

FEMM - Working Paper Series - 2015

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15019

Sebastian Eichfelder/Mona Lau

› Capitalization of capital gains taxes: (In)attention and turn-of-the-year returns

Abstract:

We argue that the tax capitalization effect is a function of the attention of market participants. Market reactions can therefore be driven not only by the announcement dates of tax events but also by factors influencing the dissemination of tax information, such as deadlines and media reports. Analyzing the introduction date of the earlier-announced German capital gains tax reform of 2009 by triple-difference estimation, we find evidence of a delayed market reaction long after the announcement date. Within the last two (five) trading days before the deadline, we observe a sharp increase in abnormal trading volume of 151.7% (104.0%). The aggregate abnormal return of the German capital market in the last five trading days in 2008 was 10.6%. Furthermore, we find a significant and positive correlation between trading volumes and measures for awareness of the upcoming tax reform (Google searches and media reports).

JEL:

G02, G12, H24, M41

Keywords:

Capital gains tax, asset pricing, tax awareness, tax arbitrage, turn-of-the-year effect, market efficiency

15018

Benedikt Hoechner/Peter Reichling/Gordon Schulze

› Pitfalls of downside performance measures with arbitrary targets

Abstract:

The Sharpe ratio has been criticized with regard to the assumptions of mean-volatility portfolio selection. Downside performance measures were developed to resolve this critique; they are consistent with expected utility under less restrictive assumptions. The most prominent family of downside performance measures is known as Kappa ratios and puts above target returns into relation to lower partial moments. While the Sharpe ratio of a mutual fund examines whether portfolios of mutual fund and risk-free asset dominate risk-adjusted passive portfolios of benchmark and risk-free asset, this characteristic cannot be transferred to downside performance measures with arbitrary targets. We show that Kappa ratios assign different values to passive strategies with varying fractions of benchmark and risk-free asset if the target differs from the risk-free rate. This effect can lead to reverse rankings of inferior and superior performing mutual funds. In addition, even the ratio of excess return and excess downside risk of passive portfolios is not constant in general. Therefore, downside performance measures turn out to be only applicable in asset management if the target is set equal to the risk-free rate.

JEL:

D81, G11

Keywords:

Downside risk, Kappa ratios, lower partial moment, performance measurement, Sharpe ratio

15017

Barbara Schöndube-Pirchegger/Jens Robert Schöndube

› Full versus Partial Delegation in Multi-Task Agency

Abstract:

We consider a moral hazard type agency problem. Two tasks need to be performed within the agency. The principal can either delegate both tasks to the agent or perform one of the tasks himself. In the latter case the principal can choose which task to delegate but doing both personally is not feasible. As firm value is not contractible by assumption the incentive contract offered to the agent needs to be based on possibly non-congruent performance measure. Allowing for both of the players to be risk averse, agency

costs can arise from a trade-off in allocating incentives and risk as well as from a congruity problem. When full delegation results in a standard two task agency problem, partial delegation creates a double moral hazard problem as neither the principal can observe the agent's effort nor vice versa. We find that full delegation is more favorable the more risk is optimally allocated to the agent. Accordingly partial delegation is beneficial if the principal has a relatively low degree of risk aversion. Moreover, full delegation allows the principal to scale incentives provided to the agent but not to fine tune the intensity of incentives for each effort separately. With partial delegation fine tuning is possible but increasing incentives for one effort implies reducing them for the other. If scaling is more effective in minimizing agency costs than fine tuning incentives, the principal tends to prefer full delegation to partial delegation and vice versa.

JEL:

Keywords: Delegation, agency problem, congruity, risk sharing

15016 Dirk Männel/Andreas Bortfeldt
› Solving the Pickup and Delivery Problem with 3D Loading Constraints and Reloading Ban

Abstract:

In this paper, we extend the classical Pickup and Delivery Problem (PDP) to an integrated routing and three-dimensional loading problem, called PDP with 3D loading constraints (3L-PDP). A set of routes of minimum total length has to be determined such that each request is transported from a loading site to the corresponding unloading site. In the 3L-PDP, each request is given as a set of 3D rectangular items (boxes) and the vehicle capacity is replaced by a 3D loading space. This paper is the second one in a series of articles on 3L-PDP. In both articles we investigate which constraints will ensure that no reloading effort will occur, i.e. that no box is moved after loading and before unloading. In this paper, the focus is on the so-called reloading ban, a packing constraint that ensures identical placements of same boxes in different packing plans. We propose a hybrid algorithm for solving the 3L-PDP with reloading ban consisting of a routing and a packing procedure. The routing procedure modifies a well-known large neighborhood search for the 1D-PDP. A tree search heuristic is responsible for packing boxes. Computational experiments were carried out using 54 3L-PDP benchmark instances.

JEL:

Keywords: Transportation, vehicle routing, pickup and delivery, 3D loading constraints

15015 Dirk Männel/Andreas Bortfeldt
› A Hybrid Algorithm for the Vehicle Routing Problem with Pickup and Delivery and 3D Loading Constraints

Abstract:

In this paper, we extend the classical Pickup and Delivery Problem (PDP) to an integrated routing and three-dimensional loading problem, called PDP with 3D loading constraints (3L-PDP). A set of routes of minimum total length has to be determined such that each request is transported from a loading site to the corresponding unloading site. In the 3L-PDP, each request is given as a set of 3D rectangular items (boxes) and the vehicle capacity is replaced by a 3D loading space. We investigate which constraints will ensure that no reloading effort will occur, i.e. that no box is moved after loading and before unloading. A spectrum of 3L-PDP variants is introduced with different characteristics in terms of reloading effort. We propose a hybrid algorithm for solving the 3L-PDP consisting of a routing and a packing procedure. The routing procedure modifies a well-known large neighborhood search for the 1D-PDP. A tree search heuristic is responsible for packing boxes. Computational experiments were carried out using 54 newly proposed 3L-PDP benchmark instances.

JEL:

Keywords: Transportation, vehicle routing, pickup and delivery, 3D loading constraints

15014 Siegfried Berninghaus/Stephan Schosser/Bodo Vogt
› Myopic behavior and overall utility maximization - A study of linked hawks and doves -

Abstract:

At present, in the domain of simultaneous action selection and network formation games, game-theoretic behavior and experimental observations are not consistent. While theory typically predicts inefficient outcomes for (anti-)co-ordination games, experiments show that subjects tend to play efficient (non-Nash) strategy profiles. One reason for this discrepancy is the tendency to model corresponding games as one-shot and derive predictions. In this paper, we calculate the equilibria for a finitely repeated version of the Hawk-Dove game with endogenous network formation and show that the repetition leads to additional sub-game perfect equilibria; namely, the efficient strategy profiles played by human subjects. However, efficiency crucially depends on the design of the game. This paper theoretically demonstrates that, although technically feasible, the efficient profiles are not sub-game perfect equilibria if actions are fixed after an initial period. We confirm this result using an experimental study that demonstrates how payoffs are higher if actions are never fixed.

JEL: D85; C72; C73; C92

Keywords: Network; Hawk-Dove; Game theory; Behavioral experiment; Finitely repeated game

15013 Stephan Schosser

› Who cares about the balderdash I spouted yesterday?* An experiment on the volatility of bargaining norms

Abstract:

When talking about possible bargaining results participants in the Nash bargaining game mainly use fairness norms to support their favored outcome. According to theory a variety of different, fair solutions exists from which the participants can choose. In this paper, we experimentally investigate Nash bargaining with a previous opportunity to chat about the bargaining outcome. We find that playing a dictator game prior to the Nash bargaining game establishes without any additional communication a fairness norm, the participants resort to. However, if nothing is played prior to the Nash bargaining game participants discuss longer about what to play. In addition, we find that deviations in favor of one participant occur the longer preplay communication lasts.

JEL: C7, C9

Keywords: bargaining game, dictator game, norms, experimental economics

15012 Claudia Brunnlieb/Stephan Schosser/Bodo Vogt

› When social preferences and anxiety drive behavior and vasopressin does not An neuroeconomic analysis of vasopressin and the Hawk-Dove game

Abstract:

We delineated the causal influence of vasopressin on behavior in an iterated Hawk-Dove game. While subjects treated with vasopressin tend to be more aggressive in response to group members who did not coordinate on equilibrium instantaneously, this effect vanishes as soon as the subjects reach an equilibrium. More than vasopressin, social preferences and trait anxiety of the subjects predict the observed behavior.

JEL: C72, C92, D03, D87

Keywords: Hawk-Dove game, anti-coordination game, neuroeconomic experiment, vasopressin, psychological aspects

15011 Stephan Schosser/Bodo Vogt

› Do hormones impact behavior in the minimum effort game? - An experimental investigation of human behavior during the weakest link game after the administration of vasopressin -

Abstract:

This paper describes an experimental study involving the minimum effort game. In this game, each player faces a trade-off between risk and payoff. Within each group, half of the subjects were administered with vasopressin in nasal spray form while half received a placebo. We found that subjects who received vasopressin were more likely to play the minimally risky strategy in the group and less likely to focus on payoff levels than those who received the placebo.

JEL:

Keywords: minimum effort game; coordination game; neuroeconomic experiment; vasopressin

15010

Stephan Schosser/Bodo Vogt

› What automaton model captures decision making? A call for finding a behavioral taxonomy of complexity

Abstract:

When investigating bounded rationality, economists favor finite-state automatons - for example the Mealy machine - and state complexity as a model for human decision making over other concepts. Finite-state automatons are a machine model, which are especially suited for (repetitions of) decision problems with limited strategy sets. In this paper, we argue that finite-state automatons do not suffice to capture human decision making when it comes to problems with infinite strategy sets, such as choice rules. To proof our arguments, we apply the concept of Turing machines to choice rules and show that rational choice has minimal complexity if choices are rationalizable, while complexity of rational choice dramatically increase if choices are no longer rationalizable. We conclude that modeling human behavior using space and time complexity best captures human behavior and suggest to introduce a behavioral taxonomy of complexity describing adequate boundaries for human capabilities.

JEL:

Keywords:

15009

Stephan Schosser/Bodo Vogt

› When proposers demand less without need Ultimatum bargaining in the loss domain

Abstract:

Subjects in the loss domain tend to split payoffs equally when bargaining. The ultimatum game offers an ideal mechanism through which economists can investigate whether equal splits are the consequence of proposer generosity or due to their anticipation that the responders will reject lower offers. This paper experimentally compares ultimatum bargaining in a loss domain with that under gains. The results reveal that, although responders do not expect more in the loss domain, proposers do make higher offers. As such, proposers reach agreements more often in the loss domain than they do in the gains domain, and responders receive higher payoffs.

JEL:

C72, C92, D74

Keywords:

Ultimatum bargaining, losses, equal split, experimental economics

15008

Olaf Gaus

Storied Business

› Wertschöpfungsmöglichkeiten durch neue Medien für kleine und mittlere Unternehmen

Abstract:

Der Ansatz eines Storied Business im Wertschöpfungsprozess von Unternehmen zielt auf die Bedeutung Neuer Medien für die Erschließung neuer und zusätzlicher Produkt-, Service- und Kundenmärkte ab. Besonders für ‚Kleine und Mittlere Unternehmen‘ (KMU) ist es wichtig, ihre Kunden über solche Medien anzusprechen, die auf der Basis des Internets keine Reichweitenrestriktion haben, damit Produkt- oder Service-Innovationen gezielt und weltweit an ausgewählte Kunden adressiert werden können. Da sich die Kunden selbst hinsichtlich ihrer Interessen und ihres Verhaltens zu New Customers wandeln, indem sie ihre bisherige Rolle als typische Kaufkunden zu interaktiven Kunden entwickelt haben, hat sich ihr Informationsbedarf von der angebotenen Unternehmensleistung auf das Unternehmen selbst erweitert. Um solche interaktiven Ansprüche von Kunden proaktiv und entrepreneurisch zu nutzen, schafft das Format eines Storied Business eine Gelegenheit, Botschaften zu kommunizieren, die dem Bedürfnis von Kunden entgegenkommen, die sich neben Produkten und Dienstleistungen zunehmend auch für die Geschäftsmodelle von Unternehmen interessieren und als Customer Investors ein weiteres Rollenprofil einnehmen. Die Interessen dieser New Customers reichen von der Beteiligung an Produkt- oder Prozessoptimierungen bis hin zu unternehmerischen Investitionsformen. Indem sich aber Kunden an der Wertsteigerung von Unternehmen beteiligen, wächst die Anforderung an die Unternehmen, den damit einhergehenden Kommunikationsanspruch unter dem Gesichtspunkt erfolgreicher Wertschöpfung

strategisch zu bewältigen. Wie dieses aus der Sicht von KMU gestaltet werden kann, wird mit dem Prozess einer Interactive Acceleration zum Innovieren von Geschäftsmodellen und Unternehmensstrategien beschrieben, woraus sich strategisch steuerbare Geschäftsmodellinnovationen ableiten lassen.

JEL:

Keywords: Storied Business, New Customer, Geschäftsmodellinnovation, Storytelling

15007

Karl Inderfurth

› Safety Stocks in Centralized and Decentralized Supply Chains under Different Types of Random Yields

Abstract:

Safety stock planning with focus on risk protection to cope with demand uncertainties is a very well researched topic in the field of supply chain management, in central as well as in local decision making systems. In contrast, there is only few knowledge about safety stock management in situations where supply risks have to be covered that are caused by uncertainties with respect to production yields. In this study, a two-stage manufacturer-retailer supply chain is considered in a single-period context that allows for an analytical study of the impact of yield randomness on safety stock determination. In order to concentrate the analysis on the effects of yield uncertainty demand will be assumed to be deterministic. We consider three basic types of yield randomness which represent different reasons for yield losses in production processes each, namely the stochastically proportional, binomial, and interrupted geometric yield type. It will be shown that these different yield risk specifications can bring about completely different properties with regard to the way safety stocks depend on various input parameters in supply chain planning. This holds especially for the impact of the demand size and for the influence of the level of product profitability in a supply chain. In an analytical model-based investigation it is demonstrated that these safety stock properties not only differ between the respective yield types, but also between system of central and decentralized supply chain decision making. Thus, this study presents general insights into the importance of a correct yield type specification for an effective safety stock management and explain necessary differences in the stock distribution across supply chain stages in both centralized and decentralized settings.

JEL:

Keywords: Random yield, safety stocks, supply chain decisions, yield types

15006

Maria Anne Schmidt/Daniel Cracau

› Cross-Country Comparison of the Corporate Social Responsibility Orientation in Germany and Qatar: A Empirical Study among Business Students

Abstract:

Corporate social responsibility (CSR) is a phenomenon of increasing interest. Today, it is practiced in most countries around the globe and studied in various fields of academia. However, the focus still lies on Western developed countries, their understanding, and implementation of CSR. This paper focuses on the comparison of the orientation towards CSR in Germany and Qatar, thereby closing a research gap by providing insights from a Middle Eastern country. Based on a survey among 265 business students in both countries, the research examines their perception of the economic, legal, ethical, and philanthropic responsibilities of a firm. Findings suggest that, next to economic obligations, Qataris appear more willing to support philanthropic activities of a business while Germans highly value ethical standards. Moreover, females in both countries value economic responsibilities less important than males do.

JEL: M14; Z1

Keywords: Empirical Economics, Cross-Cultural Research, Corporate Social Responsibility Orientation (CSRO), Gender, Germany, Qatar

15005

Sebastian Henn/André Scholz/Meike Stuhlmann/Gerhard Wäscher

› A New Mathematical Programming Formulation for the Single-Picker Routing Problem in a Single-Block Layout

Abstract:

The Single-Picker Routing Problem deals with the determination of sequences according to which items have to be picked in a distribution warehouse and the identification of the corresponding paths which have to be travelled by human operators (order pickers). The Single-Picker Routing Problem represents a special case of the classic Traveling Salesman Problem (TSP) and, therefore, can also be modeled as a TSP. However, the picking area of a warehouse typically possesses a block layout, i.e. the items are located in parallel picking aisles, and the order pickers can only change over to another picking aisle at certain positions by means of so-called cross aisles. In this paper, for the first time a mathematical programming formulation is proposed which takes into account this specific property. Based on extensive numerical experiments, it is shown that the proposed formulation is superior to standard TSP formulations.

JEL:

Keywords: Order Picking, Picker Routing, Traveling Salesman Problem

15004 André Scholz/Gerhard Wäscher
› A Solution Approach for the Joint Order Batching and Picker Routing Problem in a Two-Block Layout

Abstract:

Order Batching and Picker Routing Problems arise in warehouses when articles have to be retrieved from their storage location in order to satisfy a given demand specified by customer orders. The Order Batching Problem includes the grouping of a given set of customer orders into feasible picking orders such that the total length of all picker tours is minimized. The problem of determining the sequence according to which articles have to be picked is known as the Picker Routing Problem. Although these problems occur at the same planning level, it is common to solve these problems not simultaneously, but separately and in sequence. As for the batching problem it is usually assumed that the order pickers, when making their ways through the warehouse, follow a certain, simple routing strategy. Based on this routing strategy, the customer orders are grouped into picking orders. The advantage of this approach can be seen in the fact that in particular for single-block warehouse layouts the corresponding order pick tours are very straightforward and can be memorized easily by the order pickers. This advantage diminishes, however, when more complex, multi-block layouts have to be dealt with. Furthermore, in such case, the approach may result in picker tours that can be far from optimal. Therefore, for multi-block layouts, we develop a new approach, namely an iterated local search algorithm into which different routing algorithms have been integrated and which allows for solving the Order Batching Problem and the Picker Routing Problem simultaneously. By means of numerical experiments it is shown that this approach results in a substantial improvement of the solution quality without increasing computing times.

JEL:

Keywords: Order Picking, Order Batching, Picker Routing, Iterated Local Search

15003 Barbara Schöndube-Pirchegger/Jens Robert Schöndube
› Early versus late accounting information in a limited commitment setting

Abstract:

We consider a two period principal-agent problem in a LEN setting. Stock prices as well as accounting measures are available for incentive contracting. The principal needs to implement one out of two accounting systems. While the early accounting information system reports an accounting signal in the period it is produced, the late accounting system reports this information with one period delay. As accounting information is considered contractible if and only if it is reported within the two period horizon of the game, the late system ends up providing less contractible information than the early one. Accounting information is supposed to be effort informative and value relevant. Stock prices reflect all value relevant information. This includes accounting information along with further information that is value relevant but not effort informative. We derive optimal compensation contracts in a full commitment setting and in a limited commitment setting for both, the early and the late accounting information system. With full commitment the early system dominates the late one. If the early system is implemented stock prices are not used for contracting at all. In contrast, if the late system is present, stock prices are required to incentivize second period effort at all. However, contracting on them results in an inferior risk-incentive trade-off as compared to contracting on early accounting information only. With limited commitment implementing the late accounting information system may benefit the principal. If accounting signals are

positively correlated, limited commitment causes excessive second period incentive rates. Using the late system in combination with stock prices serves as a commitment device. Noise immanent in the stock prices reduces optimal incentive rates and thus counteracts the over-incentives. Second period benefits may more than outweigh the cost related to using stock prices in the first period.

JEL:

Keywords:

15002

Birte Balck/Daniel Cracau

› Empirical analysis of customer motives in the shareconomy: a cross-sectoral comparison

Abstract:

We present the results of an empirical study on German customers' motives to participate in the shareconomy. We focus on four different industries with two companies each: accommodation renting (Airbnb vs. Couchsurfing), car sharing (DriveNow vs. tamyca), commodities (Leihdirwas vs. WHY own it) and clothing (Prêt-à-Louer vs. Kleiderkreisel). We can conclude that the lower prices compared to classical consumption offers provide the main motive for customers using sharing offers. Across industries, we find tremendous differences as regards the importance of further motives like environmental awareness or availability of offers. Based on the results of the study, we elaborate recommendations for the different sectors.

JEL:

M31; O35

Keywords:

Sharing economy; consumer survey; cross-sectoral comparison; Germany

15001

Sebastian Lehmann

› Toward an Understanding of the BDM: Predictive Validity, Gambling Effects, and Risk Attitude.

Abstract:

Pricing research suggests incentive-compatible evaluations when consumers' situation-specific WTP is to be elicited. Especially, the lottery-based Becker-DeGroot-Marschak-mechanism (BDM) is recommended as it seems to outperform other elicitation methods. In this study, the BDM was used to measure subject WTP for eight shopping goods in binding purchase settings. In accordance with previous studies, the validity of elicited WTP measures was checked within subjects with respect to indicators of face and criterion validity (such as interest in buying, preference ratings, and compliance rates). In addition, this study observed real purchases of a separate validation sample measured under identical circumstances, thus assessing the predictive validity of WTPs elicited with the BDM. As a result, the BDM-based WTPs reveal a sufficient degree of internal face and criterion validity. However, the external validity in terms of predictive validity between WTP-based prediction and purchases of the validation sample seems limited. Specifically, this study found a substantial overestimation of WTP, and thus in the corresponding purchase rates in the BDM. Hence, a potential bias is indicated. However, contrary to the suggestions of earlier research, individual risk attitude or loss aversion, hence a potential gambling effect, seems not to bias BDM results or the decision whether to buy or not.

JEL:

Keywords:

BDM, price research, WTP, gambling effect, risk attitude

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