

FEMM - Working Paper Series - 2020

› FEMM-Antrag (https://fww.ovgu.de/fww_media/femm/FEMM.pdf)

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20010

Toni Richter

› Bankenwettbewerb und die Stabilität/Fragilität von Finanzsektoren: Nur eine Frage der Messmethode?
(https://fww.ovgu.de/fww_media/femm/femm_2020/2020_10.pdf)

Abstract:

Der Wirkungszusammenhang zwischen der Stabilität/Fragilität der (europäischen) Finanzsysteme und den herrschenden Wettbewerbsverhältnissen ist seit der Finanzkrise 2008 und verstärkt auch in der gegenwärtigen Corona-Krise Gegenstand des wissenschaftlichen und wirtschaftspolitischen Diskurses um (zu) fragmentierte Märkte und Banken im Status „Too-Big-To-Fail“. Dabei stehen sich in Theorie wie Empirie zwei fundamental konträre Kausalkonzepte (Wettbewerbs-Stabilitäts-/Fragilitäts-Hypothese) gegenüber, deren elementare wie komplexe Basis die präzise Messung des Wettbewerbsgrades ist. Aufbauend auf dem jüngsten Forschungsstand kann dahingehend einerseits gezeigt werden, dass per se alternative Wettbewerbsmaße regelmäßig signifikant unterschiedliche Konkurrenzverhältnisse ausweisen und so andererseits auf nachgelagerter, ordnungspolitischer Ebene die Evidenz für oder gegen einen stabilitätsfördernden Wettbewerbseffekt über die Wahl der Messmethode prädeterniniert wird.

JEL:

G21, L25, L11

Keywords:

Bankenwettbewerb, Finanzsektoren, Stabilität, Fragilität, Lerner-Index

20009

Dieter Schmidtchen/Roland Kirstein

› Evolutorische Ordnungsökonomik (https://fww.ovgu.de/fww_media/femm/femm_2020/2020_09.pdf)

Abstract:

Zentraler Forschungsgegenstand der evolutorischen Ordnungsökonomik sind Prozesse der Selbstorganisation (spontane Ordnung) in komplex adaptiven gesellschaftlichen Systemen. Solche Prozesse lassen sich auf drei Ebenen beobachten: der Ebene der Spielregeln (Normen und Institutionen der Ebene der Handlungsordnung, die sich unter diesen Spielregeln bildet, und der Ebene der Interdependenz von Spielregeln und Handlungsordnung. Der Beitrag erläutert das Konzept der „Ordnung“ beschreibt Arten der Handlungsordnung, diskutiert den Ursprung der für die Bildung von Handlungsordnungen zentralen Vorhersagbarkeit des Verhaltens von eingeschränkt rationalen Akteuren und zeigt anhand des Entstehens einer Konvention die evolutorische Ordnungsökonomik bei der „Arbeit“ Anschließend wird der Zusammenhang zwischen spontaner Ordnung und den Transaktionskosten untersucht und der sogenannte Koordinationsansatz skizziert. Nach dem Koordinationsansatz stellt findiges Unternehmertum Ordnung her, indem es Koordinationslücken entdeckt und diese durch Arbitrage (auch über die Schaffung von Normen und Institutionen) schließt. Den Abschluss bilden Überlegungen zu Ordnungspolitik.

JEL:

C 72, D 8

Keywords:

Spontane Ordnung, komplexe adaptive Systeme, Evolutorische Spieltheorie, Konventionen, Transaktionskosten, Koordinationsansatz

20008

Kathleen Kürschner Rauck

› 'Not in my Backyard!' The 2015 Refugee Crisis in Germany

(https://fww.ovgu.de/fww_media/femm/femm_2020/2020_08.pdf)

Abstract:

This paper exploits the sudden mass arrival of refugees to Germany in 2015 to study potential price penalties suffered by residential property in vicinity of refugee reception centers (RRCs). Using novel data on exact locations of publicly-run RRCs in 2014 and 2015 and monthly offers of single-family homes for sale from Germany's leading online property broker ImmobilienScout24, we find strong evidence in spatial DiD regressions for a sizeable negative effect on house price growth in proximity to such sites. Detached and semi-detached houses located within a 15-minute walking distance of RRCs exhibit, on average, 13 percentage points lower price growth than comparable dwellings beyond this threshold. We corroborate our finding in a battery of robustness tests and additional explorations, including sample restrictions that consider exclusively property on offer for sale within 40 minutes walking distance to RRCs and exogenous variation in the exposure to such sites. 'Not in my backyard' (NIMBY) stances among the resident population may explain our finding.

JEL: R23, R31, R38

Keywords: refugee immigration, refugee housing, house prices, Germany

20007

Marie Elisabeth Alert/Horst Gischer/Christian Ilchmann

› Analyzing Cost Structures in the Banking Industry – An Unconventional Approach

(https://fww.ovgu.de/fww_media/femm/femm_2020/2020_07.pdf)

Abstract:

Our paper deals with empirical and technical problems to derive (conventional) cost functions in banks and other financial institutions. One main reason is based on the still ongoing discussion on inputs and outputs of financial intermediaries. A second obstacle is due to the fact that most of the banks are multi-product firms. The existing literature provides an impressive variety of methods but rather focuses on productivity or efficiency, respectively. We suggest a completely different approach instead which might be suitable to identify the relevant cost drivers in banking. Our "model" uses FDIC Call Report data to outline the procedure exemplarily for North Dakota. Of course, additional improvements are necessary, hence our contribution is work in progress on new ground.

JEL: G21, L21, L23

Keywords: banking industry, cost structure, cost driver

20006

Robin Christmann/Roland Kirstein

› You go First! – Coordination Problems and the Standard of Proof in Inquisitorial Prosecution

(https://fww.ovgu.de/fww_media/femm/femm_2020/2020_06.pdf)

Abstract:

The prosecution of criminals is costly, and subject to errors. In contrast to adversarial court procedures, the prosecutor is regarded as an impartial investigator and aide to the judge in inquisitorial justice systems. We show in a sequential prosecution game of a Bayesian court that a strategic interaction between these two benevolent enforcement agents exists where each player hopes to freeride on the other one's investigative effort. This gives rise to inefficient equilibria with excessive operating and error costs. Moreover, we will demonstrate that our results are sensitive to the applied standard of proof and that, more disturbingly, the inefficient outcome becomes more probable when the conviction threshold is raised. Applying the concept of 'beyond reasonable doubt', we analyze the impact of the standard of proof and other legal policy instruments on type I and type II errors and operating costs.

JEL: GK14, K41

Keywords: criminal justice, reasonable doubt, litigation, court errors

20005

Roland Kirstein

› Some Game Theoretic Aspects of Brexit (https://fww.ovgu.de/fww_media/femm/femm_2020/2020_05.pdf)

Abstract:

The paper initially explains some fundamentals of interactive decision-making (“game theory”) and then applies different approaches of game theory to different aspects of Brexit. The first analysis perceives the 2016 referendum as a “simple voting game” and challenges the view that the observed outcome of about 52% percent in favor of Brexit have to be interpreted that the “vox populi” (and, thus, also the “vox dei”) is in favor of a “no-deal” Brexit. Rather, there seem to have existed three camps among the voters, of whom 25% have actually opted for a no-deal Brexit, whereas 27% seem to have approved Brexit in the expectation of a sensible deal. Hence, the 48% who favored “remain” have been by far the largest homogeneous group, although they fall short of an absolute majority. Social choice theory shows that, in a situation without an option supported by a clear majority, no aggregation procedure – such as majority voting or pairwise binary voting – exists that guarantees collective rationality (Arrow theorem) or satisfies some desirable properties (Gibbard-Satterthwaite theorem).

The next analysis scrutinizes the hypothesis that the observed outcome of the referendum was due to the “remainers” failure to participate. The economic theory of voter participation explains intermediate participation rates as a mixed strategy equilibrium. For the two or three groups mentioned above, the incentives to participate were different. The third model section takes a closer look at the negotiations between the UK and the EU, focusing on the transition from Theresa May to Boris Johnson. A simple Nash bargaining model demonstrates that the bargaining outcome may depend on the preferences of the delegate who negotiates on behalf of the represented party. Switching from one delegate to another, hence, may lead to a more favorable outcome. A final section discusses existing literature on game theoretic analysis of Brexit, which essentially deals with various non-cooperative bargaining models.

JEL:

Keywords:

20004

Jarmo Haferkamp/Jan Fabian Ehmke

› Evaluation of Anticipatory Decision-Making in Ride-Sharing Services
(https://fww.ovgu.de/fww_media/femm/femm_2020/2020_04.pdf)

Abstract:

In recent years, innovative ride-sharing services have gained significant attention. Such services require dynamic decisions on the acceptance of arriving trip requests and vehicle routing to ensure the fulfillment of requests. Decision support for acceptance and routing must be made under uncertainty of future requests. In this paper, we highlight that state-of-the-art approaches focus on anticipatory decision-making for either acceptance or routing decisions. Our aim is to evaluate the potential of different levels of anticipation in ride-sharing services. Up to now, it is unclear how the value of information differs between none, partial, or fully anticipatory decision-making processes. To this end, we define and solve variants of the underlying dial-a-ride problem, which differ in the information available about future requests. Using a large neighborhood search, our experimental results demonstrate that ride-sharing services can highly benefit from anticipatory decision-making, while the favorable level of anticipation depends on particular characteristics of the service, esp. the demand-to-service ratio.

JEL:

Keywords: ride-sharing, dynamic vehicle routing, anticipation, dial-a-ride problem, large neighborhood search

20003

Corinna Krebs/Jan Fabian Ehmke

› Axle Weights in Combined Vehicle Routing and Container Loading Problems
(https://fww.ovgu.de/fww_media/femm/femm_2020/2020_03.pdf)

Abstract:

Overloaded axles not only lead to increased erosion on the road surface, but also to an increased braking

distance and more serious accidents due to higher impact energy. Therefore, the load on axles should be already considered during the planning phase and thus before loading the truck in order to prevent overloading. Hereby, a detailed 2D or 3D planning of the vehicle loading space is required. We model the Axle Weight Constraint for trucks with and without trailers based on the Science of Statics. We include the Axle Weight Constraint into the combined Vehicle Routing and Container Loading Problem ("2L-CVRP" and "3L-CVRP"). A hybrid approach is used where an outer Adaptive Large Neighbourhood Search tackles the routing problem and an inner Deepest-Bottom-Left-Fill algorithm solves the packing problem. Moreover, to ensure feasibility, we show that the Axle Weight Constraint must be checked after each placement of an item. The impact of the Axle Weight Constraint is also evaluated.

JEL:

Keywords: Vehicle Routing Problem, Container Loading, 2L-CVRP, 3L-CVRP, Axle Weights

20002 **Horst Gischer/Matthias Kowallik**

› Der Beitrag des Zinsbuchs zum Gesamtergebnis einer Sparkasse
(https://www.ovgu.de/fww_media/femm/femm_2020/2020_02.pdf)

Abstract:

Insbesondere für Sparkassen und andere, relativ kleine regional operierende Kreditinstitute stellt der Zinsüberschuss die bei weitem wichtigste Ertragsquelle dar. Dieser bildet sich zum einen durch die am Markt erzielbare Zinsmarge sowie die Bereitschaft zur Fristentransformation, d.h. die Ausnutzung der zumeist positiven Differenz zwischen lang-fristigen Kredit- und kurzfristigen Einlagenzinssätzen. Weitgehend unklar und damit auch Gegenstand der Diskussion ist die faktische Gewichtung dieser beiden Komponenten. Insbesondere bei untypisch verlaufenden Zinsstrukturkurven und vor allem bei negativen Zinsniveaus stellt die Fristentransformation eine Strategie dar, die mit erheblichen Ertragsrisiken einher geht. Unsere Analyse versucht, den (historischen) quantitativen Einfluß der Fristentransformation auf das Betriebsergebnis der Sparkassen abzuschätzen und für die nähere Zukunft zu prognostizieren. Unsere Resultate lassen erwarten, dass die bis dato positiven Ertragswirkungen der Fristentransformation deutlich zurückgehen werden

JEL: G11, G21, G32

Keywords:

20001 **Iurii Bakach/Ann Melissa Campbell/Jan Fabian Ehmke**

› A Two-Tier Urban Delivery Network with Robot-based Deliveries
(https://www.ovgu.de/fww_media/femm/femm_2020/2020_01.pdf)

Abstract:

In this paper, we investigate a two-tier delivery network with robots operating on the second tier. We determine the optimal number of local robot hubs as well as the optimal number of robots to service all customers and compare the resulting operational cost to conventional truck-based deliveries. Based on the well-known p-median problem, we present mixed-integer programs that consider the limited range of robots due to battery size. Compared to conventional truck-based deliveries, robot-based deliveries can save about 70% of operational cost and even more, up to 90%, for a scenario with customer time windows.

JEL:

Keywords:

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