control"

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Abstract:
Shallow lake systems are a simple model of the level of phosphorus in lakes that is typical for the kind of nonlinearities ecosystems exhibit. The recent literature on the optimal management of these systems (Mäler et al., 2003; Wagener, 2003) assumes that the inflow of pollutants into the ecosystem can be fully controlled by a decision maker with perfect foresight. The paper examines the effect of the assumption of full control by adding a competitive and polluting industry of which the pollution can be partially countered by abatement by consumers. Consequently, capital dynamics are introduced in the shallow lake system. Abatement decisions by the consumer are influenced by the extent to which the consumer anticipates changes in the capital stock and environmental damage, that is the consumer does not necessarily have perfect foresight. We show how initial conditions, the degree of myopia, and the growth rate of the capital stock influence the equilibrium capital and pollution levels. Specifically, we show that fast economic growth (coupled with a low initial level of capital) can avoid environmental disaster.

Krista Hoekstra, Jan Jacobs, and Jan-Pieter Smits
"The Industrial Revolution in the Netherlands: A Change in Persistence?"

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Abstract:
Generations of economic historians have been struggling with the question of the nature of the transition from the pre-modern to the modern society, or the Industrial Revolution. Largely in vain, since evidence of a clear break in aggregate time series is mostly non-existing. Using advanced econometric techniques—rolling and recursive ADF tests and recently developed tests for a change in persistence—and data on the Netherlands from the project on the reconstruction of the Dutch Historical National Accounts, we look for evidence of a change in the pattern of 19th century time series of output, labor productivity, and total factor productivity, both at the aggregate and at the sectoral level. We do indeed find evidence of a change in persistence from a trend-stationary (i.e., I(0)) series to a difference-stationary (i.e., I(1)) series, but surprisingly mainly in the services sector. Apparently, the services sector was of great importance in the development of the Netherlands. The introduction of new technologies, most importantly steam engines and the building of railways, caused a huge increase in productivity for the Dutch trade and transport sector and changed the nature of economic growth in the Netherlands.

Albert van der Horst, Leon Bettendorf, and Hugo Rojas-Romagosa
"Will Corporate Tax Consolidation Improve Efficiency in the European Union?"

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Abstract:
The European Commission favors the introduction of a consolidated corporate tax base to overcome the distortions arising from the existing system of separate accounting. The blueprints for consolidation are simulated with the applied general equilibrium model CORTAX. We show that the benefits of a common consolidated tax base are limited due to two weaknesses. Formula apportionment, which is needed to allocate the consolidated taxable profits across jurisdictions, creates for MNEs new tax planning possibilities to exploit tax rate differentials in the European Union. In addition, it triggers tax competition as the incentives for member states to attract foreign investment, by reducing their tax rates are enforced. The second weakness arises from the unlevel playing field, which is introduced if only part of the firms chooses to participate in the consolidation. The gains from consolidation can be fully grasped if it is obliged for all firms and accompanied by harmonization of the tax rate.

Audrey Hu and Liang Zou
"Auctions under Moral Hazard"

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Abstract:
Auction theory typically assumes that the bidder and buyer are the same person. In practice, however, important items such as land, licenses, or government projects are mostly sold to agents (usually managers) bidding for their firms. If an agent's interests are not fully in line with that of the firm he/she represents, a moral hazard problem may arise. The conflict of interests can alter the bids in two directions. On the one hand, the agent may derive personal rents from subsequent activities upon winning and, hence, may overbid at the expense of the firm. On the other hand, the risk of an auctioned project may cause a risk-averse agent to underbid if the agent's human capital is not as diversified as the stockholder's portfolio. This paper shows that the manager will bid more conservatively when the stock market is bullish and more aggressively when the stock market is bearish. A disguised blessing of the problem is its stabilizing effect on the economy.

Kris De Jaegher
"Structure and Robustness of Minimal Sufficient Networks in the Threshold Game"

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Abstract:
This paper studies an N-player threshold game in which each player only acts when at least a certain threshold of other players act. Players' thresholds are heterogeneous, and players do not know one another's thresholds. Chwe (2000) shows that minimal sufficient communication networks (which with a minimal number of links inform players about each other's thresholds, and allow them to undertake coordinated action) take the form of a hierarchy of cliques. The first part of the paper analyzes the composition of these cliques, and the position of players in the clique hierarchy depending on their thresholds. It is shown that individual cliques can have a high degree of

heterogeneity. In addition, it is shown that players are in general at a lower position in the hierarchy the higher their threshold, with one exception; the immediate followers of the leading clique may have lower thresholds than one or more members of the leading clique. The second part of the paper analyzes the robustness of minimal sufficient communication networks to increases in the players' thresholds. It is shown that minimal sufficient communication networks with a high degree of heterogeneity in its cliques, and with few hierarchies, are more robust.

David-Jan Jansen and Jakob de Haan
"The Importance of Being Vigilant: Has ECB Communication Influenced Euro Area Inflation Expectations"

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Abstract:
Using daily data on inflation-indexed bonds, we find evidence for a negative relationship between ECB communication regarding risks to price stability—measured on the basis of the frequency and strength of the keyword "vigilance"—and euro area break-even inflation. However, this result is only found for the second half of 2005, when a change in the ECB's policy stance became increasingly likely. This suggests that communication should be closely in line with policy actions to be effective. Even so, we also find that the economic significance of this type of communication has been small.

Dirk Bezemer and **Richard Jong-A-Pin**
“World on Fire? Democracy, Globalization, and Ethnic Violence”

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Abstract:
Recent studies suggest that democracy and globalization lead to ethnic hatred and violence in countries with a rich ethnic minority. We examine the thesis by Chua (2003) that democratization and globalization lead to ethnic violence in the presence of a market-dominant minority. We use different data sets to measure market dominant minorities and employ panel fixed effects regressions for a sample of 107 countries over the period 1984–2003. Our model contains two-way and three-way interactions to examine under which conditions democracy and globalization increase violence. We find no evidence for a worldwide Chua effect, but we do find support for Chua’s thesis for Sub-Saharan Africa.

Willem Jongman
“Standard of Living in the Roman Empire: Toward a Reconstruction of the Millennial Trend”

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Abstract:
When we project modern high growth rates backwards in time, we quickly end up at bare subsistence. Since life cannot be any worse than that, the result is a static model of pre-industrial economies with life at or near subsistence. Can we be sure that this was true? In this paper two points are made. The first is methodological. It is shown that rather than play ever more sophisticated

games with flimsy written records of a distant economy, we do better to look at the material remains of past economic activity. The archaeological record of the distant past is abundant, but it is hardly used by economic historians. It can provide precisely the kind of large data sets that can be queried statistically, and it can provide much needed and sometimes breathtakingly detailed chronological resolution. My second point is historical. It is argued that the archaeological record shows that the Roman economy witnessed not only significant population growth and subsequent decline, but also vast improvements in popular standards of living precisely during the period of demographic expansion. It may well have been the most successful economy in world history before the Industrial Revolution.

Thomasz Katzur
"The Heston Model: Theory, Numerical Issues, and Calibration"

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Abstract:
In the option pricing literature, several models have been proposed to bridge the gaps between theory and empirical facts left by the classical Black-Scholes (1973) model, many of them focusing on modeling stochastic volatility. In this paper, we analyze in-depth the properties of one such model (Heston, 1993). We present a valid and efficient calibration procedure for both the standard Heston model and an extended version and discuss fit results for AEX-index call options accounting for piecewise constant parameters. Moreover, we compare several numerical methods for calculating Heston model prices, taking into account their accuracy and computing time. A number of possible applications of the calibrated model for option pricing are presented.

Franc Klaassen and Henk Jager
"A New Approach to Measuring Exchange Market Pressure"

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Abstract:
Currencies can be under severe pressure, but in a fixed exchange rate regime that is not visible via the exchange rate. We propose a new method to measure the pressure indirectly, using the interest rate and intervention responses to the pressure. Our method does not rely on a specific model of exchange rate determination, so we generalize existing measures. The interest rate shows up in level form, not in the first-difference form used so far, and is taken relative to the rate chosen if the country had no exchange rate objective. Accordingly our measure is more in line with economic sense. Moreover, besides the commonly used monthly data, we stress the importance of daily data when analyzing currency crises. Therefore, it is convenient that our measure has the same structure across data frequencies. The European Monetary System (EMS) crises in 1992–1993 illustrate the improvements in practice.

Jeroen Klomp
"Political Institutions and Economic Volatility"

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Abstract:
Although economic volatility around the world may be gradually declining during the last decades, most developing countries are still highly unstable relative to OECD countries. There are a number of problems with the existing literature on the determinants of economic volatility. First, most studies use

the standard deviation of the real GDP growth rate per capita as an indicator of economic volatility, which does not capture all characteristics of volatility. Second, most papers focus on the effect of economic variables on economic volatility, while political factors may be more important. Acemoglu et al. (2003) argues that countries with volatile economic outcomes do not only suffer from poor macroeconomic policy, but also have weak institutions. We use our alternative measure of economic growth volatility to examine the impact of political factors on economic volatility in a dynamic panel model with various economic variables. On the basis of the general-to-specific approach, we decide on the specification of our model. We find that there exists a negative relation between democracy and governance on the one hand and economic volatility on the other. In addition, we find that some dimensions of political instability and policy uncertainty have a positive effect on economic volatility.

Thijs Knaap
"A General-Equilibrium Analysis of the Regional Effects of Aging"

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Abstract:
A static general equilibrium model featuring regional trade and the location decision of workers and pensioners is developed and applied to the Netherlands. The location decision is modeled using McFadden's method of unobservable preferences, so that the model gives a non-trivial distribution of inhabitants over regions. It is used to discuss the consequences of population aging for the number of inhabitants, wages, and prices in Dutch provinces. To facilitate an analysis in a static model, I introduce a stylized version of the pension system. I find that in response to the changed demographics, workers move to the central provinces, while pensioners move to the periphery. Wages, prices and house prices increase especially in the periphery.

Pierre Koning

"Non-Profit Provision of Job Training and Mediation Services"

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Abstract:

This paper analyzes the relative performance and selection behavior of not-for-profit (NFP) job training service providers, using contract data from the Dutch social benefit administration. We take full account of selection effects, both ex ante (before contracting) as well as ex post (at the start of the program). First, for each cohort type of unemployed clients, cohorts that are contract are ex ante equivalent for providers that are procured. Thus, within cohort type variation in performance outcomes suffices to obtain consistent estimates of performance differentials. Second, ex post selection of clients by providers, at the start of programs, is measured explicitly in our data. Our estimation results show that for profit providers (FPs) are more active in selecting clients, both by sending back more of them and indirectly, by encouraging clients to start a program, so as to receive additional payments by the social benefit administration (per client at the start of a program). Regarding the estimation results for the job placement rates, we find NFP job training service providers only to outperform FPs in the second half year after completion of the program. This effect is however too small to lead to overall better placement rates in the full first year after completion of programs.

Takanobu Kosugi

"Evaluating Environmental Tradeoffs: Side Effects of Carbon Reduction"

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Abstract:
Although climate change is recently regarded as a most serious environmental issue, we should take into account that there are many other resource and environmental problems linked with climate change. This paper is primarily intended to show potential negative side effects of the activities of climate change mitigation, which also bring side-benefits, though. They include not only effects on adaptive capacity to climate change in developing countries, but also resources and environmental side effects arising from the installation of carbon reduction technologies. The paper focuses on the latter, which consists primarily of additional resource extraction due to increases in the consumption of fossil fuel, scarce materials, and water accompanied by introducing carbon capture and sequestration, fuel cells, photovoltaics, energy biomass plantation, etcetera. An attempt is made to develop an integrated assessment model (IAM), which provides a framework to evaluate tradeoffs more comprehensively. The model endogenizes several kinds of environmental impacts for the 21st century, through linking an IAM with a life cycle impact assessment model. Preliminary results of the model will be presented as well.

Tobias Kronenberg

"Household Consumption Survey Data as a Basis for Energy Demand Projections"

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Abstract:

Projections of future energy demand are important for infrastructure planners and policymakers dealing with issues such as emissions and supply security. In Germany, private households account for 43 percent of final energy consumption. Therefore, energy demand projections should pay attention to the determinants of households' consumption patterns. The aim of this paper is to show how data from household consumption surveys can serve as a basis for energy demand projections. First it is shown how this data can be used to identify the characteristics shaping household consumption patterns. In the second step, a projection of household consumption expenditure is calculated, which facilitates an estimate of direct energy consumption by households. Finally, an input-output model is used to estimate total energy consumption. The methodology outlined above is then applied to data from the EVS household consumption survey, in which more than 50,000 German households reported their consumption expenditure on 133 distinct categories of goods and services. One of the main determinants of household consumption patterns is the age of the main income earner. Household projections are then used to calculate a projection of energy demand, taking into account the expected changes in the age structure of German households.

Jan Jacobs and **Gerard Kuper**
"Monetary Policy and Fiscal Policy in the Euro Area"

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Abstract:
The paper analyzes monetary and fiscal policy in the euro area using a simple dynamic macroeconomic model. The model consists of an IS curve, a Phillips curve, a Taylor rule, a simple fiscal policy rule, and a debt accumulation equation. We extend the model by including the long-term interest. The short-term interest rate is the key policy instrument under direct control of the central bank, whereas the long-term interest rate is relevant for financing debt. The difference between the long-term and the short-term interest rate is explained by lagged inflation. The model is estimated with Area Wide Model (AWM) data for the 1970Q1–2005Q4 period. Impulse responses show the effects of demand, inflation, and debt shocks.

Amine Lahiani and Olivier Scaillet
"Testing for Threshold Effects in ARFIMA Models: An Application to US Macroeconomic Data"

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Abstract:
Many macroeconomic time series involve a threshold effect in their Autoregressive Moving Average (ARMA) representation. In this paper we introduce a new class of threshold ARFIMA models. The threshold is introduced in the autoregressive or the fractional integration parameters of

the usual ARFIMA(p,d,q) model or both. We use two marginal and a joint LM-type test. Monte Carlo experiments demonstrate the desirable finite sample power and size of the test and the improvement of its accuracy when using the exact maximum likelihood estimator of the longterm parameter (Sowell, 1992). Simulations show also that the joint test has tractable properties when a threshold effect is present in the short memory and the long memory dynamics of the series. This joint test has the advantage of detecting individual threshold effects and giving a definite decision whether or not the null of no threshold effect can be rejected. The methodology is applied to seven US macroeconomic time series, including the US real GNP growth rate. We find that a threshold effect in the parameters of the ARFIMA(p,d,q) model is a common property for many US macroeconomic data.

Jaap Bos, James Kolari, and **Ryan van Lamoen**
"Competition and Innovation in US Banking"

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Abstract:
This paper examines the relationship between competition and innovation for the US banking sector, which has experienced considerable consolidation and technological developments during the last two decades. We build on the theoretical work of Aghion et al. (2005) that predicts an inverted-U relationship between competition and innovation. In the present study, the technology gap ratio is introduced as a new measure of innovation in the services sectors to overcome problems with applying conventional innovation measures to these sectors. While the current literature often neglects micro-meso relationships by only analyzing industry-level developments, we contribute to the literature by focusing on the link between industry level developments in innovation and firm-level dynamics such as the reallocation of resources, entry and exit.

Maureen Lankhuizen, Henri de Groot, and Eelke de Jong
"The Knowledge Capital Model Revisited"

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Abstract:
This paper subjects the theoretical predictions of the knowledge-capital model to a robustness analysis, using an OECD sample of countries. It extends existing empirical evidence on the knowledge-capital model in three ways. First, we test the theoretical predictions of the model using various proxies of skilled labor and of trade and investment costs. We include: (i) indicators of technological skills; and (ii) indicators that capture institutional and cultural proximity. Second, we estimate the model with ordinary least-squares using clustering by parent and host country, and with weighted least squares. Third, we examine whether the restrictions which the model imposes on some coefficients are actually supported by the data. We find that, whatever estimation method is used, estimating the knowledge-capital model for the OECD sample does not produce persuasive evidence regarding the role of trade costs in foreign direct investment (FDI). Second, the hypothesis that parent and host-country skill abundances can be estimated using a single skill difference term is not supported by the data.

Jérémie Lefebvre, Hans Degryse, and Frank de Jong
"Information Content of Legal Insider Trading in the Netherlands"

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Abstract:
In this paper, we employ a registry of legal insider trading for Dutch listed firms to investigate short-term stock market reactions around legal insider trades. Regulations stipulate that insiders are not allowed to trade shares of their own company based on private and price-sensitive information. It has been shown nevertheless that insiders have superior knowledge either on the future prospects of their firm or on the mispricing of the stock by the market. Using standard event study methodology, we examine stock price behavior before and after insider trading to analyze the information content of the trades. The main findings are: (i) trading by insiders indeed provides new information to the market; (ii) trades made by top executives of a company carry more information than those made by other insiders; (iii) trades following exercises of employee stock options seem to be motivated more by liquidity needs than superior information; (iv) insiders choose the right timing to carry on their transactions. We further test for the cross-sectional determinants of the cumulative abnormal returns before and after insider trades, and investigate how recent regulatory changes about the speed of notification and releases of price-sensitive information affect stock market price reactions.

Sebastian Buhai and **Marco van der Leij**
"A Social Network Analysis of Occupational Segregation"

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Abstract:
We develop a social network model of occupational segregation between different social groups, generated by the existence of positive inbreeding bias among individuals from the same group. If network referrals are important for job search, then expected homophily in the contact network structure induces different career choices for individuals from different social groups. This

further translates into stable occupational segregation equilibria in the labor market. We derive the conditions for persistent wage and unemployment inequality in the segregation equilibria. Our framework is proposed as complementary to existing theories aimed at explaining labor market inequalities between groups divided by race, ethnicity, or gender.

Kasper Leufkens, Ronald Peeters, and Marc Vorsatz

"An Experimental Comparison of Sequential First-Price and Second-Price Auctions with Synergies"

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Abstract:
The presence of synergies in recurrent procurement auctions leads to exposure problems and asymmetries among bidders. We consider sequential first-price and second-price sealed-bid auctions with synergies in a setting with four bidders. This setting can be solved theoretically only for the second-price auction. In a series of experiments, we compare the performance of the two pricing formats for three different synergy sizes. We also compare our findings to theoretical predictions for the case with only two bidders. We find that for small synergies, the first-price sealed-bid format performs better in terms of efficiency, revenue, and the probability of losses. Once the synergy factor becomes very large, however, the performance of the two different pricing formats is similar. In general, our results provide support for the common use of first-price rather than second-price auctions for public procurement. Furthermore, we find that the two pricing formats give rise to different price trends within the auction sequence.

Allard van der Made

"Quality Labeling by Interest Groups"

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Abstract:
I analyze the choices of an interest group (IG) capable of investigating the production practices of firms. The IG informs the public about its findings after concluding its investigations. The aim of the IG is to minimize the aggregate production of a certain bad, for example, pollution. Without the IGs interference consumers are unaware of the amount of the bad associated with the production of specific firms and, therefore, only base their purchasing decisions on prices and observable (horizontal) product characteristics. Information dissemination by the IG effectively introduces vertical product differentiation to the market under consideration. It is shown that in equilibrium the IG either refrains from any investigations or investigates every single firm in the industry. If the latter possibility prevails both ex ante expected consumers' surplus and ex ante expected aggregate profits are higher than in a setting without an IG. However, the effect of the IG on total ex ante expected welfare can be negative if the IGs costs are considerable. The model sheds light on the efficacy of the use of quality labels issued by non-market parties.

Patricia Melo, Daniel Graham, and Robert Noland

"Urban Agglomeration and Productivity: A Meta-Analysis"

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Abstract:
Agglomeration studies have contributed for long time to the understanding of the existence of cities, exploring the relationship between city size and productivity. Despite there is a general agreement on a positive effect of urbanization economies on productivity, there is no clear consensus about its value. Estimates on urban agglomeration externalities vary greatly due to the diversity of methodological strategies, the different specifications of agglomeration economies, and the different levels of industrial and spatial aggregation used. This study uses meta-analytic techniques to investigate the sources of variation in the empirical estimates of productivity elasticities of urban agglomeration. We concentrate on the production function approach since it is the most commonly used and provides a direct measure of the output elasticity of urban agglomeration economies. The meta-analysis includes 21 studies and 107 effect sizes. Evidence suggests publication bias is present and is strongly biased toward positive values of the productivity elasticity of urban agglomeration. We estimate meta-regressions to identify the sources of systematic variation. Results suggest that the geographical context makes a difference and, in particular, single-country estimates tend to be lower than cross-country estimates. Service industries tend to have higher elasticities than the manufacturing sector and the entire economy. The use of a time trend, of a time fixed-effect, and instrumentation techniques tend to produce lower estimates. Moreover, the definition of private output, the inclusion of other agglomeration sources, and the functional form of the production function also influence the magnitude of the elasticity value.

Jochen Mierau
"Education, Aging, and Intrahousehold Allocation in OLG Models"

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Abstract:
We develop and explore two extensions to a two-period overlapping generations model (OLG) with probabilistic aging. The first extension introduces a human capital investment period into the OLG model to analyze the interaction between education and aging. The second extension steps away from the unitary model of household decision making and uses a two-person Nash bargaining game as basis for household decision making in order to study the impact of heterogeneous ageing within the household. In light of the first extension, we find that aging increases the time agents spend on educational investments. This is due the additional benefits that may be reaped from human capital reflecting to an increased expected lifetime. With respect to the second extension, we highlight the heterogeneity among the household members as a key item in determining the consequences of aging. Possible extensions of the current models include the introduction of more elaborate household decision making models and the introduction of a formal government sector that faces a tradeoff between the funding of education and pensions.

Mark Mink, Jan Jacobs, and Jakob de Haan
"Synchronicity and Comovement of Business Cycles: A Comparison of EMU and the United States"

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Abstract:
It is generally believed that business cycles of US states are more similar than business cycles of countries in the euro area. We show that the reverse actually is the case. To this end, we develop multivariate measures of synchronicity and comovement of business cycles. The synchronicity measure concerns itself with the coincidence of cycle phases, whereas the comovement measure, in addition, takes differences between cycle amplitudes into account that have

been overlooked in most previous studies. When we apply the new measures to the euro area for the 1970–2005 period, we find that several countries saw the similarity of their business cycle increase vis-à-vis the euro area reference cycle, but that national business cycles remain fairly diverse. Synchronicity and comovement for the region as a whole do not exhibit a clear upward tendency. Under the regime of the European Economic and Monetary Union, business cycles of countries in the euro area are more similar than business cycles of US states. These findings casts some doubt on the belief that further economic integration between countries in the currency union will reduce the existing disparities between national business cycles.

Jaap Bikker, **Abrahim Miro**, and Laura Spierdijk
"Competition and Market Structure: An Empirical Analysis of the Non-life Insurance Industry"

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Abstract:
Non-life insurance industry in the European Union (EU) has been undergoing major changes due to deregulations and open market environments. The paper applies the Panzar-Rosse (PR) model to estimate the competitive conditions in the non-life insurance industries of 17 EU and non-EU countries, based on a sample of more than 3,000 non-life insurers over the last 15 years, totaling to more than 20,000 observations. Our study is the first to our knowledge that applies the PR approach to the non-life insurance industry. Expanding on the PR approach, we take the effect of the investment income on premium prices into account. We observe monopolistic competition for most countries, but for a minor part of the countries monopoly and perfect competition are found.

Timo Mitze, Björn Alecke, and Gerhard Untiedt
"Determining Trade-FDI Linkages for Germany: Evidence from a Simultaneous Equation Approach Using Panel Gravity Models"

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Abstract:
The paper analyzes the German trade-FDI nexus within 27 EU countries. We adopt a regional perspective and estimate a simultaneous equation system of gravity models for exports, imports, outward and inward FDI based on state-level data for 16 German states between 1993–2005. The motivation for our simultaneous equation modeling approach rests on the empirical observation that there is a significant positive correlation of the models' residuals even after controlling for simultaneity among the variables. Thus, besides profiting from efficiency gains due to a full information estimation strategy, the covariance matrix of the system's error components can be taken as a natural indicator for identifying the type of trade-FDI linkages. Adopting a Hausman-Taylor three-stage least squares model we find a significant negative relationship between exports and outward FDI, while imports and outward FDI complement each other. These two results are in line with predictions of recently developed new economic geography models; that is, when international trade is merely of intra-industry type with non-zero trade costs (both true for our dataset), trade costs may shift production abroad and lead to export replacement effects of FDI. However, at the same time FDI stimulates trade via reverse good imports.

Marius-Ionut Ochea
"Stable Limit Cycles and Complex Attractors in Logit Dynamics"

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Abstract:
We investigate, via standard Rock-Scissors-Paper and coordination games, the occurrence of periodic and complex behavior in a smoothed version of the best response dynamics, the logit dynamics. The findings are as follows. First, in contrast with the replicator dynamics, generic Hopf bifurcation and thus, stable limit cycles, do occur under the logit, even for three strategy games. Second, the logit displays another phenomenon which does not occur under the Replicator; multiple, interior steady states created via a sequence of fold bifurcations. The basins of attraction of the interior point-attractors vary both with the payoff and the behavioral parameters and they are maximal for the Pareto-optimal equilibrium when agents are only moderately "rational." Finally, we find, in a four-strategy game, a period-doubling route to chaotic dynamics under a "weighted" version of the logit dynamics.

Ioulia Ossokina and Otto Swank
"Adoption Subsidy Versus Technology Standards under Asymmetric Information"

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Abstract:
Market-based instruments are believed to create more efficient incentives for firms to adopt new technologies than command-and-control policies. We

compare the effects of a direct technology regulation and of an adoption subsidy under asymmetric information about the costs of technological advances in controlling socially undesirable activities. We show that the policy maker may want to commit to her policy. The reason is that asymmetric information about adoption costs induces the policy maker to set subsidy levels that increase over time; firms, expecting higher subsidies in the future, postpone investment. Direct regulation offers a commitment possibility that allows to prevent firms from postponing investment.

Bastiaan Overvest
"Barbarians at the Gate: Some Simple Economics of Cartel Duration"

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Abstract:
Conventional models of collusion predict that cartels are either stable, and last forever, or are unstable, and fail to emerge at all. This prediction is at odds with cartel duration data. I propose a model that yields finite cartel duration, driven by the threat of entry. In each period, entry is perfectly deterred if at least one incumbent invests a fixed amount in an entry deterrence technology. In the symmetric equilibrium, each firm deters entry with a positive probability. A testable implication of the model is that ceteris paribus expected cartel duration decreases in the number of firms.

Ferdinand Paraguas, Raymond Florax, and Henri de Groot
"Cross-Country Economic Growth: A Spatial Panel Approach"

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Abstract:
Since the celebrated paper of Islam (1995), a number of studies applied panel data methods to control for unobserved heterogeneities and to deal with endogeneity in the estimation of cross-country economic growth models. An aspect that remains relatively obscured in this approach is the role of spatial interaction. There is a growing recognition of the importance of space in the context of cross-sectional regression models using spatial econometric techniques. Conceptually, spatial interactions exist among neighboring regions due to international spillovers. In the paper, we show empirically that the realization of the potential advantage of a panel data approach depends to a considerable extent on the estimators used. More importantly, the paper explores recent developments in spatial panel econometrics in which random effects models have been extended to encompass different spatial-temporal correlation patterns, and investigates the substantive implications of using such approaches. We apply these models to variants of the neoclassical Mankiw, Romer, and Weil (1992) growth model, and contrast these with the outcome of the classic panel-data growth models.

Jan Piplack
"Estimating and Forecasting Asset Volatility and its Volatility: A Markov-Switching Range Model"

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Abstract:
This paper proposes a new model for modeling and forecasting the volatility of asset markets. We suggest to use the log range defined as the natural logarithm of the difference of the maximum and the minimum price observed for an asset within a certain period of time, that is, one trading week. There is clear evidence for regime-switching behavior of the volatility of the S&P500 stock market index in the period 1962–2007. A Markov-switching model is

found to fit the data significantly better than a linear model, clearly distinguishing periods of high and low volatility. A forecasting exercise leads to promising results by showing that some specifications of the model are able to clearly decrease forecasting errors with respect to the linear model in an absolute and mean square sense.

Michael Koetter and **Tigran Poghosyan**
"Do Real Estate Price Fluctuations Influence Riskiness of Banks? Evidence from Germany"

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Abstract:
A priori, the relationship between real estate prices and bank stability is unclear. On the one hand, rising house prices increase the value of collateral and should thus bolster banks' buffers against other risks. On the other hand, increasing house prices might indicate bubbles and induce banks to lend excessively to sub-prime borrowers. We test the relation between bank probabilities of default and house prices for a unique panel of German universal and specialized mortgage banks reporting to the Bundesbank between 1994–2005. We account for state- and time-specific effects, state-level housing price, and bank specific financial indicators to predict bank distress events collected by the central bank. We start by fitting two separate binomial hazard rate models for universal and specialized banks on distress event indicators. First, we find that the covariates affecting bank distress are different between these two groups. Second, we find that increasing house prices increase, especially the probability of default of universal banks. Potentially, this indicates that specialized banks possess superior skills to insulate against house price movements due to the particular focus on this line of business. Next, we test with a more general (latent class) limited dependent variable model whether both hazards can be estimated simultaneously using

the share of mortgage loans as a group determinant. We hypothesize that some universal banks are in fact significantly more specialized compared to peers and exhibit hazard functions akin to that of specialized banks formally incorporated as mortgage institutes. Our main finding is that house price developments significantly affect bank probabilities of default and should thus be incorporated in regulators analyses of financial stability.

Alexander Rasch and Achim Wambach
"Internal Decision-Making Rules and Collusion"

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Abstract:
We study the impact of internal decision-making structures on the profitability of collusive agreements. To this end, we use a three-firm spatial competition model where two firms belong to the same holding company. The holding company can decide to set prices itself or to delegate this decision to its local units. The latter is often imposed by competition authorities as a non-structural remedy in the wake of a merger. If collusion breaks down, the holding company may relocate its local two units. It turns out that collusion with maximum prices is more profitable and more stable if price setting is delegated to the local units. Profitability is reversed for adjusted collusive prices and low discount factors.

Joppe de Ree, Rob Alessie, and Menno Pradhan

"The Identification of Equivalence Scales Using Qualitative Perceptions of Consumption Adequacy"

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Abstract:
To identify the poor, policy makers aim to compare utilitarian welfare levels across households of different sizes and composition. The utilitarian concept of welfare can be operationalized in applied welfare analysis by scaling household income with an appropriate index number. These indices are known as equivalence scales and are defined as ratios of cost functions between demographically distinct households. Unfortunately, equivalence scales (or cost functions in general) can only be partly identified from observed patterns of demand. We therefore need additional information for complete identification. Both Pollak and Wales (1979) and Blundell and Lewbel (1991) hint at the feasibility of using subjective/psychometric data to solve the identification problem at hand. In this research, we estimate equivalence scales using the Indonesian Socio-Economic Survey (SUSENAS) consumption panel data set. The data set is unique by combining information on expenditures and demographics, with self-rated consumption adequacy (which we interpret as a household specific assessment of utility). To estimate the parameters of the cost function, we have developed a model that explains the empirical patterns of demand and self-rated consumption adequacy simultaneously in a utility maximizing framework. The estimated parameters are subsequently used to compute equivalence scales.

Hassan Benchekroun and **Amrita Ray Chaudhuri**
"Environmental Policy and Mergers in Polluting Oligopolies"

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Abstract:
This paper examines the profitability of mergers in polluting oligopolies where firms are charged a tax per unit of emissions. We determine the impact of the imposition of the emissions tax on the profitability of a merger. We consider two scenarios. In the first scenario, the tax on pollution is considered given and, in particular, is not changed subsequent to a merger. In the second scenario, we compute the efficiency inducing tax designed by a regulator. This tax depends on the number of firms. We study the profitability of a merger when the emissions tax is optimally adjusted post-merger. We find that mergers are more profitable when the tax adjusts optimally to the post-merger industry structure. Second, we show that by allowing the tax to optimally adjust subsequent to a merger, rather than letting it remain unchanged, we increase current welfare at the expense of future welfare and cause greater damage to the environment.

Wolter Hassink and **Anna van der Schors**
"Singles Effect on Absenteeism"

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Abstract:
This paper scrutinizes the so-called singles effect of absenteeism. We find empirically that the rate of sickness absence is about 0.3 percentage points higher for employees who are single than for those who have a partner.

Although this finding is reported by previous empirical studies on absenteeism covering different countries and periods, no clarification of this effect has been given so far. Further analysis seems to be fruitful as the effect implies that characteristics of the home situation of employees, which are out of scope of their employers, can influence productivity at work. The preposition of our analysis is that Dutch civil servants cannot monitor perfectly their employees' absence. Upon notification of sickness, employees do not need to hand over a sickness certificate issued by the doctor. Consequently, it is possible that when the benefits of staying at home are large at a particular day, workers may decide to shirk by reporting absent. We investigate one of the hypotheses that may explain the singles effect of absenteeism. We focus on the care of children. A major difference between singles and couples is that the time spent on the care of children can better be shared by couples than by single parents. Thus, when parents unexpectedly need to care for the children at home, couples can easier share their task. It boils down to the following empirical questions that we will address in this paper. First, is there any single household effect for employees who do not have any children? Second, what part of the single-person effect can be attributed to the presence of children? Our estimates with Dutch data of about 50 thousand employees indicate that the single household effect does not depend on the presence of children.

Siem Jan Koopman, André Lucas, and **Bernd Schwaab**
"Common Macro Factors for Frailty Correlated Default"

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Abstract:
We develop an econometric model to capture cross-sections of conditional default probabilities in a "frailty" setting in which: (i) the systematic risk factors are unobserved; (ii) a large array of macro variables may matter for

default risk conditions over time; (iii) the default counts of interest are conditionally Binomial, thus non-Gaussian; (iv) the cross-section of firms is heterogeneous in terms of industry specification, rating histories, and age cohorts; and (v) the factor sensitivities may depend on these firm characteristics. The model combines the non-Gaussian panel data model of Koopman and Lucas (2007) with a Stock and Watson (2002) approximate dynamic factor model. It accommodates both common factors from observed macro data as well as unobserved components in the sense of Harvey (1989). We show that by considering macro factors in addition to an unobserved component we can capture a large part of the in-sample variation, and improve the accuracy of out-of-sample forecasts of conditional default probabilities by 5-16 percent in terms of mean absolute error.

Alexander Sebald

"Procedural Concerns in Psychological Games"

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Abstract:
One persistent finding in experimental economics is that people react very differently in identical situations in terms of outcomes depending on the procedures that have led to them. In accordance with this, among psychologists there exists by now a broad consensus that not only expected outcomes shape human behavior, but also the way in which decisions are taken. Economists, on the other hand, have remained remarkably silent about procedural aspects of strategic interactions. The paper responds to the experimental evidence showing that procedures matter by providing a game-theoretic framework which allows for the integration of procedural concerns into economic analysis. Building on Battigalli and Dufwenberg's (2005) framework of dynamic psychological games, we show how procedural concerns can be conceptualized assuming that agents are (also) motivated by

belief-dependent psychological payoffs. As will be seen, procedural choices influence the causal attribution of responsibilities, the evaluation of intentions, and the arousal of emotions. Two applications are discussed to highlight the impact and importance of procedural concerns in strategic interactions.

André Lucas and **Oleg Sheremet**
"Interdependence in Insurance Sector and Possibilities for International Diversification"

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Abstract:
Our paper studies the possibility for international diversification of catastrophe risk by the insurance sector. In particular, we employ conditional copula theory to model bivariate dependence of returns on insurance assets on three geographically distinct markets. We find that for American and European markets the dependence of negative returns is higher than the dependence of positive returns, whereas the relationship of American and European insurance markets with Asian market seems to be more symmetric. Further, we investigate the stability of the copula parameters and find evidence of existence of change points. We also find strong evidence that the dynamics of copula parameters are influenced by the catastrophe events, in the sense that the coefficients for dummies related to catastrophe dates proved to be significant in the equation describing time variation of copula parameters.

Arjen Slangen and Sjoerd Beugelsdijk
"The Impact of Exogenous and Endogenous Hazards on Types of Multinational Activity"

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Abstract:
Prior studies have shown that cultural distance and governance imperfections negatively affect a country's inward multinational activity. We extend these prior studies by exploring the relative impact of cultural distance and governance imperfections on different types of multinational activity. We argue that governance imperfections have a more negative impact on a country's total inward multinational activity than cultural distance, since governance imperfections result in exogenous hazards for multinational enterprises (MNEs) and cultural differences in endogenous ones. We also contend that governance imperfections have a more negative impact on vertical than on horizontal MNE activity, since governance-related hazards disrupt an MNE's international supply chain when the stricken subsidiary performs vertical activity, but only have local consequences when it performs horizontal activity. In contrast, we expect cultural distance to have a more negative effect on horizontal than on vertical MNE activity, because culture-related hazards are much easier to resolve when subsidiaries perform vertical activity. Finally, we expect that both governance imperfections and cultural distance have a more negative impact on parent-oriented than on affiliate-oriented vertical activity, because parent executives will find disruptions in parent supply more undesirable. An analysis of US foreign affiliate sales over the period 1996–2004 confirms most of these expectations.

Adriaan Soetevent, Marco Haan, and Pim Heijnen
"Developments in the Dutch Retail Gasoline Market"

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Abstract:
This paper describes the retail market for gasoline in the Netherlands, using an extensive data set containing price data for most retail outlets in the time period 2005–2007. These data allow us to investigate the presence and causes of regional price differences. Special attention is paid to the relation between market concentration and price levels.

Jan Stoop, Daan van Soest, and Jana Vyrastekova
"The Carrot and the Carrot: Two Stages of Rewarding in the CPR Game"

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Abstract:
In the paper, the effects of rewarding on social dilemma outcomes are investigated by means of an economic experiment. The considered social dilemma, is the so-called Common Pool Resource (CPR) game, in which groups of five individuals make investment decisions generating negative externalities. After each investment decision, subjects have two stages in which they can reward each other. We find that adding two stages of rewarding promotes cooperation in the CPR only marginally. The addition of two stages of rewards causes the following to happen for a large fraction of the subject pool. A subject consistently chooses the same number of tokens to invest in the common pool resource. Subjects use the investment stage as a way to seek group members with whom they will exchange reward tokens in

stage 2 and stage 3. The influence of stage 1 on stage 2 is significant and prevalent. However, the influence of stage 1 on stage 3 is much smaller. Stage 3 rewards are mainly influenced by stage 2 rewards. The addition of the second stage of rewarding is the driving force behind the evolution of the use of the common pool resource; it ensures that subjects can exploit their bilateral relationships.

Fangfang Tan

"Punishment in a Linear Public Good Game with Productivity Heterogeneity"

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Abstract:
This paper examines sanction behavior in the voluntary provision of a linear public good with heterogeneous marginal per capita return (MPCR) from the public account. Our experimental results suggest when sanction opportunities are absent, the average contribution level of a heterogeneous group is lower than that of a homogeneous group with the same average MPCR. Adding a sanction mechanism in heterogeneous groups significantly enhances cooperation, but does not increase welfare. Punishments in successful cooperation groups are sent by high MPCR subjects to low MPCR subjects. However, conditioning on the contribution level, high MPCR subjects receive more punishment, and behave more responsively by raising higher contributions in the next period.

Joachim Stibora and **Albert de Vaal**
"Trade Liberalization and its Fiscal Implications in a North-South Trade Model"

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Abstract:
We study the fiscal implications of trade liberalization in a North-South trade model with nonhomothetic preferences. Combining a Ricardian trade model with a continuum of competitive goods and a public good, nonhomothetic preferences are shown to imply that both the global income distribution and the local income distribution matter for gauging the effects of different trade liberalization regimes on income taxes and public good provision. The fiscal implications of tariff reductions are typically more adverse for poorer countries than for richer countries. We also find that unilateral trade liberalization by richer countries is a more viable policy option to pursue than multilaterally reducing tariffs.

Bertrand Candelon, Joan Muysken, and **Robert Vermeulen**
"Fiscal Policy and Monetary Integration in Europe: An Update"

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Abstract:
By distinguishing between discretionary and non-discretionary fiscal policy, this paper proposes an analysis of the stability of fiscal rules for EMU countries before and after the Maastricht Treaty. Using both Instrumental Variables and GMM techniques, it turns out that discretionary fiscal policy

remains procyclical after 1992. This result contradicts the previous findings of Gali and Perotti (2003). Furthermore, it appears that fiscal rules differ between EU founders and newcomers, and big versus small countries. The paper shows that discretionary fiscal policy does not exhibit different behavior under supply or demand constraints. It also documents that non-discretionary fiscal policy appears to be consistently counter-cyclical and supports the increasing role of automatic stabilizers after the Maastricht Treaty. Finally, there is no support for the presence of a "fatigue effect" in fiscal discipline.

Wouter Vermeulen and Jan Rouwendal

"Growth Centers, Growth Controls, and Intercity Commuting: An Applied General Equilibrium Analysis"

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Abstract:
Restrictive land use regulations around cities are sometimes combined with an accommodative housing policy at specific locations in their vicinity. This paper shows that such "growth center" policies may be optimal from a welfare economic perspective, when a negative externality of city size exists. We develop a concise urban general equilibrium model in which the main city offers higher wages and more amenities, while residents of the growth center enjoy living in a smaller city. Conditions for the desirability of founding this growth center are studied and the optimal level of growth controls in both cities is derived. We apply the model to Amsterdam and its main growth center Almere.

Hendrik Vrijburg, Jan Jacobs, and Jenny Ligthart
"A Spatial Econometric Approach to Commodity Tax Competition"

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Abstract:
Kapoor et al. (2007) propose a two-step General Method of Moments (GMM) estimator for a random effects panel data model with spatially autocorrelated disturbances. The paper discusses several extensions to this method. The first introduces a spatially lagged dependent variable, the second models fixed effects, whereas the third adds a time lag of the dependent variable. The extensions proposed are highly relevant for the empirical tax competition literature, where the combination of spatial and serial correlation typically is ignored. Monte-Carlo simulations illustrate the performance of the estimators. It is shown that the dynamic estimator that is proposed in this paper outperforms the dynamic estimators used in the literature until now.

Hans-Peter Weikard, Rob Dellink, and Ekko van Ierland
"Renegotiations in the Greenhouse"

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Abstract:
International climate policies are being shaped in a process of ongoing negotiations. This paper explores the stability of international climate agreements in a sequential game framework allowing for multiple renegotiations. We analyze how the incentives to reach an international climate agreement today will be impacted by the prospect of further negotiations at a later stage. We empirically examine the stability of

international climate agreements in a setting with renegotiations by means of an extended version of the Stability of Coalitions model (STACO). We explore the impact of timing of renegotiations in a two-stage game and find that in the context of the STACO model, a coalition of China and the United States is the unique renegotiation proof equilibrium. In a game with more frequent renegotiations we find that the possibility to punish players helps to stabilize larger coalitions in early stages of the game. Consequently, several renegotiation proof equilibria emerge that outperform the coalition of China and the United States in terms of abatement level and global payoff. The Grand Coalition, however, remains unstable.

Siem Jan Koopman, Max Mallee, and **Michel van der Wel**
"The Dynamic Nelson-Siegel Model with Time-Varying Loadings and Volatility"

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Abstract:
In the paper we explore time-varying parameter extensions of the dynamic Nelson-Siegel yield curve model for forecasting multiple sets of interest rates with different maturities. The Nelson-Siegel model is recently reformulated as a dynamic factor model where the latent factors level, slope, and curvature are modeled simultaneously by a vector autoregressive process. We propose to extend this framework in two directions. First, the factor loadings are made time-varying through a simple single step function and we show that the model fit increases significantly as a result. The step function can be replaced by a spline function to allow for more smoothness and flexibility. Second, we investigate empirically whether the volatility in interest rates across different time periods is constant. For this purpose, we introduce a common volatility component that is specified as a spline function of time and scaled

appropriately for each series. Based on a data set that is analyzed by others, we present empirical evidence where time-varying loadings and volatilities in the dynamic Nelson-Siegel framework lead to a significant increase of the model fit. Finally, we provide an illustration where the model is applied to an unbalanced dataset. It shows that missing data entries can be estimated accurately.

Utz Weitzel and **Bastian Westbrock**
"Who is my Partner Abroad?"

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Abstract:
This paper empirically investigates the relevance of international networks in legal counseling of 2,948 mergers and acquisitions. We study leading US and UK legal advisors and their alliances with local counterparts from 1999–2006. We examine the incentive of reaching closure in the network versus the opportunities from market access in partner selection. The results of the analysis show that: (i) networks are an important element in legal firms' internationalization strategy; (ii) while legal firms generally expose themselves to the risk of exploitation; and (iii) US firms seek the gains from market access more than the UK firms.

Karen van der Wiel
"Evaluating the Impact of a Change in Employment Protection on Layoffs and Wages"

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Abstract:
On January 1, 1999, the law on flexibility and security was introduced in the Netherlands. Under this law, a worker's age ceased to be a determinant in the formula to calculate her legal term of notice. For most employees this resulted in a shorter term of notice, but for some workers the term of notice lengthened. This paper exploits this policy change to investigate the causal effect of the term of notice, an important element of firing costs and thus employment protection, on lay-offs and wages. The analysis is based on a fixed effects treatment evaluation. I find strong evidence that a shorter term of notice led to relatively more firings as well as lower wages. The reverse is true for those workers whose term of notice increased.

Zhang Yi
"The Causal Effect of Institutional Quality on Outsourcing"

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Abstract:
The paper empirically investigates the relationship between institutional quality and outsourcing to developing economies. In contrast to cross-sectional studies on institutions, this paper uses panel data for 76 countries over 25 years (1980–2004). Employing panel data helps to show the causal relationship by controlling for the fixed effects and dynamic factors. Using within estimation as well as GMM, I find that there is a positive effect of institutional quality on outsourcing in the lower-middle income countries. The quality of institutions is not an important determinant of outsourcing to either low-income or high-income nations.

Jun Zhou

"Jackpot Justice: The Value of Inefficient Litigation"

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Abstract:
Litigation seems to be a Pareto-inefficient outcome of pre-trial bargaining. However, this paper shows that litigation can be the outcome of rational behavior by a litigant and her lawyer. If the lawyer has more information than his client concerning the characteristics of the lawsuit, the client can use litigation as a way of extracting information. This paper uses an asymmetric information model where the lawyer has information about the strength of the lawsuit that the plaintiff does not know. The settlement-litigation decision by the litigant then depends on her prior information about the prospective of her claim. It is shown that litigation will occur only when the plaintiff is pessimistic about her prospects at trial. The plaintiff is more likely to sue if she is more pessimistic about winning the case and faces more uncertainty in litigation. I characterize the nature and frequency of equilibrium litigation and settlement. In addition, I discuss how the financing of litigation, the risks associated with it and the way of legal representation create incentives that significantly influence the players in a legal dispute. A unique data set, collected from the files of the Taxing Masters in the United Kingdom, allows specific testing of the model's predictions. Regression analysis provides support for the theory.

Matthijs de Zwaan

"A Simulation of Interchange in Payments Systems"

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Abstract:

In the discussion on the determination of multilateral interchange fees in debit card payments systems, many issues are still in abeyance. Application of the theory of two-sided markets to payments systems shows that a system's privately determined interchange can improve welfare, but might well be set too high. We simulate the Dutch market for debit card payments in view of the single euro payments area (SEPA) for cards, and analyze the welfare implications of interchange in different scenarios. These welfare implications are of importance for the assessment of interchange from the point of view of competition law.

Paper Abstracts

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